DERMATOLOGY PRACTICAL & CONCEPTUAL
www.derm101.com

Abstracts from the 3rd World Congress of Dermoscopy, May 17 to 19, 2012, Brisbane Australia

Citation: Abstracts from the 3rd World Congress of Dermoscopy, May 17 to 19, 2012, Brisbane Australia. Dermatol Pract Conc. 2012;2(2 suppl):16. http://dx.doi.org/10.5826/dpc.0202a16.

Dermoscopy in non-pigmented eccrine poromas. Study of Mexican cases

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Background: Non pigmented eccrine poroma is a benign tumor that can have dermoscopic features mimicking malign neoplasias. The characteristic vascular pattern of this tumor hasn't been established. We found a scarcely reported vascular pattern, which can be useful to distinguish this tumor from malignant ones and propose a new nomenclature to these vessels due their similarity with the common calla flower and cherry blossoms tree.

Observations: We study 10 proven Mexican cases of eccrine poroma and nearly half of them presented irregular linear and branched vessels with semi-elliptical, circular or semicircular endings, we called them "chalice-form" and "cherry-blossoms" vessels. The structureless pink-white areas were the most common finding and some vascular patterns reported in other studies were barely found.

Conclusions: Due to the variability in the dermoscopic patterns found in non pigmented eccrine poroma, further studies are required to establish the specificity of these vessels, however they hasn't been reported in other benign or malign neoplasias so, if seen, they can be an useful key leading to the diagnostic of eccrine poroma.

Basal cell carcinoma: dermoscopy vascular features of different subtypes

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Background: Basal cell carcinoma is a common tumour, which presents with various subtypes. These subtypes usually display vascular features, which are readily identified using dermoscopy.

Objective: Dermoscopy vascular features of superficial, superficial and nodular, nodular and combined aggressive subtypes were compared for diagnostic discrimination.

Method: Dermoscopy vascular features were recorded in vivo for 1098 consecutive BCC. Cases with potential confounding from previous intervention were excluded. These vascular features included branching, serpentine, dot, glomerular, loop and linear vessels, the proportions of pink, central verses peripheral vessel distribution and the presence of large vessels. Kappa values were calculated for each defined vascular feature.

Results: Different subtypes of BCC have distinctive vascular features. Superficial BCC (n=284) have more than half the tumour area pink (85%) and absent large vessels (93%), CI 85%—95%. Nodular BCC (n=230) are characterized by large vessels (46%, CI 39%-52%, P<0.001) compared to other subtypes, as well as less dot, coil and loop vessels. Aggressive BCC (n=213) display a tumour area with no pink (12%) or less than half the area pink (27%) and absent vessels in the central tumour area (22%, P<0.001) compared to other subtypes.

Kappa values for all recorded features ranged from 0.48 to 1.0.

Limitations: Aggressive subtypes within the combined aggressive group were not assessed separately. All data was recorded using non polarized dermoscopy.

Conclusions: Diagnostic discrimination between different subtypes of BCC is facilitated by vascular feature assessment. The lower limb has different variation in BCC vessel features, compared to other anatomic sites.

Dots/globules on dermoscopy in nail-apparatus melanoma

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Introduction: Dermoscopic features of nail apparatus melanoma are different from those of other sites. Ronger et al. described seven dermoscopic features of melanonychia.

Methods: Features of dermoscopic examination of 31 patients with nail apparatus melanomas were reviewed retrospectively.

Results: A brownish discoloration of the background and irregular lines were the most common feature, followed by and (micro-) Huchinson's sign. Dots/globules were seen in 8 of 31 cases (25.8%).

Conclusions: Dermoscopy was very useful in the diagnosis of nail-apparatus melanoma, and dots/globules might be the one of features of nail apparatus melanoma.

Reference

1. Ronger S, Touzet S, Ligeron C, et al. Dermoscopic examination of nail pigmentation. Arch Dermatol. 2002; 38:1327-33.

Complex dermatoscopy diagnostics of melanoma

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Introduction: In spite of the fact that frequency of melanoma makes 3-5 % of all primary malignant tumors of skin, it is the main reason of death of patients in oncodermatology. Over the last 6 years complex dermatoscopy examination has been intensively used in clinical practice of Moscow Oncological Hospital No 62 for the detection and characterization of melanoma and other pigmented skin lesions.

Method: Complex dermatoscopy diagnostics include digital photo, Zoom-photo, standard and microdermatoscopy, fluorescent dermatoscopy. At the first stage, we take digital photos and perform computer mapping of the patient's skin. At the second stage, zoom-photo with a 10-fold enlargement is taken for each suspicious lesion. At the third stage, we perform a standard dermatoscopy with a 10-fold enlargement, microdermoscopy with a 120-fold enlargement and a fluorescent dermatoscopy with 5-ALA (Alasens). Applying the complex method of dermatoscopy diagnostics we studied the reliability of characteristics describing malignant and benign pigmented skin lesions in 497 patients with 1735 pigmented skin lesions (280 non-melanocytic, 1271 melanocytic lesions (65 melanoma, 259 dysplastic nevi)). The data of the complex dermatoscopic investigation were compared to the results of morphological investigation of surgery samples.

Results: Sensitivity and specificity dermatoscopy diagnostics of melanoma has made 92 % and 72 % accordingly. Consider high efficiency, non-invasive character of method of complex dermatoscopy diagnostics of melanoma of skin it should be used first of all for examination in groups of high risk of melanoma. This scientific trial is supported by Moscow.

Circumscribed palmar hypokeratosis: correlation between histopathological patterns and dermoscopic findings

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Circumscribed palmar hypokeratosis (CPH) is a rare skin disorder that typically develops on the palms of middle-aged women. CPH is clinically characterized by well-demarcated, slightly scaling erythema that is sometimes difficult to differentiate from Bowen's disease and porokeratosis of Mibelli. CPH is usually diagnosed by its clinical and histopathological features. We present a 61-year-old Japanese female presented with a 10-year history of a well-demarcated, 6x6-mm asymptomatic erythema on the right palm. We show an apparent correspondence between the dermoscopic findings and histopathological features of the lesional skin, which indicates that the pathogenesis of CPH is associated not only with abnormal keratinization but also with hyper vascular formation.

Effect of narrowband UVB phototherapy on melanocytic naevi

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Introduction: Melanocytic naevi have been observed to undergo morphological changes following exposure to narrowband ultraviolet B (NBUVB). We aimed to analyse changes occurring in naevi exposed to NBUVB in a large cohort.

Method: 51 subjects referred for phototherapy had macro and dermoscopic images of prominent melanocytic naevi taken immediately prior to NBUVB treatment; after 10 exposures; after 30 exposures or at the end of the treatment course if earlier; and 3 months after discontinuing treatment.

Four dermatologists, by consensus, examined each naevi for specific clinical and dermoscopic features, at each time point. The size (area) of each naevus was determined by plenimetry.

Preliminary results: 36 of 51 patients had complete sets of images. The most common global dermoscopic pattern in the 440 naevi examined, were reticular (50%) and globular (32%).

Following NBUVB exposure, 45% of reticular naevi displayed changes in local features with blurring or merging of lines. Increase in colour intensity and in the number of dots/globules was observed in 63% of globular naevi.

167 naevi (40%) underwent change in size following UV exposure. Of these, 54% (91/167) decreased in size, with median area reduction of 8% (0.9%-42%); whilst 46% (76/167) increased in size, with median area increase of 9% (1%-76%). The trend was for these naevi to return to their pre-treatment size after phototherapy. Of the 440 naevi reviewed, none displayed changes suspicious of malignancy.

Conclusion: Around half of exposed naevi undergo size/morphological changes following a course of NBUVB. Size changes tended to revert to pre-treatment values 3 months after discontinuing phototherapy.

Dermoscopy and reflectance confocal microscopy to aid in the detection of lentigo maligna recurrence after treatment

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Introduction: Distinguishing between recurrence of lentigo maligna (LM) and postinflammatory hyperpigmentation after treatment may be challenging. Reflectance confocal microscopy (RCM) and dermoscopy might be of help in this clinical setting.

Methods: We performed dermoscopy and RCM in 7 patients that showed pigmentation in areas previously treated for LM. Previous treatments were radiotherapy (4), cryotherapy (2) and surgical excision (1). Correlation between RCM findings and histological/immunohistochemical features was evaluated.

Results: Two cases treated with radiotherapy exhibited blue-gray granules around hair follicle openings under dermoscopy. RCM exam correlated these structures with widespread plump cells in the upper dermis without other features suggesting recurrence of LM, definitely excluded in the biopsy. In 3 cases (2 radiotherapy, 1 surgery) dermoscopy showed irregular brown pigmentation, areas with fingerprint-like structures and focal grayish dots. In these cases RCM demonstrated widespread dendritic bright cells at basal and suprabasal layers. No evidence of LM was detected on histology, but immunohistochemistry showed positive Langerhans' cells at suprabasal layers and dendritic HMB-45-positive melanocytes at the basal layer. The two cases that had been treated with cryotherapy did not show clear-cut dermoscopic criteria for LM. However, RCM was highly suggestive of melanoma that was histologically confirmed.

Conclusion: RCM can be useful in the monitoring of LM after treatment. In photodamaged skin, the visualization of widespread dendritic cells in basal and suprabasal layers by RCM may mimic a recurrence of LM. These structures correlate with activated nonmalignant HMB45-positive melanocytes and Langerhans' cells and may represent a pitfall in the confocal evaluation of these lesions.

Dermatoscopy of patients with radiation-induced pigmented basal cell carcinoma

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Introduction: Dermatoscopy is one of several non-invasive approaches that use to improve the diagnostic accuracy. It has been applied in the diagnosis of skin tumors such as Basal cell carcinoma (BCC).

Method: One hundred lesions from 39 patients (28 men and 11 women) were included in this study. All patients had a past history of childhood radiation therapy, primarily for treatment of tinea capitis. They presented with lesions that were morphologically highly suspicious to be pigmented BCC. Using a digital dermatoscope, all lesions were photographed and evaluated for the presence of Menzies BCC criteria and other features. All lesions were subsequently, underwent biopsy.

Results: When combined with clinical diagnosis, Menzies dermatoscopic criteria for BCC diagnosis have 100% sensitivity and 90.9% specificity. Tree like vessels, maple leaf-like structures and spoke wheel patterns were only seen in BCC lesions. Large gray-blue globules were seen in 76.4%, blue gray ovoid nest in 66.3%, arborizing vessels in 63%, maple leaf like pattern in 45%, ulceration in 43.8% and spoke wheel pattern in 28% of BCC lesions. The results confirmed the usefulness of dermatoscopy for better decision-making in the clinically suspected BCC lesions after radiation.

References

1. Soyer HP, Kerl H. Surface microscopy of pigmented cutaneous tumors. Ann Dermatol Venereol. 1993;120:15-20.
2. Menzies SW, Westerhoff K, et al. Surface microscopy of pigmented basal cell carcinoma. Arch Dermatol. 2000;136:1012-6.

A blueprint for staging of murine melanocytic lesions in genetically modified mice

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It is well known that when mice are engineered with mutations in molecular pathways that drive human malignant melanoma (MM) development, they too develop the disease. Little attention has been paid, however, to the natural history of naevi and melanomas developing in mouse models, and how this relates to the particular mutation the animal carries. Gaining the knowledge of the behaviour of each individual mouse lesion provides a relevant link for translation of information obtained from the mouse model to the corresponding clinical condition. The ultimate goal of the mouse MM model is to gain understanding of how certain mutations influence lesion dynamics, and to provide appropriate models for preclinical evaluation of melanoma therapies. We recently reported the development melanocytic lesions, along the spectrum of naevus to MM, in $Cdk4^{R24C/R24C}$::Tyr-$Nras^{Q61K}$ mice. We followed the development of lesions over time using digital photography and dermoscopy to correlate the clinical appearance with histopathologic features of melanocytic lesions developing in this model. We have identified essentially two types of lesions and studied their respective growth patterns. We developed a staging system, based on the level of extension in to the dermis, which offers a practical linkage between murine MM models and standard clinical diagnosis. We will discuss how we have used these methods to help us understand the development of melanomas in mice carrying other mutations (e.g., in the p53 and Arf genes) that result in a very different mode of tumour progression than we see in the original model.

Refining mole phenotype with anatomic distribution and dermoscopic patterns of clinically dysplastic nevi: A pilot study

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Introduction: Individuals with increased quantities of clinically dysplastic nevi (DN), such as those with the Atypical Mole Syndrome (AMS), have an elevated melanoma risk. Little is known, however, about the influence of qualitative mole phenotypic factors on melanoma risk, such as anatomic distribution and dermoscopic appearance of DN.

Objective: To compare the anatomic distribution and dermoscopic appearance of DN among AMS patients with or without a personal history of melanoma.

Method: We conducted a retrospective case-control study of clinical and dermoscopic images from 22 AMS patients with or without a personal history of melanoma (11 cases and 11 controls, respectively) using MoleMap software. The anatomic location and dermoscopic pattern for each DN was analyzed.

Results: 676 of 1822 lesions met criteria for DN. 391of 676 (58%) DN were located on cases compared to 285/676 (42%) located on controls. Cases had more DN on the legs than controls (29% vs. 15%, p = 0.009), and fewer DN on the chest (7% vs. 14%, p = 0.009). Disorganized globular DN and homogeneous DN, were more common among cases than controls (18% vs. 11%, p = 0.0126; 18% vs. 6%, p = 0.001, respectively). DN exhibiting peripheral network with central globules were more frequent in controls (20% vs. 3%, p = 0.002).

Conclusion: These data suggest that DN exhibit significantly different anatomic distributions and dermoscopic patterns among AMS patients with or without a melanoma history. These differences may be helpful in improving melanoma risk prediction among high-risk individuals with increased quantities of DN.

Dermatoscopy of genital warts

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Background: Genital warts may mimic a variety of conditions, thus complicating their diagnosis and treatment. The recognition of early flat lesions presents a diagnostic challenge.

Objective: We sought to describe the dermatoscopic features of genital warts, unveiling the possibility of their diagnosis by dermatoscopy.

Methods: Dermatoscopic patterns of 61 genital warts from 48 consecutively enrolled male patients were identified with their frequencies being used as main outcome measures.

Results: The lesions were examined dermatoscopically and further classified according to their dermatoscopic pattern. The most frequent finding was an unspecific pattern, which was found in 15/61 (24.6%) lesions; a fingerlike pattern was observed in 7 (11.5%), a mosaic pattern in 6 (9.8%), and a knoblike pattern in 3 (4.9%) cases. In almost half of the lesions, pattern combinations were seen, of which a fingerlike/knoblike pattern was the most common, observed in 11/61 (18.0%) cases. Among the vascular features, glomerular, hairpin/dotted, and glomerular/dotted vessels were the most frequent finding seen in 22 (36.0%), 15 (24.6%), and 10 (16.4%) of the 61 cases, respectively. In 10 (16.4%) lesions no vessels were detected. Hairpin vessels were more often seen in fingerlike ($x^2 = 39.31$, $P = .000$) and glomerular/dotted vessels in knoblike/mosaic ($x^2 = 9.97$, $P = .008$) pattern zones; vessels were frequently missing in unspecified ($x^2 = 8.54$, $P = .014$) areas.

Conclusions: There is a correlation between dermatoscopic patterns and vascular features reflecting the life stages of genital warts; dermatoscopy may be useful in the diagnosis of early-stage lesions.

Comparison of the sensitivity and specificity of the dermoscopic findings of alopecia areata, androgenetic alopecia, and cicatricial alopecia

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Introduction: The aim of this study was to compare the specificity and sensitivity of the dermoscopic findings of alopecia areata (AA), androgenetic alopecia (AGA) and cicatricial alopecia.

Method: A total of 99 patients with alopecia (37 AA, 39 AGA, 23 cicatricial alopecia) were admitted to our study. An informed consent form was signed by the patients and volunteers, followed by dermoscopic examination and photography.

Results: Yellow dots, exclamation mark, broken hairs, black dots were more specific for AA; reduced follicular ostia, white patches, white dots, blue-grey dots, red dots, keratin plugs, branching capillaries, tufted follicle and perifollicular scales were more frequently observed in cicatricial alopecia. Hair diameter diversity, perifollicular pigmentation and peripilar erythema were mostly observed in AGA. Yellow dots with short vellus hairs were observed both in AA and AGA. Reduced hair diameter was observed in significant ratio both in AA and cicatricial alopecia. Unlike previous studies, "yellow dots" were observed nearly equally both in AA and AGA. "Short vellus hair" was observed frequently both in AGA and AA. Moreover, we revealed "reduced hair diameter" in AA and "honeycomb-like erythema" in cicatricial alopecia, which have never been reported before in previous dermoscopic and trichoscopic studies that were carried in different alopecia types.

Conclusion: We think that our study is unique and important not only because it is the first study in literature to compare the clinical and dermoscopic findings of AA, AGA, and cicatricial alopecia, but also evaluating the specificity and sensitivity of these findings.

Dermoscopic analysis of synchronous melanoma: 5 years' experience at a tertiary skin cancer clinic in the United Kingdom

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The incidence of multiple primary melanoma ranges from 2-12% in various studies, with the majority of second primary melanomas detected within the first three years. In particular, many patients in this group have more than one melanoma at presentation (synchronous melanoma).

Clinicopathological studies of patients with multiple primary melanomas have found that most subsequent melanomas are less invasive than the initial melanoma, however many do not have the typical clinical or dermoscopic appearances of melanoma.

Patients with multiple benign naevi frequently show a predilection for certain dermoscopic patterns across all of their naevi (the concept of 'moles breed true'). Furthermore, dysplastic naevi or melanomas are frequently first detected due to their difference from surrounding benign naevi: the 'ugly duckling sign.'

We sought to determine whether synchronous melanomas in individual patients had similar dermoscopic profiles. Therefore, the dermoscopic appearances of synchronous

melanomas arising in patients attending a tertiary skin cancer clinic in the United Kingdom from 2005-2010 were reviewed.

We found that patients with synchronous melanomas may not show a predilection for any particular dermoscopic pattern. Therefore, unlike benign naevi, multiple primary melanomas do not 'breed true'; these 'ugly ducklings' need to be assessed, clinically and dermoscopically, on an individual basis.

Usefulness of dermoscopy during laser or IPL treatments

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Dermoscopy is a non-invasive instrumental method for the in-vivo study of pigmented skin lesions. This technique allows for viewing the parameters that would otherwise be invisible to the naked eye. Over recent years dermoscopy has proved to be extremely useful even on dermatological pathologies of an inflammatory origin and skin parasitosis. The introduction of the new laser and intense pulsed light systems has made it possible to cure pathologies difficult to treat with the instruments available to doctors ten years ago.

The use of dermoscopy has proved to be particularly important immediately after treatment for observing positive or negative results, any side effects, or early signs of relapses. In this way the patient and the doctor know with good approximation what they can expect from a specific treatment. The constant application of dermoscopy to laser and IPL treatment can also be useful for educational purposes in order to better understand how to interpret the dynamics of specific pathologies and the results which the different types of lesions and skin may have when crossed by a laser beam or luminous energy. The use of dermoscopy before surgical excision of a given melanocytic lesion with CO2 laser is also indispensable for medical—legal purposes. The dermoscopic image of the lesion immediately after treatment is important for demonstrating the absence or residual presence of pigment as well as the depth reached and the absence of any thermal damages. Dermoscopy is a particularly useful method for predicting the therapeutic success of the vascular treatments. The dermoscopic exam performed before treatment makes it possible to quantify the number and gauge of the vessels to be treated and the presence of any photodamage. The reaction of the vessel immediately after IPL or Nd-Yag laser treatment can be of two types: coagulation of the vessel with colour change from red to blue or contraction of the vessel with disappearance or reduction in size. These epiphenomena are clearly visible with the help of dermoscopy.

In our experience, dermoscopy has demonstrated to be an extraordinary instrument for determining any possible adverse events immediately after laser or IPL treatment. This allows physicians to provide suitable therapy in advance and inform the patient about any possible undesirable effects.

Our results demonstrated that dermoscopy can definitely be considered a first choice exam of great validity, above all due to the exactness and extreme accuracy in identifying the target to be hit. In most cases this has made it possible to immediately predict the treatment results. The dermoscopic exam performed some time after treatment demonstrated that it is indispensable for verifying the final results, especially in the cases of epithelial tumours treated with PDT. On concluding this study we suggest that the dermoscopic exam should be an integral part of all laser and IPL treatments.

Visual language in dermoscopy: A tool for novices and experts

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Visual language refers to the integration of shapes (symbols or signals), images (codes or objects) and words (text and speech) into a single communication unit.

The broad concept of shape can be subdivided into the basic elements of visual language: dot, line, shape and colour. These are the raw materials of all visual information. Dermoscopic images are made up of these basic elements.

Reading these elements abstractly can help both the learner and expert in dermoscopic diagnosis.

Does it look like melanoma? The effect of sunless tanning on dermoscopy of pigmented skin lesions—a pilot study

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Background: The use of dermoscopy has led to an improvement in diagnosing malignant melanoma (MM), which is important for the prognosis of the patient. Sunless tanning agents containing dihydroxyacetone (DHA) could lead to a decrease in UV exposure decreasing the risk for MM. Importantly, DHA has been reported to change the dermoscopic image and could thus endanger the diagnostic improvement of dermoscopy.

Objective: To investigate if the use of DHA can lead to changes that simulate a real, clinically relevant dermoscopic change suggesting malignant transformation in facial solar

lentigo/ initial seborrheic keratosis (SL/ISK) or in nevi on the body.

Method: Seven patients with 25 pigmented skin lesions (PLS) were photographed resulting in 38 dermoscopic images. Photographs were taken before, one week after and 1-2 months after the use of DHA. Two dermatologists separately evaluated the dermoscopic features according to Menzies' method (lesions on the body) or Pattern analysis (facial lesions).

Results: In facial PSLs unclear dermoscopic lesions were registered by both evaluators significantly more often after DHA use than before (42 vs.12 %, p=0,021 and 69 vs.19 %, p=0.001). Furthermore, follicular pigmentation that partly mimics that of lentigo maligna was also seen significantly more often after DHA use than before (80 vs.12%, p<0.001 and 69 vs. 15%, p<0.001) and in these instances the evaluators recommended a biopsy. Unclear lesions in nevi on the body were not significantly increased after DHA use.

Conclusion: Dermatologists that come across unclear dermoscopic findings, especially in facial PLS, should ask about the use of DHA.

A survey of US dermatology chief residents with regard to the nature, significance, and management of dysplastic nevi

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Introduction: A 2002 survey of fellows of the American Academy of Dermatology found substantial variation in the management of dysplastic nevi and attitudes toward their biological significance.

Objective: To assess the attitudes and practices of newly graduated US dermatologists with respect to dysplastic nevi and compare these findings with those from the 2002 survey.

Methods: An online survey was sent to 139 chief residents of US Dermatology Training Programs.

Results: A 59% response rate was achieved. All residents accept the dysplastic nevus as a clinical entity, and all report access to a dermatoscope in clinic. 98% agree that dysplastic nevi mark persons at increased risk for melanoma, compared to 59% of AAD fellows in 2002. 94% of chief residents use dermoscopy to manage pigmented lesions, compared to 23% of AAD fellows in 2002. Although 92% of chief residents report receiving dermoscopy training, only 48% train with a pigmented lesion specialist. Among those training without a specialist, less than half receive classroom or bedside teaching compared to 77% of those who train with a specialist. Of those who train with a specialist, 77% agree that dermoscopy can help differentiate melanoma from benign lesions, compared to 46.5% of those who train without a specialist (p=0.0067).

Conclusion: Residents are receiving a more unified message regarding the biological significance of dysplastic nevi and nearly all use dermoscopy as a diagnostic tool. Additionally, specialists can provide dedicated instruction to trainees fostering greater confidence in the utility of dermoscopy for the management of pigmented lesions.

Reference

1. Tripp JM, Kopf AW, Marghoob AA, Bart RS. Management of dysplastic nevi: a survey of fellows of the American Academy of Dermatology. J Am Acad Dermatol. 2002;46:674-82.

Dermoscopy in dark-skinned people: the experience of the National Institute for Health, Migration and Poverty (NIHMP) in Rome (Italy)

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Little is known about dermoscopy in dark-skinned people and whether it can influence diagnostic performance. Conditions as diverse as inflammatory and infective dermatoses, tumours and pigmented and non-pigmented skin lesions have been documented in white population but few studies report dermoscopic features in dark skin. Moreover, clinical diagnosis in skin of darker color is made difficult by unusual presentations, annular patterns and absence of erythema.

The aim of this study is to assess whether dermoscopy can be a useful diagnostic tool in dark skinned population and compare dermoscopic features in the different phototypes.

Migrants of ethnic skin attending the dermatology department of NIHMP in Rome affected by inflammatory and infective dermatoses, tumours and pigmented skin lesions underwent dermoscopic examination after clinical evaluation.

We present a case series and document how the routine use of dermoscopy can guide the dermatologist in diagnosing skin lesions of difficult interpretation and accurately classify pigmented lesions.

References

1. Bowling J, Argenziano G, Azenha A, Bandic J, Bergman R et al. Dermoscopy key points: recommendations from the international dermoscopy society. Dermatology. 2007;214:3-5.
2. de Giorgi V, Trez E, Salvini C, et al. Dermoscopy in black people. Br J Dermatol. 2006;155:695-9.

Apoptosis in seborrheic keratoses: an open door to a new dermoscopic score

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Background: The aetiology of seborrheic keratoses (SK), the most common benign epithelial tumours, and any relationship with malignancy are not yet known. As a protective anti-cancer mechanism, apoptosis reflects cellular loss as a reaction to proliferative activity.

Objectives: The objective of this study was to quantify apoptosis in different SK types (acanthotic, hyperkeratotic, reticulated, irritated, and clonal) and correlate the dermoscopic picture with apoptosis rate.

Methods: After a qualitative and quantitative analysis of dermoscopic images, we defined a new quantitative dermoscopic score (C3V2F, crypts, millia cysts, colours, hairpin vessels, irregular vessels, fissures) from 0 to 22, which enabled us to establish cut-offs correlating with apoptosis rates.

Results: All five SK forms were associated with lower apoptosis rates compared to normal skin. A C3V2F score >10 and greater number of crypts and colours reflected a higher apoptosis rate, which implies a benign character of evolution. In contrast, the presence of irregular vessels on more than 50% of the lesion surface implied a lower rate of apoptosis and probably associated with a risk of malignant transformation. Based on the dermoscopic information, we used multiple regression to establish a model for estimating the rate of apoptosis with a 0.7 prediction interval (approximately 1 standard deviation).

Conclusions: The new C3V2F score could be valuable for the clinical evaluation of possible SK prognosis and decisions regarding excision.

Evaluating the first step of the dermatoscopic 2-step method in non-sun damaged and chronically sun damaged patients

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Usage of the diagnostic two-step method in teaching dermatoscopy is widely accepted and was approved in a consensus meeting in 2003. The differentiation of melanocytic and non-melanocytic lesions ("the first step") contains the risk of misclassification and can therefore lead to wrong diagnoses. This risk is inherent especially when applied by dermatoscopists at a beginning level, the most frequent users of published algorithms.

The present study aimed to evaluate the frequency of misclassifications according to the first step. We included 707 consecutive cases from 553 patients (mean age: 54.7 years, SD: ±18.1 years) with (n=331) and without (n=222) chronically sun-damaged skin. The cases were collected from a tertiary referral center at a University hospital in Europe and from a Primary Care Skin Cancer Clinic in Brisbane (Australia). Dermatoscopic images were evaluated in a blinded fashion for the presence of features described in the 2-step algorithm to determine their melanocytic or non-melanocytic origin. Mucosal, genital and non-pigmented lesions were excluded. The sensitivity of the first step was 97.1% for patients with chronic sun-damage and 96.8% for patients without or moderate sun damaged skin. The specificity was 33.6% for patients with chronic sun-damage and 67.9% for patients without or moderate sun-damaged skin. The most common reasons for misclassification were a pigmented network in 69 cases and an absence of any given features in 74 cases.

References

1. Argenziano G et al. Dermoscopy of pigmented skin lesions: results of a consensus meeting via the Internet. J Am Acad Dermatol. 2003;48(5):679-93.
2. Marghoob AA, Braun R. Proposal for a revised 2-step algorithm for the classification of lesions of the skin using dermoscopy. Arch Dermatol. 2010;146(4):426-8.

Pigmented actinic keratosis: Brazilian cases

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Pigmented actinic keratoses play a difficult role in the differential diagnosis of lentigo maligna on the face. However some helpful hints as neighborhood sign, rough appearance, abrupt interruption of pigment pseudo network could help in such diagnosis. The authors present a visual set of lesions illustrating this concept.

References

1. Schiffner R, Schiffner-Rohe J, Vogt T, et al. Improvement of early recognition of lentigo maligna using dermatoscopy. J Am Acad Dermatol. 2000;42:25-32.
2. Cognetta AB, Stolz W, Katz B, Tullos J, Gossain S. Dermatoscopy of lentigo maligna. Dermatol Clin. 2001;19:307-18.
3. Katz B, Rao B. Pigmented actinic keratosis. In: Marghoob AA, Braun RP, Kopf AW. Atlas of Dermoscopy. London: Taylor & Francis, 2005: 86-90.

4. Zalaudek I; Ferrara G, Leinweber B, Mercogliano A, D´Ambrosio A, Argenziano G. Pitfalls in the clinical diagnosis of pigmented actinic keratosis. J Am Acad Dermatol. 2005;53:1071-4.

Observation of a five year high risk clinic for primary melanoma

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Introduction: While Australia has the highest worldwide melanoma incidence, certain subpopulations are at extreme risk and early melanoma diagnosis is crucial. Knowledge of the role of clinical imaging techniques in this group is somewhat limited.

Objective: To determine for high risk patients the natural history and role of total body photography (TBP) and sequential digital dermoscopy imaging (SDDI) in early primary melanoma detection.

Method: 312 patients at extreme melanoma risk were monitored six monthly after baseline TBP over a 5 year period. Inclusion criteria were ≥1 of: (1) CDKN2A or CDK4 mutation; (2) ≥3 1st/2nd degree relatives with prior melanoma and a personal history; (3) Dysplastic Naevus Syndrome and a melanoma history; (4) History of ≥2 primary melanomas.

All patients were screened against TBP at each visit with SDDI short term (3 months) and long term (≥6 months) monitoring employed following established criteria and atypical lesions excised.

Results: The median follow-up time was 3.5 years (IQR: 2.4-4.2 years). 77 primary melanomas were detected, 16 at baseline visit and 61 subsequently. Median Breslow thickness was in situ melanoma (IQR: in situ-0.60mm).

39.3% were detected using TBP and 39.3% with SDDI. Six melanomas were ≥1mm Breslow thickness (including three desmoplastic and one scalp melanoma). 142 BCCs and 64 SCCs were excised and the overall benign/malignant excision ratio was 1.4:1 and 4.2:1 for melanocytic lesions.

Conclusion: Monitoring extreme risk patients with TBP and SDDI assisted with the effective early diagnosis of primary melanoma. Hyper-vigilance for difficult to detect thick melanoma subtypes is crucial.

Automated detection and analysis of pigment networks, streaks and scale for melanoma diagnosis on dermoscopic images

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Introduction: With recent advances in skin imaging technologies there has been an increasing demand for image processing techniques in computer aided-diagnosis of pigmented skin lesions using dermoscopy images. Our work follows a relatively new trend in clinical dermatology to identify specific 'dermoscopic structures' such as streaks, scale, and pigment network, which are used to aid the diagnosis of malig nant melanoma.

Method: Irregular pigment network and streaks are two important positive features of melanoma and scale seems to be a negative feature based on our studies on the dry polarized contact dermoscopy. We present a novel approach to detect, segment, analyze and visualize pigment network, streaks, and scale in dermoscopic images, according to their clinical definitions. Three important dermoscopic structures (pigment network, streaks, and scale) are modeled based on the structural (shape), geometric (spatial arrangement), chromatic and textural features defined by experts in dermoscopy. Our approach has several steps; pre-processing that includes image enhancement and automatic skin lesion segmentation, object detection using morphologic techniques, and feature extraction and classification into irregular or regular structures. The presence and absence of these structures can be used for malignancy detection in skin lesions.

Results: Our results over 945 images show an accuracy of 92% on pigment network detection, 82% on typical-atypical pigment network classification, 78.5% on streaks detection, 83.5% on regular-irregular streaks classification and 84% on scale detection.

Melanoma invasiveness depends on preventive behavior and total number of nevi. A retrospective study in 176 patients

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Introduction: High melanoma-related mortality rates remain a problem in Poland. The aim of the study was to evaluate melanoma invasiveness depending on dermoscopy screenings, preventive behavior and clinical findings.

Method: A retrospective study based on revised medical records between years 2004-2011 and completed questionnaires of patients diagnosed with melanoma.

Results: In the analyzed timeframe 176 patients were diagnosed in our department with melanoma (57%-F, 43%-M). A total of 38,4% were diagnosed as melanomas in situ. Among invasive melanomas mean Breslow thickness was 1.03 mm. About 80% of melanoma patients were phototype I-II, what corresponds to usual numbers in Polish population. A history of sun burns recorded 83,6% of patients with melanoma and 69,3% of healthy control. About 60% of patients had more than 50 nevi. In this group mean Breslow thickness was 1,32 mm and 46,6% of melanomas were in situ. In patients with less than 50 nevi mean Breslow thickness was 2,25 mm and 32,7% of melanomas were in situ. About 60% of patients were never screened for melanoma. In this group 35% of melanoma were in situ, and mean Breslow thickness was 1,77mm (1,35 mm—F, 2,77 mm—M). Within patients screened for melanoma at least once 49% of melanomas were in situ and mean Breslow thickness was 0,89 mm -F and 1,18 mm—M patients.

Conclusions: Thickness of melanoma (in Breslow scale) is significantly lower in patients who had a history of at least one dermoscopy screening prior to diagnosis and in patients who have multiple nevi.

Dermoscopy use in the next generation: A survey of dermatology trainees

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Introduction: The use of dermoscopy is rapidly expanding. The dermatoscope is now used in everyday practice. We sought to investigate the use of dermoscopy in Australian dermatology trainees.

Method: An invitation to complete a web-based survey was sent via e-mail. The survey was composed of a combination of questions from a standardized survey of the International Dermoscopy Society, a previous published dermoscopy survey of Australian consultant dermatologists and questions posed by us. Two-sided Fisher's exact tests, chi-square tests and exact chi-square tests for trend were used to assess differences between Australian consultant dermatologists (n=99) and trainee dermatologists (n=44). A significance level of 0.05 was assumed. The statistical analysis was conducted using SPSS release 18 (IBM SPSS Inc, Chicago, IL).

Results: The response rate was 55% (44 out of 88 trainees). There were 31.8% (n=14) male and 68.2% (n=30) female respondents. The mean age was 33 years (SD=5.41). All respondents used dermoscopy with the majority (54.5%, n=24) using a dermatoscope for 3-5 years. When asked whether a dermatoscope was an essential tool for a trainee dermatologist, 95.5% (n=42) responded yes. When comparing consultants and trainees, there was a significant difference in their answers when questions concerning identifying melanoma early in the curable stage, use in non-pigmented tumours, helping to improve record keeping, documentation for medical liability and anticipation for future use of dermoscopy were asked ($p<0.05$).

An index of diagnostic difficulty for malignant melanoma

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Introduction: Comparing diagnostic skills for identifying malignant melanoma strongly depends on characteristics of the tumors analyzed. For benchmarking diagnostic studies on melanoma the average tumor thickness is neither representing clinical nor dermoscopic difficulty of diagnosis. It is evident that an investigator encountering only large, dark and asymmetric lesions has to face less diagnostic problems as compared to another one excising small, symmetric and possibly hypopigmented melanoma, too. Most important for cost efficiency in health care systems is the benign-malignant ratio of excisions with suspect of melanoma. Comparing the ratios of different investigators cannot be made without taking diagnostic difficulty of the lesions into account.

Methods: A two-step procedure is presented including clinical as well as dermoscopic features contributing to the diagnostic difficulty of a given lesion. First, a lesion must be considered worthy of examination by dermoscopy. An index of clinical diagnostic difficulty characterizes these lesions. In a second step, certain dermoscopic criteria must be present to raise suspicion of malignancy. A score of features is presented to define diagnostic difficulty of melanoma for both steps. The index of diagnostic difficulty ranges from zero to infinite and thus comprises easy-to-diagnose classical

melanoma as well as so-called featureless melanoma, fairly impossible to spot in the skin. Examples are demonstrated.

Conclusion: In future studies, the average index of difficulty of melanoma with the study population should be calculated in order to compare benchmark results of various centres.

Is reflectance confocal microscopy a useful aid in diagnosis of regressive lesions?

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Regressive cutaneous lesions are a significant diagnostic challenge as they lack distinct clinical and dermoscopic features. Reflectance confocal microscopy (RCM) is a tool for non-invasive diagnosis of melanocytic skin lesions that has been shown to be useful in diagnosis of non-pigmented skin lesions. Little is known, however, about the value of RCM in diagnosis of regressive lesions. We will present a case series of regressive lesions including clinical, dermoscopic and RCM images as well as histopathological diagnoses, and discuss specific features that, in our view, might be of use in diagnosis of these challenging lesions.

Clinical and dermatoscopic characteristics of melanocytic nevi in Turkish young people with 18-25 years old

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Background and aim: Melanoma is a malign tumor of the skin. Malign transformation in the already existing nevus is the most seen etiological factor for melanoma. This study was done to determine the clinical and dermatoscopic characteristics of melanocytic nevi in Turkish young people with 18-25 years old.

Material and methods: A total of 688 young people from the patients and students of Gülhane Military Medical Academy, School of Medicine, and Department of Dermatology were included in the study. A questionnaire was applied including age, sex, sunblock use, and sunburn history. On clinical examination, we evaluated number of nevi, location of nevi and skin type. Nevi that are equal or greater than 3mm were examined dermatoscopically, recorded and scored by using pattern analysis, ABCD total dermoscopic score, 7 point checklist, Menzies algorithm, 3 point checklist and CASH algorithm.

Results: Totally 668 young people were physically examined in this study (268 of which were women and 400 of which were men). The most common skin phototype in both sexes was type 3 (91.6% of women, 85.25% of men). A total of 453 nevi were examined dermatoscopically. The most common localization of nevi was on the head and neck region (n=144; 31.8%), followed by anterior trunk and abdomen (n=128; 28.3%), back (n=122; 26.9%) and extremities (n=45; 9.9%). The most common dermatoscopic global feature was the globular pattern (n=135; 29.8%), followed by reticular pattern (n=88; 19.4%), and cobblestone pattern (n=64; 8.8%).

Conclusion: This is the first study about the characteristics of melanocytic nevi at this age group and lays the foundation for future studies that will elucidate the relationship between nevi, dermatoscopic pattern and the other factors in a population-based cohort.

Dermoscopy of alopecia neoplastica

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Introduction: Alopecia neoplastica is a rare disorder that in most cases represents metastatic breast cancer. Dermoscopy might be a useful tool in clinical evaluation.

Case report: A 72 year-old woman reported asymptomatic localized hair loss with a progressive course during the past 4 months. She presented a past history of breast adenocarcinoma diagnosed 5 years ago. On physical examination there was a mildly indurated, slightly erythematous plaque of alopecia on parietal scalp. Dermoscopy reveals only overlying telangiectasias diffusely distributed. Biopsy proved a metastatic carcinoma compatible with a mammary origin.

Discussion: In woman, breast cancer is the most common malignancy that metastasizes to the skin. Alopecia neoplastica is a rare asymptomatic manifestation of cutaneous metastases and it might present as single or multiple slightly erythematous round plaques of alopecia, usually with peripheral telangiectasias. The clinical picture may mimic several dermatoses and therefore the diagnosis might be delayed. Dermoscopy might be an important diagnostic tool, mainly on the exclusion of other dermatoses with already described dermoscopy patterns such as alopecia areata, which presents for example short "exclamation mark" hairs and yellow dots, discoid lupus erythematous, that shows follicular plugs and red dots, and tinea capitis, which exhibits broken and comma hairs. In conclusion, alopecia neoplastica is an uncommon cutaneous disease. Although it lacks a characteristic dermoscopic pattern, dermoscopy might be helpful in its evaluation especially when dermoscopic features of other common dermatoses are not present and should lead dermatologists to perform histologic examination in such cases.

Acral melanoma in Spain; retrospective study of 275 cases in a referral center

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Introduction: Acral melanomas (AM) can be misdiagnosed in early stages and it has postulated that the delay in the detection could be the main cause of a poor prognosis.

Methods: Retrospective clinical-prognostic, dermoscopic and histopathologic review of AM in a referral unit from 1986 to 2010.

Results: 275 AM were included (61% women; mean age of 56y, range 12-96). The most frequent location was on feet (83%), 60% were ulcerated 20% achromic. Dermoscopically (68 cases) multicomponent global pattern was the most frequent (35%), parallel ridge pattern could be identified in up to 50% of cases. More than 40% presented blue whitish veil and streaks. 60% of achromic tumours showed milky red areas and/or atypical vessels, and were correlated to higher Breslow index. At the time of consultation in our Unit all showed dermoscopic clues of malignancy. Histopathologically they consisted in acral lentiginous melanoma (ALM) 57%, superficial spreading (SSM) 30% (75% women), and nodular (NM) 6%. 24% were in situ melanomas whereas the mean Breslow thickness of invasive cases was 3.02mm. In a mean follow-up of 55.16 months 27% died due to melanoma. Prognostic factors by multivariate analysis were age at diagnosis, Breslow, and histopathologic subtype. ALM and NM presented a poorer outcome than SSM (OR 10.95, p0.02).

Conclusions: Diagnosis of AM in our population is delayed and dermoscopy could help to identify difficult lesions, especially achromic tumours. In addition to misdiagnosis, subtypes of ALM and NM presented a poorer prognosis after been adjusted by age and Breslow.

Dermoscopy of common inflammatory skin diseases of the face

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Introduction: Skin inflammation of the face can be caused by different factors such as infections, allergies, physical and chemical agents and reactions due to medications. Skin inflammatory diseases are often accompanied by patches, blisters, dryness of the skin, burning and itching, which affect the appearance and texture of the skin. Differential diagnosis may be difficult. We investigated, whether dermoscopy may aid differential diagnosis of inflammatory skin diseases of the face.

Method: A total of 50 patients with nummular lesions on the face were included into the study (pemphigus vulgaris, pemphigus foliaceous, discoid lupus erythematosus, subacute cutaneous lupus erythematosus, atopic dermatitis, psoriasis, seborrheic dermatitis, rosacea, tinea, pityrosporum folliculitis, sycosis). Videodermoscopy was performed with Fotofinder 2.

Results: In dermoscopy of pemphigus vulgaris and pemphigus foliaceous we observed: bloody-red, sharply demarcated, polygonal areas, glomerular vessels and peripherally attached linear scales. In discoid lupus erythematosus most characteristic dermoscopy features were: thick arborizing vessels, fine scaling and large, keratotic plugs. In seborrheic dermatitis fine arborizing vessels and yellowish scaling were most prominent. Dermoscopy of psoriasis showed regularly distributed globular vessels. UV-enhanced dermoscopy (UVED) may be beneficial in differential diagnosis of *Microsporum canis* infections and *Pityrosporum folliculitis*.

In conclusion, dermoscopy may be applied in differential diagnosis of inflammatory diseases of the face.

Cutaneous malignant melanoma metastases (CMMM): dermoscopic features and differential diagnosis

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Cutaneous metastases of melanoma can be confused with other skin lesions. Dermoscopy could be helpful in the differential diagnosis.

We described the distinctive dermoscopic patterns of CMMM assessing their sensitivity and specificity performing a retrospective study of 146 dermoscopic images of CMMM from 42 patients attended in our institution since 2002 to 2009. First, two investigators established six dermoscopic patterns of CMMM. The correlation of 75 dermoscopic images with their distinctive patterns was assessed by 4 independent dermatologists. Finally, a pool of 163 dermoscopic images including CMMM and non-metastatic lesions were evaluated by the same four dermatologists in order to assess

the diagnostic utility of the dermoscopic patterns to recognize CMMMs.

The six dermoscopic patterns of CMMM were blue nevus-like, nevus-like globular and non-globular, angioma-like, vascular and unspecific. When CMMM were classified accordingly to these patterns, agreement between the investigators and the four dermatologists ranged from $\kappa = 0.56$ to 0.7. The interobserver agreement was good (> 80% for angioma-like, nevus-like and blue nevus-like patterns).

71 CMMM, 16 angiomas, 22 blue nevus, 15 malignant melanoma (unspecific or globular pattern), 11 seborrheic keratosis, 15 melanocytic nevus with globular pattern and 13 pink lesions with vascular pattern were evaluated by 4 dermatologists showing an overall sensitivity of 68% (between 54.9-76%) and specificity of 80% (between 68.5-93.5) for the diagnosis of CMMM that varies according to the experience of the observer and point out the difficulty in the identification of some metastases. Nevertheless, the majority of the lesions were correctly identified as CMMMs.

References

1. Bono R, Giampetruzzi AR, Concolino F, et al. Dermoscopic patterns of cutaneous melanoma metastases. Melanoma Res. 2004;14(5):367-73.
2. Minagawa A, Koga H, Sakaizawa K, et al. Dermoscopic and histopathological findings of polymorphous vessels in amelanotic cutaneous metastasis of pigmented cutaneous melanoma. Br J Dermatol. 2009;160:1134-6.

An innovative primary care physician training program in dermoscopy in underserved and rural communities in Pennsylvania

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Pennsylvania is a very rural state within the United States with many health care concerns. Of the 67 counties within the Commonwealth, 52 are designated as primary care shortage areas with significant concerns of access to primary health care services. The economic backbone of this state is agriculture, lumbering and mining, which require long hours of exposure to the environment. Health indices of the Commonwealth demonstrate an increase in skin cancer and melanoma incidence. With a minimum of six months or greater to schedule an appointment with a dermatologist, the Department of Family Medicine and The Penn State Hershey Melanoma Center developed an education and training program for primary care physicians in dermoscopy to:

Develop an educated primary care physician workforce in rural and underserved areas skilled in the use of dermoscopy

Increase access to screening and early detection interventions for skin lesions through primary care to prevent progression of the disease

Decrease cost to health care interventions through early detection and better diagnosis accuracy

This workshop describes the educational content, instructional methods and evaluative processes used to train primary care physicians to become competent and skilled in the use of dermoscopy and confident in the delivery of primary and secondary interventions. The facilitator also explore the lessons learned in the pilot dermoscopy training session implemented in the Department of Family and Community Medicine at Penn State College of Medicine which served to frame the changes in curriculum and instructional media applied in the first training series.

References

1. Argenziano G, Puig S, Zalaudek I, et al. Dermoscopy improves accuracy of primary care physicians to triage lesions suggestive of skin cancer. J Clin Oncol. 2006;24:1877-82.
2. Carli P, De Giorgi V, Crocetti E, et al. Improvement of malignant/benign ratio in excised melanocytic lesions in the 'dermoscopy era': A retrospective study 1997-2001. Br J Dermatol. 2004;150:687-92.

Teledermoscopy using handheld dermoscope coupled with smartphone

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New mobile phones, so-called smartphones, with built-in digital cameras used in combination with customized dermoscopes can hopefully be used to carry out teledermoscopic evaluations of suspicious skin lesions. In this study, we included 69 melanocytic and non-melanocytic lesions in which malignancy was suspected upon clinical and dermoscopic examination by a dermatologist during a face-to-face visit. Prior to biopsy or excision, clinical and dermoscopic digital photographs were taken with a smartphone and a dermoscope that could be fitted directly onto the smartphone. The suspected diagnosis, the level of diagnostic difficulty and the management decision was provided and later

compared to the histopathological report. Furthermore, the image quality was assessed. These same parameters were also provided by two experienced dermoscopists who independently reviewed the clinical and dermoscopic photographs together with relevant clinical information but without seeing the patient and without knowledge of the histopathological report. We will report on the diagnostic accuracy of the dermatologist meeting the patient face-to-face compared to histopathology, the diagnostic accuracy of the two teledermatologists, the interobserver agreement between the two teledermatologists and between the teledermatologists and the dermatologist meeting the patient face-to-face. We will also present the image quality of this innovative dermoscopic technology and discuss the potential of using this method for teledermoscopy between primary care physicians and dermatologists.

Teledermoscopy in Serbia: more than two years of experience in five centers

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Introduction: Teledermoscopy is a rapidly developing field of dermatology and teledermatology. Many studies have described its advantages and disadvantages with special emphasis to shorten waiting lists, make dermatologist consultation easy accessible and in reducing the costs of examination of pigmented skin lesions (PSL). A non-commercial teledermatology network based on store-and-forward operation was established in Serbia in 2009.

Method: Six Dermatologists, two surgeons and three general practitioners trained in dermoscopy from five towns in Serbia equipped with Teleskin Teledermoscopy System® obtained clinical and dermoscopic images of the suspicious PSL. The images were sent using store-and-forward system in order to obtain expert second opinion and recommendation concerning excision of the PSL.

Results: Total of 2528 patients with 3153 PSL was enrolled into the study from July 1st 2009.—December 1st 2011. Dermoscopical diagnoses were: 1800 melanocytic nevi, 84 melanomas, 697 seborrheic keratoses, 122 angiomas, 87 dermatofibromas and 341 basocellular carcinomas. Interobserver agreement between dermatologists and experts was a perfect agreement (first and second opinion) for melanoma K value > 0.89 (0,79—0,92), for melanocytic nevus K value > 0,92 (0,85—0,94), for seborrheic keratosis K value > 0,89 (0,75—0,92), for angioma K value > 0,93 (0,78—0,96), for dermatofibroma K value > 0,86 (0,49—0,94) and for basal cell carcinoma K value > 0,95 (0,84—0,98). Between general practitioners and experts, moderate to perfect (0,60—0,92) agreement was obtained for most of the lesions. And at the end, between surgeons and experts, K value was substantial to perfect (0,67—0,83) for all lesions.

Conclusion: In our experience, this large teledermoscopy study provided data that teledermoscopy is more reliable concerning melanocytic lesions vs. non-melanocytic lesions. Apart from its teaching potential, the use of teledermoscopy as a triage tool offers the potential to improve the healthcare access and delivery, both in general practice and on specialist level.

References

1. Tan E, Oakley A, Soyer HP, Haskett M, Marghoob A, Jameson M and Rademaker M. Interobserver variability of teledermoscopy: an international study. Br J Dermatol. 2010;163: 1276-81.
2. Fabbrocini G, Balato A, Rescigno O, Mariano M, Scalvenzi M, Brunetti B. Telediagnosis and face-to-face diagnosis reliability for melanocytic and non-melanocytic 'pink' lesions. J Eur Acad Dermatol Venereol. 2008;22:229-34.

Dermoscopic findings in biopsy-proven poromas: A case series

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Background: Poromas are often misdiagnosed as skin cancers.

Objectives: To describe clinical and dermoscopic features of biopsy-proven poromas.

Methods and materials: Biopsy-proven poromas were retrospectively collected from image-database of four hospitals. Data collected included patient's demographics and anatomic location of lesions. Clinical and dermoscopic images were analyzed.

Results: In all, 19 patients (10 males, mean age 64, range 35-90 years) contributed 19 biopsy-proven poromas. Nine lesions (47%) were on the foot and 10 (53%) on leg, thigh, trunk or face. Mean size was 7.8 mm; plantar poromas were larger than poromas elsewhere on the body (10 versus 5 mm, p<0.01). On dermoscopy, common vascular patterns were glomerular vessels in 10 cases (53%), looped in 9 (47%) and leaf and flower-like vessels in 8 (42%). Additional dermoscopic features included structureless areas in 15 cases (79%) and interlacing white cords in 9 (47%). In retrospective search through image-database of 5200 excised lesions, interlacing white cords were found in 2of 201 melanomas (2%).

Conclusions: Among biopsied poromas, about half arose on non-acral skin. Leaf and flower-like vessels may be a unique dermoscopic feature of poromas. While interlacing white cords are commonly seen in poromas, they are rarely seen in melanoma.

Grey-blue areas in the melanocytic lesions: how important are they?

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Introduction: The dermatoscopic structures, which are suggestive for melanoma, are in general well defined and some of them have a stronger diagnostic value. The blue or grey-blue colour can be found in some melanomas but also in some melanocytic nevi.

Method: We evaluated the dermoscopies of 152 melanomas and 123 atypical nevi recommended for excision. The melanoma group was divided in four subgroups in accordance with the thickness of melanoma: in situ, under 1 mm, between 1-2 mm and more than 2 mm. We registered the following dermatoscopic structures: grey-blue areas with different patterns (globules, net with lines and holes, structureless, grey dots with peppering aspect), blue-whitish veil and white areas. We analyzed the frequency of every structure in each group of lesions.

Results: We found that grey-blue areas are high suggestive for melanoma in all the four types of patterns: the reticular ones are most frequently encountered in thin melanomas and the structureless blue areas in thicker melanomas. The whitish-blue veil was most frequently found in the thicker melanomas. The blue areas were also found in dysplastic nevi but in a lower degree in comparison with melanomas.

Conclusions: The grey-blue structures are relevant for melanoma in high degree, even for very thin melanomas.

References

1. Bassoli S, Borsari S, Ferrari C, et al. Grey-blue regression in melanoma in situ-evaluation on 111 cases. J Skin Cancer. 2011; 2011:180980.
2. Massi D, De Giorgi V, et al. Diagnostic significance of the blue hue in dermoscopy of melanocytic lesions. Am J Dermatopathol. 2001;23(5):463-9.

Is it necessary to perform eye examination for patients with cutaneous dysplastic nevi?

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Introduction: Regular dermatological examination for patients with dysplastic nevi is indicated. However, the literature on whether those patients should also be examined by ophthalmologists or not regarding a relation between ocular melanoma and cutaneous dysplastic nevi is limited. In this study we aimed to screen the eyes of our patients who had been followed-up with the diagnosis of cutaneous dysplastic nevi.

Method: We examined the eyes of 110 patients with dysplastic nevi (47 had the diagnosis of dysplastic nevus syndrome type A, B, C, D1 or D2) for any lesion and compared the results with a control group consisted of 110 sex, age and skin-type matched patients without a diagnosis of dysplastic nevi or melanoma.

Results: No ocular melanoma was detected in any of the groups. The frequency of the conjunctival nevi, iris nevi, choroidal nevi and conjunctival acquired melanosis were similar in both groups. Iris freckles were detected more frequently in the study group. Conjunctival racial hyperpigmentation was detected more frequently in the control group (p<0.05).

References

1. Toth-Molnar E, Olah J, Dobozy A, Hammer H. Ocular pigmented findings in patients with dysplastic naevus syndrome. Melanoma Res. 2004;14(1):43-7.
2. Hurst EA, Harbour JW, Cornelius LA. Ocular melanoma: a review and the relationship to cutaneous melanoma. Arch Dermatol. 2003;139(8):1067-73.

Dermatoscopic features of a series of non-facial non-acral lentiginous growth pattern melanomas

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Introduction: Dermatoscopic features of facial lentigo maligna (LM) and acral lentiginous melanoma are well described. Lentiginous growth pattern (LGP) melanoma, including LM, is increasing in diagnostic incidence but the

dermatoscopic features of non-acral non-facial LGP melanomas are not yet described. Early recognition of LGP melanomas is important, as these tend to lack BRAF mutations that are a target of therapies for metastatic melanoma.

Method: A 12-month case series of melanomas detected in a primary care skin cancer clinic was imaged clinically and dermatoscopically before biopsy. Dermatoscopic images were assessed for proposed clues to LGP melanoma, including: lentigo-like pigment patterns associated with a lack of lentigo-like border; atypical follicular pigmentation patterns; geometric/polygonal pigment patterns and grey structures. The results of this were compared for statistical significance between groups of non-facial non-acral melanomas categorised by the following histologically reported growth patterns: LGP, mixed lentiginous and nested growth pattern, and superficial spreading melanoma (SSM).

Results: 66 melanomas (12 invasive) were diagnosed in 59 patients: 11 facial, 1 acral, 54 non-facial/non-acral (23 LGP, 13 mixed pattern, 14 SSM, 1 desmoplastic, 3 not specified). The following were associated with non-facial non-acral LGP and mixed pattern melanomas over SSM: a disorganized lentigo-like pigment pattern lacking a lentigo-like border ($p<0.001$); atypical follicular pigmentation patterns ($p<0.05$); and rhomboidal shapes ($p<0.05$). Mixed pattern melanomas and SSM were more likely to have structureless pink areas than were LGP melanomas ($P<0.05$). SSM were more likely to be invasive at diagnosis ($p<0.05$).

Conclusion: LGP melanomas may have a specific pattern of dermatoscopic features. Further multicentre study is required.

Dermoscopic features of clear-cell acanthoma

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Background: Clear-cell acanthoma is a rare benign epidermal tumour. The dermoscopic features appear fairly unique.

Objectives: To delineate the key features of clear-cell acanthoma on dermoscopy.

Methods: We reviewed the dermoscopic features of all published cases of clear-cell acanthoma in the literature to date and report 4 new cases of our own.

Results: All cases featured scattered pinpoint dotted or larger red globules. The majority of cases showed the typical 'string of pearls' or linear arrangement. This characteristic linear arrangement of red globules is ultimately reticular and strikingly symmetric when fully developed. In some cases, the pattern is incomplete or partly developed but still recognisable. Other features such as crusting, hyperkeratosis or a peripheral collarette may be present.

Conclusion: Clear cell acanthoma has distinctive dermoscopic features that help in reaching a confident clinical diagnosis and minimizing the need for biopsy.

Reference

1. Degos R, Civatte J. Clear-cell acanthoma. Experience of 8 years. Br J Dermatol. 1970;83:248-54.

Dermoscopic characteristics of Merkel cell carcinoma

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Merkel cell carcinoma (MCC) is an aggressive cutaneous malignancy with a high mortality rate. Diagnosis is often delayed. No case series analysing the dermoscopic features of MCC have been published. Clinical and dermoscopic images of biopsy proven MCCs were analysed in a retrospective manner with existing dermoscopic criteria being scored independently by three dermatologist. The most frequent clinical features were cherry red colour, shiny and well-circumscribed nodules. Significant dermoscopic features include linear irregular and poorly focused vessels, milky pink areas, white areas and architectural disorder. Pigmented structures were absent for all lesions. The dermoscopic features described here should help achieve earlier diagnosis of MCC, which facilitates timely treatment.

Dermoscopic aspects of cutaneous gastric carcinoma metastases

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Cutaneous metastases might be the initial presentation of internal malignancies in 22% of patients. 1 Up to 10% of all visceral malignant tumors develop cutaneous metastases, which represent 2% of all skin tumors. However, skin metastases from signet ring cell gastric carcinoma are uncommon. We present the dermoscopic aspects of a patient with gastric adenocarcinoma and multiple skin nodules.

Case report: A 55-year-old man presented with a progressive generalized cutaneous eruption. Examination revealed asymptomatic small erythematous firm nodules. Dermoscopy showed a polymorphous vascular pattern. One

year prior to this event, this patient had been submitted to a partial gastrectomy due to a poorly differentiated, diffuse type, signet-ring cell gastric adenocarcinoma. Histologic and immunohistochemical studies of the lesions confirmed progression of the neoplasia to the skin.

Discussion: Few reports have described the dermoscopic features of non-melanoma cutaneous metastases. An atypical vascular pattern was observed in one report of skin metastases of thyroid carcinoma and this feature was considered pathognomonic for neoplastic neovascularization, both benign and malign, concluding that such lesions should be biopsied. To our knowledge, no reports analyzed the dermoscopic features of gastric carcinoma metastases. We observed a prominent atypical vascular pattern, demonstrating that this feature might also be observed in nodular lesions of cutaneous metastases of gastric carcinoma. This report emphasizes that cutaneous metastases of internal malignancies might have its initial presentation on the skin and that dermoscopy is an important diagnostic tool in evaluating such lesions.

References

1. Nashan D, Müller ML, Braun-Falco M, Reichenberger S, Szeimies RM, Bruckner-Tuderman L. Cutaneous metastases of visceral tumours: a review. J Cancer Res Clin Oncol. 2009;135:1-14.
2. De Giorgi V, Alfaioli B, Massi D, et al. Solitary cutaneous metastasis as the first sign of relapse of thyroid carcinoma: a clinical, dermoscopic-pathologic case study. Dermatol Surg. 2009;35:523-6.
3. Aneiros-Fernandez J, Husein-ElAhmed H, Arias-Santiago S, et al. Cutaneous metastasis as first clinical manifestation of signet ring cell gastric carcinoma. Dermatol Online J. 2010;16:9.

Dermoscopic aspects of extragenital lichen sclerosus

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Lichen sclerosus (LS) is an unusual chronic inflammatory skin disease. Although it may affect all areas of the body, only 15% compromises the extragenital area. Initial lesions are porcelain white papules, plaques or atrophic patches. We present the dermoscopy aspects of two patients with extragenital LE.

Case report: Patient 1: A 19-year-old woman, presented with a 2-year history of two pruritic whitish plaques on her left upper back. Dermoscopy showed a whitish-pink background, surrounded by linear vascular structures and hairpin-like vessels. Yellowish areas were also visualized.

Patient 2: A 59-year-old woman, presented with a 5-month history of asymptomatic hyperchromic plaques on her axillas. Dermoscopy showed irregularly distributed black granules, predominantly over whitish areas. Discrete follicular plugging was also observed.

Discussion: Dermoscopy of extragenital lichen sclerosus has been described in previous reports. Garrido-Ríos et al studied four women with extragenital LS and described, as major dermoscopic findings, whitish areas with comedo-like openings in the center of the lesions, which corresponded to follicular plugging and atrophy of the epidermis. Moreover, Kimura et al reported one case, with comedo-like openings, telangiectasias on a whitish-pink background and red-violet to brown-red perifollicular ovoid structures, corresponding to follicular plugging.

In our patients, we observed linear vascular structures, hairpin-like vessels and irregularly distributed black granules, predominantly over whitish areas. Contrasting with the prior descriptions, follicular plugging was discrete. In conclusion, we present a different dermoscopic pattern of extragenital LE, which may aid the clinical diagnosis of this unusual skin disorder.

References

1. Monsálvez V, Rivera R, Vanaclocha F. Lichen sclerosus. Actas Dermosifiliogr. 2010;101:31-8.
2. Kimura A, Kambe N, Satoh T, Togawa Y, Suehiro K, Matsue H. Follicular keratosis and bullous formation are typical signs of extragenital lichen sclerosus. J Dermatol. 2010;38:834-6.
3. Farris DR, Hardy D, Kagen MH, Don PC, Weinberg JM. Extragenital pigmented lichen sclerosus. J Eur Acad Dermatol Venereol. 2000;14:322-4.
4. Garrido-Ríos AA, Alvarez-Garrido H, Sanz-Muñoz C, Aragoneses-Fraile H, Manchado-López P, Miranda-Romero A. Dermoscopy of extragenital lichen sclerosus. Arch Dermatol. 2009;145:1468.

Double comparison of teledermoscopy: Interobserver variability and relation to histopathology

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Introduction: Teledermoscopy, with all its pros and cons, allows for a grand entrance of new perspectives, and not only for Pigmented Skin Lesions (PSL). Regardless of good interobserver concordance, literature still lacks the data about the comparison of teledermoscopic diagnoses to histopathologic (HP) ones.

Method: 5 experts from different centers in Serbia, Bosnia and Herzegovina, and Macedonia are included in the study. During a two-month period, they will establish clinical and dermoscopic diagnoses on 1000 patients with 1000 histologically verified Pigmented Skin Lesions, through use of The

Teledermoscopy Network. 1000 PSL contain: 130 melanomas, 230 basal cell carcinomas, 450 melanocytic lesions, 150 seborrheic keratoses, 20 angiomas and 20 dermatofibromas. Each patient has, other than personal, the following data: age, sex, skin phototype and melanoma risk factors. Each lesion has: a clinical image, anatomic localization, ABCDE clinical information and a dermoscopic image.

Design of the study: In the course of 2011 Jadran Bandic has selected the material for the study from the ORS Hospital database in Belgrade. During the period spanning February 1 to April 1 2012, Marijana Bandic will include 20 new cases daily (100 per week, over the course of 10 weeks with week 11 reserved for cases that get left behind for any reason) into The Teledermoscopy Network. Clinical diagnosis will be the one to be established first, with the dermoscopic image being made available for review and diagnosis after the clinical diagnosis has been made. Clinical diagnosis will not be made available for correction.

Results: The study will show results of accordance amongst experts in relation to HP diagnosis, for every PSL type and not only the relation between dermoscopic vs. HP diagnosis, but also relation between clinical and HP diagnosis.

Discussion: We believe that the right path for teledermoscopy is to be directed towards primary healthcare. In order for that path to be realised it is necessary for experts to provide background education and quick an efficient control, until the arrival of an automated process. The validity of this opinion will be pointed out by the expected results.

References

1. Warshaw EM, Lederle FA, Grill JP, et al. Accuracy of teledermatology for pigmented neoplasms. J Am Acad Dermatol. 2009;61:753–65.
2. Tan E, Yung A, Jameson M, et al. Successful triage of patients referred to a skin lesion clinic using teledermoscopy (IMAGE IT). Br J Dermatol. 2010; 162:803–11.

Early melanoma with halo eczema (Meyerson's phenomenon)

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We present a case of a 49-year-old man who presented with a solitary atypical pigmented lesion with a surrounding halo of dermatitis. Dermoscopy showed a pigment network at the periphery with areas of scar-like depigmentation, negative pigment network and erythema. The lesion was treated preoperatively with a potent topical corticosteroid resulting in a reduction of inflammation. Histology showed an early Clark level 1 melanoma arising within a severely dysplastic compound melanocytic naevus. There was an adjacent perivascular chronic inflammatory cell infiltrate with occasional eosinophils. Minimal, though definite spongiosis with parakeratosis was also present. The scar was subsequently re-excised achieving appropriate excision margins for melanoma in situ. Six months later, there was recurrence of dermatitis at the scar with no evidence of recurrent melanoma. To our knowledge, melanoma with Meyerson phenomenon has not been reported in the literature. This case highlights that all lesions should be evaluated on clinical and dermoscopic grounds regardless of the presence or absence of eczema. Our case adds yet another entity that may display Meyerson phenomenon and consequently a halo of eczema cannot be considered a reassuring sign when evaluating melanocytic lesions.

Analysis of CDKN2A alelic variants in Mexican patients with malignant melanoma: preliminary study

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Background: CDKN2A and CK4 are high penetrance genes associated to high risk of melanoma. CDKN2A is a tumor suppressor gene located in 9p21, it is composed by 4 exons, which code for p14 and p16. Isoform p16 acts as a tumour suppressor gene, which binds to CDK4 and CDK6, inhibiting linking with cycline D1, thus avoiding both formation of CDK/cycline d1 complex and cell cycle. CDKN2A is inactivated by some different ways: intragenic mutations, homocygotic deletion and CpG islands hypermetilation on its promoter causing some different neoplasms such as pancreatic adenocarcinoma and malignant melanoma.

Aim: To identify alelic variants which could (or could not) influence risk (predisposition) of MM in Mexican patients.

Materials and methods: Genomic DNA was obtained from peripheral blood samples. Alpha isoform codifying region of CDKN2A was amplified, after that automatized sequenciation in a ABI310 sequencer was performed.

Results: Twenty-eight patients with MM Analysis of codifying and intronic regions of p16 showed 2 polymorphous

heterocygotic variants: c.-2G>A in 4 patients with MM and p.I49T in 11 patients with MM. Both variants were also identified in healthy controls.

Conclusions: Our study found 2 different variants in melanoma patients: c.-2G>A which-–to our knowledge—has not been reported and p.I49T which partially influences in the binding to cyclin D1-CDK4/6 complex, and inhibition of cellular growth and proliferation. As well as presence of other alelic variants in genes involved in melanoma development, considering also studying influencing environmental factors.

Shiny white streaks in malignant melanoma: a sign of thick tumours

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Introduction: In the context of melanocytic tumours white shiny streaks (SWS) or chrysalides have been related to malignant melanoma. It still remains unclear the biological significance of this dermoscopic criterion.

Methods: Systematic study of SWS in 125 melanomas (56% in situ; 44% invasive with mean Breslow 1.7 mm (48%<1mm)) and 305 melanocytic nevi consecutively excised in a Melanoma Unit of a referral Hospital in Barcelona.

Results: SWS were present in 5 nevi (4.67%) compared to 41 melanomas (38,32%) (24 SSMM (58,5%), 11 LMM (26.8%), 3 NM (7.4%), 3 others (7.3%)). The presence of SWS correlated with a 10.33 fold risk of harboring a diagnosis of invasive melanomas when compared to in situ melanomas (OR: 10.33, IC 95% 3.812-28.014, p<0.005). Among invasive melanoma, SWS had 4.46 fold risk to be thick melanomas (Breslow>1mm) (OR 4.46, IC95% 1.444-13.792 p=0.009). SWS were also observed more frequently in MM with black (p<0.05), gray, white or red colours (p<0.001); structureless area, blue whitish veil, regression, atypical blotch, multicomponent (all p<0.001) or unspecific pattern (p<0,05), polymorphic vessels and milky red globules (both p<0.001) but not with dotted vessels (p =0.792). The mean TDS score for melanomas with SWS was 6.61 and without SWS 5.62 (p<0.05). SWS were also observed in 3 cases with TDS <4.75 (3.8%).

Conclusions: SWS in the context of a melanocytic tumour is associated to malignancy, and to invasive melanoma, with a higher Breslow thickness and higher TDS. In some few cases the presence of SWS was seen in MM with TDS of benignity.

Use of dermoscopy as aid for the diagnosis of extramammary Paget disease (EMPD), and clinical assessment after brachytherapy

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Extramammary Paget's disease (EMPD) is a rare, usually non-invasive intraepithelial adenocarcinoma, preferentially localized on genitals in postmenopausal women in their sixth-seventh decade of life. EMPD may or may not be associated with an underlying malignancy. The diagnosis is obtained by histopathology and immunohistochemistry. In the last few years, dermoscopy, besides pigmented lesions, has been increasingly employed also for the evaluation of non-pigmented skin tumours and inflammatory diseases, such as for assessment after therapies. We report five cases of EMPD: 4 women and 1 man, aged from 65 to 79 years old, with lesions localized on the vulva, perianal region and glans penis, which we evaluated by dermoscopy. In 5/5 cases, dermoscopic examination revealed a repetitive pattern characterized by a diffuse pinkish background mottled with crimson and bright white irregular structures, grossly mixed together, occasionally forming a sort of thick reticulation; this picture was reminiscent for us of a raspberry slush. In all 5 cases histopathology subsequently confirmed the diagnosis of EMPD. Whereas there is no standard treatment, as alternative to surgery, we treated our patients by superficial brachytherapy. This new therapy, successfully utilized for non-melanocytic skin tumors, basically consists in a superficial high dose brachytherapy, characterized by the use of a radioactive beta-emitting isotope, rhenium188, incorporated in a specially formulated inert synthetic resin. An histological examination confirmed the clinical-dermoscopic healing of our patient's lesions. Thanks to dermoscopy, we could better identify the extent of the tumor and follow up our patient after therapy.

Imaging of an atypical naevus spilus with in vivo confocal microscopy

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Introduction: Naevus spilus, or speckled lentiginous naevus (SLN), is characterised by darkly pigmented macules or papules on a background of light-brown pigmentation. It is usually present at birth as a "café-au-lait" macule, with often widespread darker pigmented macules developing years to decades later. The importance of close follow-up is underlined by case reports of melanoma developing within naevus spilus.

Case summary: A 54-year-old lady with no prior melanoma history presented with a pigmented lesion on her lateral thigh present since birth. Clinical examination revealed a 4x5cm café-au-lait macule with superimposed maculopapular speckles, consistent with naevus spilus.

Dermoscopy showed a darker focus within the lesion though no classic features of melanoma. In-vivo reflectance confocal microscopy demonstrated multiple atypical bright large cells with upward migration consistent with melanoma-in-situ.

The remainder of the lesion contained only monomorphous small bright cells organised around a very regular papillae ring. Histopathology of a biopsy taken from the atypical area noted could not exclude a melanoma-in-situ.

Conclusion: Malignant melanoma arising in a naevus spilus is a rare event. The café-au-lait macule is often present at birth and the darker pigmented speckles that develop subsequently in number and size over many years are challenging to monitor.

In-vivo confocal microscopy is a well proven laser imaging technique for pigmented lesions, allowing non-invasive examination of the epidermis. We propose its use in identification of areas of dynamic change in clinically and dermoscopically equivocal lesions, thereby assisting in the early detection of melanoma arising in naevus spilus.

Melanoma detection in high risk patients: a case series

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Introduction: Australia has the highest worldwide incidence of cutaneous melanoma. Certain subpopulations are at extreme risk and early detection in this group is critical to reducing disease mortality.

Clinical imaging techniques permit early melanoma diagnosis and improved patient prognosis. Regular patient and doctor examination of total body photography (TBP) baseline images enables identification of changing or new skin lesions.

Sequential digital dermoscopy imaging (SDDI) additionally permits the capture and assessment of successive dermoscopic images over short term (average 3 months) or long-term (≥6 months) intervals to assess for morphological change and permits detection of still featureless incipient melanomas.

Case series: A melanoma case series of high risk patients diagnosed with melanoma through SDDI monitoring is presented from a 312 patient cohort managed in the Sydney Melanoma Diagnostic Centre high risk melanoma clinic since 2006.

No classic dermoscopic features were present initially and only minimal changes were noted on SDDI monitoring. These included subtle lesion enlargement, regression and focal change, with the cases representing key diagnostic lessons from this extreme risk patient group.

Conclusion: Early melanoma diagnosis, particularly in extreme risk patients, is crucial though challenged by the absence of classic diagnostic criteria.

This case series reinforces the importance of the role of TBP and SDDI in monitoring patients at extreme risk of melanoma.

Reference

1. Kittler H, Guitera P, Riedl E, et al. Identification of clinically featureless incipient melanoma using sequential dermoscopy imaging. Arch Dermatol. 2005;142(9):1113-9.

Thick melanoma detection in a five-year high risk clinic for primary melanoma

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Introduction: Melanoma thickness is a key determinant in long-term prognosis. Thick melanomas (≥1mm Breslow thickness) confer a significantly poorer prognosis, especially in patients already at extreme melanoma risk.

Increased knowledge regarding the characteristics of thick melanomas diagnosed in this subgroup is crucial to enable earlier detection and increased survival.

Objective: To evaluate ≥1mm melanomas detected during a five-year study for patients at extreme melanoma risk.

Method: 312 patients at extreme melanoma risk were examined six monthly using baseline total body photography for 5 years. Inclusion criteria were ≥1 of: (1) CDKN2A or CDK4 mutation; (2) ≥3 1st/2nd degree relatives with a melanoma history and a personal history; (3) Dysplastic Naevus Syndrome (DNS) and a melanoma history; (4) History of ≥2 primary melanomas.

Short term (3 months) and long term (≥6 months) sequential digital dermoscopic imaging were employed following established protocols. Atypical lesions were excised. All ≥1mm melanomas were analysed.

Results: 77 primary melanomas were detected, 16 at baseline visit and 61 subsequently. 6 melanomas had a Breslow thickness of ≥1mm. These included three desmoplastic melanomas (1.6mm, 8.5mm and 21mm) and a 1.0mm superficial spreading melanoma (SSM) with clinically light/tan amelanotic morphology, a 1.0mm unclassified scalp melanoma on a lady and a 1.0mm SSM with nodular component.

Conclusion: Early diagnosis of desmoplastic melanoma is especially challenging in extreme risk melanoma patients. A high vigilance for light or tan coloured amelanotic lesions and formal scalp examination will assist in reducing the thick melanoma incidence in patients at extreme melanoma risk.

How difficult is the dermatoscopic diagnosis in early melanoma?

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Introduction: The first clinical signs of melanoma are sometimes difficult to be diagnosed. Due to dermoscopy we can make very often an early diagnosis. The general wish is to make an in situ melanoma diagnosis as often as possible in the patients with melanoma.

Method: We analyzed 26 dermoscopies of 12 cases with in situ melanoma and 14 cases with melanoma thickness under 1 mm. We registered for each dermoscopy the following structures: irregular pigmented network, irregular brown globules, irregular distributed black or grey dots, pseudopods and radial streaming, grey-blue areas with different patterns, atypical vascular pattern, white scar-like areas and regression of the structures which were fading.

Results: We found that irregular pigment network and radial streaming are of great help for diagnosis of thin melanomas. Regression of dermatoscopic structures, grey-blue areas and irregular grey or black dots are often found in the in situ melanomas. In the followed up lesions, the changes in the pigment network, a small white or pinkish structure, new minimal vessel structures and few uniform grey, black dots or globules in the periphery indicate the change to malignant state.

Conclusion: From our few cases we can conclude that the grey-blue structures and the fading of the structures could be important dermatoscopic changes that could announce the onset of melanoma.

Dermatoscopic findings in jellyfish stings

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Introduction: Jellyfish are free-life members of the phylum Cnidaria, who share the presence of a type of venomous stinging cell (cnidocyte, cnidoblast, or nematocyte) mostly located in the tentacles and around the mouth.

Diagnosis of jellyfish stings is mainly made on clinical grounds, but the finding of cnidioblasts in skin scraping or biopsy may be helpful in some cases. We evaluated the usefulness of dermoscopy in the diagnosis of jellyfish stings.

Method: We reviewed retrospectively the clinical and dermoscopic pictures of 8 patients (6 females and two males) diagnosed of jellyfish stings in the last 5 years at Mallorca, a Spanish island in the Mediterranean Sea.

Results: Depending on the clinical stage of the lesions, there were dotted and telangiectatic vessels and reticular pigmentation. However, the most conspicuous image on the acute stage was the presence of brown pinpoint crusts, 0.1mm in diameter on average, almost evenly spaced following a lineal distribution. This feature corresponds to the entry points of the harpoon-like structures contained in the nematocysts that are responsible for injecting the toxin into the skin. To the best of our knowledge, these findings have not been previously reported in the literature.

References

1. Williamson JA, Fenner PJ, Burnett JW, Rifkin JF. Venomous and Poisonous Marine Animals: A Medical and Biological Handbook, 1996.
2. Zalaudek I, Giacomel J, Cabo H, et al. Entodermoscopy: a new tool for diagnosing skin infections and infestations. Dermatology. 2008;216:14-23.

Pyoderma gangrenosum versus basal cell carcinoma: Is dermoscopy helpful?

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Pyoderma gangrenosum (PG) is a chronic skin disease, characterized by neutrophilic infiltration and destruction of tissue. It occurs most commonly in association with a systemic disease, especially chronic colitis. The main clinical finding is ulcer. Differential diagnosis includes infectious ulceration and skin cancer. We tried to use dermoscopy for make precise diagnosis.

A 24-year-old white man presented with a 3-month history of a quickly growing painful ulcer on his left groin. The patient had a history of Crohn disease for 18 years. He took oral glucocorticoids or sulfasalazine from time to time. Clinically, the lesion had irregular shape 4-6 cm with dusky-red or purple sharply borders. The base of the ulcer was purulent with hemorrhagic exudate, partially covered by necrotic eschar with granulation tissue and scars areas. On dermoscopy diffuse white to red shiny areas with ulceration, arborizing vessels and short fine telangiectasia, multiple structures like blue-gray ovoid nests was found in the lesion. It's a typical dermoscopic picture of basal cell carcinoma (BCC). Biopsy excluded any skin cancer. Serology, cultural investigation tests helped rule out infectious etiology of the ulcer. Histopathological findings were non-specific and corresponded to PG. The lesion healed during some weeks after treatment by oral sulfasalazine and topical corticosteroids.

PG may simulate BCC clinically and dermoscopically. Diagnosis of PG, just as any other lesions, should base on the integrated assessment of the detailed history, physical examination, dermoscopy and skin biopsy.

Photographic artifact simulating regressing melanocytic lesion—a potential pitfall of total body photography

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Clinical photography is a useful tool for dermatologists particularly when monitoring skin lesions. Clinicians using photography should be aware of potential image artifacts that may blur the clinical picture. Dust contamination for instance can mimic a regressing melanocytic lesion as exemplified by our recent experience. Regular cleaning of photographic hardware, ideally by professionals, will help to minimise this problem.

Argyria mimicking a blue nevus: dermoscopy features

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Skin staining as a result of exposure to silver is known as localized argyria. This is a rare phenomenon caused by the direct application of silver and is clinically manifested by blue-grey discoloration.

We report the case of a 30-year old patient, bearer of a clinical condition of localized argyria in the ear lobes, caused by an earring screw, who had remained asymptomatic for over 20 years. Clinically, the patient manifested a well-demarcated, dark blue grey a papule of 1 cm in diameter similar to a blue nevus.

In the dermoscopy we observed blue gray, granular and annular structures around the eccrine ostium, and little linear structures. These structures are not observed in blue nevis. We also observed a scar, not visible clinically.

The histopathology showed the presence of fine, brownish to blackish particles throughout the upper and deep dermis prone to concentrating around the elastic collagenic, vascular vessels and eccrine glands.

To our knowledge, dermoscopy features have not reported in argyria.

References

1. Takeishi E, Hirose R, Hamasaki Y, Katayama I. Localized argyria 20 years after embedding of acupuncture needles. Eur J Dermatol. 2002;12(6):609-11.
2. Sugden P, Azad S, Erdmann M. Argyria caused by an earring. Br J Plastic Surg. 2001;54(3):252-3.

Dermoscopy of melanocytic lesions of the vulva

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Clinical and epidemiological characteristics of melanocytic vulvar lesions are different from those of other body sites. Vulvar melanoma typically occurs in postmenopausal

women as solitary or multifocal disease; a small subset of vulvar nevi, known as atypical melanocytic nevi of the genital type (AMNGT), are commonly associated with a younger age compared with melanoma and common nevi and show histological features that may overlap with melanoma. We report the dermoscopic features of 42 melanocytic lesions that include 29 common nevi, 8 AMNGT and 5 melanomas collected at the Melanoma Unit of San Gallicano Dermatological Institute in Rome. All nevi appeared as solitary flat or palpable tumors. On dermoscopy, a globular pattern, a mixed pattern and homogeneous brown-gray pigmentation were the most prevalent patterns among nevi. The mixed pattern, defined as the combination of 2 or more dermoscopic patterns in the absence of melanoma-specific features, and characterized by the combination of parallel structures with globules or a homogeneous brown-gray pigmentation, was the most frequently pattern observed in AMNGT. All melanomas showed a multicomponent pattern, and, in most cases, reticular depigmentation and blue-white veil as dermoscopic local features. Based on our results, we propose to perform a dermoscopic follow-up for solitary flat or palpable lesions showing a mixed pattern in child to teenager. Surgical excision or a punch biopsy are recommended when a multicomponent pattern, reticular depigmentation or blue-white veil are seen, independent of the clinical features of the lesion, to rule out a melanoma.

References

1. Ronger-Savle S, Julien V, Duru G, Raudrant D, Dalle S, Thomas L. Features of pigmented vulval lesions on dermoscopy. Br J Dermatol. 2011;164:54-61.
2. Ferrari A, Zalaudek I, Argenziano G, et al. Dermoscopy of pigmented lesions of the vulva: a retrospective morphological study. Dermatology. 2011;222(2):157-66.

Unusual dermoscopic presentations of dermatofibroma

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Dermatofibroma is a skin neoplasm that is usually easy to be diagnosed clinically and dermoscopically, but in some cases its differentiation from other tumors may be difficult. Different morphologic faces of dermatofibromas may be dependent to various evolutive stages, but also to special histopathologic variants or special locations of these tumors. We report the results of a dermoscopic study of 130 cases of dermatofibromas that were consecutively collected at the Melanoma Unit of San Gallicano Dermatological Institute in Rome. "Central white scar-like patch and peripheral thin pigment network" was the most frequently observed pattern. In particular we described additional patterns defined by us, namely, the non-dermatofibroma-like patterns that were found in 17.7% of cases. These patterns were characterized by a combination of features reminiscent of melanoma (melanoma-like pattern) in 7.7% of cases or other neoplasms (such as a melanocytic nevus, a vascular tumor, or a basal cell carcinoma) in 10% of cases. Although we were not allowed to define a specific dermoscopic profile for each histopathologic variant of dermatofibroma for the low number of these variants, we found a significant association with locations, global dermoscopic patterns and local features. The knowledge of all these variables could represent a further aid for the diagnosis. However, a full surgical removal is always recommended in all doubtful cases, especially in high-risk patients and/or with a history of recent onset or changes.

References

1. Karaarslan IK, Gencoglan G, Akalin T, Ozdemir F. Different dermoscopic faces of dermatofibromas. J Am Acad Dermatol. 2007;57:401-406.
2. Zaballos P, Puig S, Llambrich Á, Malvehy J. Dermoscopy of dermatofibromas. A prospective morphologic study of 412 cases. Arch Dermatol. 2008;144(1):75-83.

Acquired dermal melanocytosis of the face and extremities in a young Japanese woman

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A 25-year-old woman presented with non-palpable pigmented reticulated pigmentation with discrete brown macules on her dorsal surface of hands and feet. She had noted those hyperpigmentation from a childhood. The pigmented macules gradually increased in intensity and extent and, slight pigmentation also appeared on her nasal wings five years ago. Physical examination revealed multiple, discrete, coalescing faint brown macules and small brown spots distributed symmetrically on the dorsa of the hands and feet, the bilateral extensor surfaces of the forearms and the lower legs, and the nasal wings. The patient was otherwise healthy and taking no medication. Her older sister has also deeply-pigmented macules of her extremities. Dermoscopy showed coarse reticular pigmentation pattern with color heterogeneity and blurred margin. Skin biopsy from the left lower leg showed discontinuous basal melanosis in the epidermis and melanin-laden cells in the upper dermis. Immunohistochemical analysis revealed the presence of S-100 positive dermal

melanocytes and CD68 positive melanophages. These clinicopathological features were consistent with acquired dermal melanocytosis of the face and extremities (ADMFE), which was proposed by Hidano in 1991. ADMFE is characterized by the development of multiple coalescing brown spots of the extremities and the nasal wings. Differentiation from dyschromatosis symmetrica hereditaria (DSH) is necessary. Unlike DSH, there was no psuedopigment network in ADMFE suggesting that brown pigmentation may be due to dermal melanocytes and melanophages, but not basal melanosis. We report here the first dermoscopic description of a Japanese patient with ADMFE.

Freely designable acrylic dermoscopy modules

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Introduction: We elaborated dermoscopy modules with acrylic tubes and plates that can be combined with a high-vision video camera and a macro lens.

Aims: To design a narrow tipped module that can fit onto interdigital or periorbital concave skin surfaces and to design a tilting module for oblique view dermoscopy.

Method: We examined melanocytic skin lesions on the concave skin areas such as interdigital and periorbital skin using a narrow dermoscopy module and soles of the feet using a tilting dermoscopy module.

Results: All the dermoscopy images taken with these dermoscopy modules were clear with high resolution. A narrow dermoscopy module allowed clear dermoscopy images of melanocytic nevi on the interdigital or periorbital areas. A tilting dermoscopy module enabled fibrillar pattern to be observed as original parallel furrow pattern.

Dermoscopic features of subungual melanoma in situ: our experiences of three Japanese cases

Taiki Isei

Subungual melanoma in situ (early melanoma of nail apparatus) is a relatively rare subtype of malignant melanoma. The clinical resemblance of this type to benign melanonichia striata makes it difficult to differentiate between these nail disorders. Detection of early lesions of subungual melanoma is beneficial for the improvement of prognosis. In this paper, we examined 3 patients with subungual melanoma in situ and analysed the characteristics of their pigmentation of the nail apparatus with the use of a dermatoscope. Case 1 is a 33 year-old woman with melanonychia of her right thumb. Case 2 is a 44 year-old woman with narrow pigment line on her right little fingernail with 2 years of evolution. Case 3 is a 61 year-old man showing pigment striae on his index finger nail. Excisional biopsy was performed, and pathological examination revealed all 3 cases as melanoma in situ. Two of 3 cases had multiple pigment lines of nail plate. Only one presented irregular lines with variegation in colours. Though all the cases showed no Hutchinson's sign, only one case showed pseudo-Hutchinson's sign. Micro-Hutchinson's sign was detected in 2 of 3 cases. Our results suggest that precise dermoscopic examination can be an easier and more reliable procedure for the detection of early subungual malignant melanoma.

Dermoscopy of fungal melanonychia

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Introduction: Differential diagnosis of pigmented lesions of the nail has special importance. Dermoscopic features of various melanocytic and nonmelanocytic pigmented lesions of the nail are available in the literature, however the data on dermoscopy of fungal melanonychia is lacking. In this study, we aimed to define dermoscopic features observed in cases of fungal melanonychia.

Method: We reviewed the cases of fungal melanonychia that had been seen at our dermoscopy unit within the past year. Specimen for mycologic examination was obtained by the curettage of the pigmented portion of the nail. The pigmented part was totally removed by curettage in order to see the nail bed to exclude any melanocytic lesion.

Results: Twenty lesions in 13 cases (10 male, age ranged 34-80 years) were observed. All were located on toes and all were gray-black in color. Clinically, 2 of them were difficult to differentiate from a melanocytic lesion. On dermoscopy, melanonychia was mostly observed as multicolored (brown, gray, black, and in some cases red indicating hemorrhage) pigmentation (19/20). The multicolored pigmentation was homogeneous in 9 of the cases and, gray-black pigment aggregates, which may be called as pigmented clusters, accompanied the multicolored homogeneous pigmentation in 10 lesions. In 1 of the cases, the pigmentation was homo-

geneous and was observed only in gray-black color. *Trichophyton rubrum* and *Candida albicans* were causative agents.

References

1. Tosti A, Piraccini BM, de Farias DC. Dealing with melanonychia. Semin Cutan Med Surg. 2009;28:49-54.
2. Micali G, Lacarrubba F, Massimino D, Schwartz RA. Dermatoscopy: alternative uses in daily clinical practice. J Am Acad Dermatol. 2011;64:1135-46.

Dermoscopic features of basal cell carcinoma according to histopathologic subtypes

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Basal cell carcinoma (BCC) is a slowly growing malignant epithelial tumor and world's most common cancer. Clinicopathologic appearances of BCCs are classified as non-aggressive types, which include nodular, superficial, and adenoid variants, and aggressive types, which consist of morpheaform, micronodular, and infiltrative variants.

Dermoscopy is a noninvasive diagnostic tool, which is helpful in differential diagnosis between benign and malignant pigmented skin lesions. Though numerous studies have reported dermoscopic patterns of BCCs, there was a lack of study for dermoscopic features of BCC according to their histopathologic subtypes. In this study, we conducted retrospective histopathologic and dermoscopic analysis of 128 BCCs (91 with non-aggressive type and 37 with aggressive type) and compared dermoscopic differences according to histopathologic subtypes.

Punctum in epidermal cyst and punctum-like structures in other dermatoses: the probability of presence and dermoscopic findings

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Epidermal cysts are one of the most common types of benign skin tumors. Although they are frequently encountered in the daily dermatological practice, the differential diagnosis of epidermal cysts is very broad. Therefore, they often become a complex diagnostic challenge for the clinicians. An epidermal cyst exhibits as a well-defined dermal nodule and is characterized by a central punctum that represents the plugged pilosebaceous unit. Though observation of a punctum can be used as a clue for the diagnosis of an epidermal cyst, a study regarding it was hardly reported. To our knowledge, there was only a single study conducted in 1980, had reported that a punctum was visible to the naked eye in 15 out of 34 epidermal cysts (42.1%). Therefore, we evaluated the presence or not of punctum and punctum-like structure of the skin lesion of which the first clinical diagnosis was epidermal cyst. And, we examined dermoscopic features of punctum and punctum-like structure, because dermoscopy provides clinicians with magnified in vivo observation of the morphologic features of the skin that are often imperceptible to the naked eye. We thought it could be used as an adjuvant tool in the diagnosis of epidermal cysts. Herein, we report the probability to find punctum in epidermal cyst and punctum-like structures in other dermatoses. In addition, other various skin tumors or cysts such as pilomatricoma, lipoma, pilar cyst, neurofibroma, and so on were examined to compare the dermoscopic differences of punctum in epidermal cyst and punctum-like structures in other dermatoses.

Irregular fibrillar pattern is an artifactual expression of parallel ridge pattern

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Introduction: Miyazaki et al. reported that regular fibrillar pattern of an acral nevus was changed into parallel furrow pattern by horizontally moving the cornified layer with the probe of a dermoscope. Maumi et al also reported that regular fibrillar pattern changed into parallel furrow pattern by oblique view dermoscopy.

Method: We observed an irregular fibrillar pattern in acral melanoma in situ of a 54-year-old Japanese woman by oblique view dermoscopy. The slanting angle of the melanin columns in the cornified layer was confirmed by use of DermLite DL-100 (3Gen, Dana Point, Calif., USA). After the direction of viewing was fixed so that the parallel ridge pattern was observed, pictures were taken with the Derma9500 (Derma Medical, Yokohama, Japan) and K-Y Jelly (Johnson and Johnson, New Brunswick, N.J., USA).

Results: While a picture taken by ordinary dermoscopy showed an irregular fibrillar pattern, a picture by oblique view dermoscopy demonstrated a parallel ridge pattern.

References

1. Miyazaki A, Saida T, Koga H, Oguchi S, Suzuki T, Tsuchida T. Anatomical and histopathological correlates of the dermoscopic patterns seen in melanocytic nevi on the sole: a retrospective study. J Am Acad Dermatol. 2005;53:230-6.

2. Maumi Y, Kimoto M, Kobayashi K, Ito N, Saida T, Tanaka M. Oblique view dermoscopy changes regular fibrillar pattern into parallel furrow pattern. Dermatology. 2008;218:385-6.

Dermoscopic features from two cases of reticulated acanthoma with sebaceous differentiation

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Case 1: A 75-year-old Japanese woman was referred with a 17-year history of a solitary brown macule on the right elbow. Physical examination revealed a 6-mm smooth light brown macule. Dermoscopic examination demonstrated central hypopigmentation area surrounding homogeneous yellowish light brown structureless area and radially arranged light brown leaf-like areas at the periphery. Dark brown pigment network and spoke-wheel areas were also seen in the leaf-like areas. Clinical and dermoscopic findings suggested superficial basal cell carcinoma with a differential diagnosis of early seborrheic keratosis. Histopathological diagnosis was reticulated acanthoma with sebaceous differentiation (RASD).

Case 2: An 89-year-old Japanese man was referred with a 1-year history of a solitary brown nodule on the left neck. Physical examination revealed a 9.2 x 6.7 mm multilobulated brown nodule. Dermoscopic examination demonstrated numerous grayish to blue-gray blotches with a non-pigmented area containing multiple linear and hairpin vessels. Peripheral radially arranged light brown leaf-like areas and comedo-like openings were also noted. Clinical and dermoscopic findings suggested seborrheic keratosis with a differential diagnosis of pigmented eccrine poroma. Histopathological diagnosis was RASD.

Temporal changes of the objective discrimination index permit identification of early nail apparatus melanoma

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Background: It is well known that follow-up observation is important to detect melanoma at an early stage. However, to our best knowledge, such capabilities have been beyond the scope of specifications for automated melanoma detection systems.

Aim: To investigate whether temporal changes of the objective discrimination index previously proposed by our group help us to detect early nail apparatus melanoma.

Patients and method: Dermoscopic images of five lesions of longitudinal melanonychia seen in Japanese adult patients were used. Two lesions were clinically and dermoscopically diagnosed as benign longitudinal melanonychia and 3 lesions showed equivocal dermoscopic features, suspected to be evolving lesions of melanoma in situ. The size of each image was adequately reduced to ensure that the spatial resolution of each image was the same. Nail plate pigmentation excluding artifact bubbles was analyzed. The index representing variegation in color was automatically calculated from RGB values contained in each pixel according to the previously proposed method. Temporal changes were evaluated at most for 31.6 months.

Results and discussion: In the 2 benign longitudinal melanonychia, the indices were always below the threshold value, mostly constant or decreasing monotonically. The suspicious 3 lesions were finally biopsied. Histopathologically, one lesion was diagnosed as benign melanonychia since no proliferation of atypical melanocytes was detected. In this lesion, the indices were always below the threshold and decreased monotonically during the course. The remaining2 lesions were histopathologically diagnosed as melanoma in situ. In one lesion, the index remained above the threshold, though it slightly decreased with time. The other lesion was characterized by a rapidly increasing index, though the value remained under the threshold. In conclusion, temporal changes of the index, which reflects activity of melanocytes, surely help us to identify early evolving lesions of nail apparatus melanoma.

Morphometric analysis of arborizing vessels in skin tumors

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Introduction: Vascular structures are a most important tool for dermoscopic diagnosis of (hypo)-pigmented lesions. Especially basal cell carcinoma (BCC) displays a distinctive pattern, so-called arborizing vessels. However, similar vascular structures can be found in various other tumors. As the descriptive term "arborizing vessels" is somewhat subjective and there is a considerable interobserver variability in perception we felt it was desirable to achieve a precise and quantitative characterization of morphological details.

Methods: Images of 18 basal cell carcinoma, 4 malignant melanoma, 3 hyperplastic sebaceous glands and 3 blue

nevi showing vascular structures resembling "arborizing vessels" were used for morphometric analysis. Vascular patterns in facial skin were analyzed as well, serving as a pattern of reference. Analysis was performed with established methods used in geography for characterization of fluvial systems. The following parameters were recorded: Branching of the vessels, determining the number ("order") of bifurcating vessels from the stem vessel. Diameter of vessels in all subbranches and distances between each fork was measured. The angle within each fork and the curve radius of winding vessels were determined.

Further analysis of the data permitted calculation of parameters such as number of bifurcations and number of curves along the course of a winding vessel. Analysis was performed using standard statistical procedures.

Results: Arborizing vessels in non-BCC-tumors can be clearly distinguished from BCC vessels using these parameters. The data may be helpful for developing imaging systems diagnosing BCC by means of the vascular pattern or for follow-up of alterations of the vascular supply under therapy.

Videodermoscopy in the evaluation of pemphigus vulgaris and pemphigus foliaceus.

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Introduction: Pemphigus is an autoimmune bullous disease affecting the skin and mucous membranes. There are two main types of pemphigus: pemphigus vulgaris (PV) and pemphigus foliaceus (PF). The aim of the study was to evaluate the characteristic features of PV and PF in videodermoscopy.

Methods: Twenty-four lesions of 15 patients with PV and twenty six lesions of 11 patients with PF were examined using Fotofinder 2 videodermoscope.

Results: Pink-red areas were present in 58% (14/24) of PV and in 61% (16/26) of PF lesions. Glomerular vessels were observed in 50% (12/24) of PV and in 69% (18/24) of PF lesions. In the proximity of skin lesions multiple, irregular elongated blood vessels were visible in 67% (16/24)of PV and in 54% (14/26) of PF cases. Videodermoscopy of skin lesions also showed yellowish areas in 25% (6/24) of PV and in 23% (6/26) of PF lesions. Moreover yellow dots with whitish halo were visible in 42% (10/24) of PV and 46% (12/26) PF lesions. Videodermoscopy also revealed the presence of two type of scaling: scaling like broken ice floe visible in 12% (3/24) of PV and in 8% (2/26) of PF lesions and scaling like a wave hitting the shore visible in 25% (6/24) of PV and in 38% (10/26) of PF lesions.

Conclusions: These data show the most characteristic feature of pemphigus in videodermoscopy are pink-red areas and glomerular vessels within the lesions and multiple, irregular elongated blood vessels in the proximity of skin lesions.

A survey about the use of dermoscopy in Greece

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Introduction: We conducted a survey to evaluate the prevalence of dermoscopy use among Greek dermatologists, the method by which they learned to use it, how often they use it and whether they believe it is effective.

Method: A questionnaire was handed over to all participants attending an annual dermoscopy seminar in Thessaloniki, Greece, in November 2011. Four hundred thirty nine attendants completed the survey.

Results: Three hundred participants (68.5%) had been previously trained in dermoscopy. The majority (73.6%) first learned how to use dermoscopy by attending a seminar. Two hundred and forty-six (56.1%) dermatologists claimed to use dermoscopy more than once daily and 20 (5%) never had used dermoscopy. The most popular algorithm used for the evaluation of pigmented skin lesions was the ABCD algorithm (70.8%) followed by pattern analysis. The most common response (33.8%) as to why dermoscopy is effective was that it detects melanoma earlier. One third of those who found dermoscopy ineffective thought so, because it needs excessive training. About a minute was the time most attendants (53%) needed to evaluate a skin lesion by dermoscopy; less than a minute was reported by 33.8%. Most dermatologists (76.8%) used dermoscopy not only for evaluating pigmented skin lesions. For 25.8% of the participants it was the first time they attended a dermoscopy seminar and 98.7% would like to attend more such seminars. Nearly half of the attendants (41.7%) were dermatologists with less than 10 years of clinical experience and 23.8% were residents.

Dermoscopic features of melanocytic skin lesions in Greek children and adolescents. Association with environmental factors and skin types. Preliminary data

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Introduction: Acquired nevi often present in childhood and increase in number and size during early and middle life. As they represent important risk factors for melanoma, the knowledge of their epidemiology, especially in young age, is essential. In our study, that is currently ongoing, we intend to determine the dermoscopic features and prevalence of dermoscopic patterns of nevi and their association with environmental factors and skin types, using cross-sectional data from a population-based cohort of children and adolescents.

Method: The study population is going to include all students, aged 6-18 years, from 6 different schools in Thessaloniki, Greece, whose parents are going to consent to a total body clinical and dermoscopic examination of their nevi. For each participant a questionnaire is completed, which includes data on age, sex, pigment phenotype, sun sensitivity, sun exposure, sunblock use, previous sunburn history and family history of skin cancer. The total number of nevi is recorded, distributed on head and neck, anterior trunk, back, upper and lower extremities, palms and soles. Dermoscopic patterns of all nevi are recorded as globular, reticular, homogeneous, mixed and unspecified.

Results: To date, only 388 adolescents, aged 15-18 years, and no children have been examined. A total of 17759 nevi have been recorded with a reticular predominant dermoscopic pattern (74.25%). Globular pattern was seen in 16.08% of nevi, homogeneous pattern in 3.77% and mixed pattern in 5.9% of nevi. This is the first, still ongoing, population-based study evaluating clinical and dermoscopic features of nevi in Greek children and adolescents.

Clinical, videodermoscopic, ultrasonographic and histopathological features of Fordyce angiokeratoma

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Introduction: Angiokeratomas are benign vascular lesions that histopathologically consist of dilated subepidermal vessels and in most cases are associated with acanthosis or hyperkeratosis. The prevalence of angiokeratomas is estimated to be approximately 0,16% among the general population. Five clinical types are recognized: angiokeratoma of Mibelli, angiokeratoma of Fordyce (angiokeratoma scroti), angiokeratoma corporis diffusum, angiokeratoma circumscriptum neviforme and solitary angiokeratoma.

Angiokeratomas of Fordyce are typically asymptomatic, soft, solitary or multiple blue-to-red papules, plaques or nodule with a diameter of 2 to 10 mm located on the scrotum, shaft of penis, labia majora, inner thigh or lower abdomen. The pathophysiology of angiokeratoma remains unknown, although increased venous pressure may contribute to their formation. Other causative factors include acute or chronic trauma and nevoid or vascular malformations. The precise incidence of angiokeratomas of Fordyce is unknown, but they are considered common, especially with increasing age and male gender. Usually, they do not require treatment.

Method: We performed clinical, videodermoscopic, ultrasound and histopathological examination of Fordyce angiokeratoma. Ultrasound examination was performed with 30MHz ultrasound transducer with 0,1mm resolution and 7mm penetration. Fotofinder 2 system was used for videodermoscopy.

Results: We present a 36-year-old man with asymptomatic red-violaceous papules, 2-5 mm in diameter on the scrotum. Videodermoscopy revealed red-blue lacunae and whitish veil that corresponded to hyperkeratosis and acanthosis. Ultrasound scan showed hypoechogenic and mixed echogenicity lesions with indistinct margins. Histopathology was characteristic of angiokeratoma.

In conclusion, Fordyce angiokeratoma shows red-blue lacunae and whitish veil in videodermoscopy. In ultrasonography the lesions are hypoechogenic or show mixed echogenicity.

Meyerson phenomenon in a Becker nevus. Clinical features and videodermoscopy

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Introduction: Becker nevus is a late-onset of *epidermal nevus* or *birthmark*, occurring mostly in males, due to an overgrowth of the epidermis, melanocytes and hair follicles. It develops during childhood or adolescence on the shoulders or upper trunk. A Becker nevus is a large one-sided brown patch. After puberty it often becomes darker and hairy.

Meyerson nevus (halo dermatitis, halo eczema, Meyerson's phenomenon) occurs when a focal and transitory eczematous eruption arises around melanocytic lesions. It appears to occur more commonly in young males (average age 30 years). It most often occurs in healthy individuals but also observed in patients with eczema or other atopic conditions. It usually develops as a single itchy patch.

Method: Videodermoscopy was performed with a Fotofinder 2 system at magnifications 20x and 70x.

Results: We present a 4-year-old boy with Becker nevus localized on right arm and a 1-week history of a pruriginous and erythematous halo with blistered yellowish rash which partially surrounded proximal part of hairy, symmetrical Becker nevus of 3x5cm in diameter. Videodermoscopy

revealed regular melanocytic pattern with yellowish vesicles in the proximal pole. After one week of topical anti-inflammatory and antibacterial treatment Meyerson nevus disappear and control videodermoscopy revealed only pigment network.

Conclusions: Meyerson phenomenon does not seem to alter significantly dermoscopic features of Becker nevus.

The role of ultrasonography in in vivo evaluation of melanoma thickness. Ultrasonography, videodermoscopy and histopathology in selected cases of melanoma

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Introduction: Essential for increasing the chance of detecting melanoma are: the health education, regular skin examination by the patient and by the dermatologists and improving diagnostic methods in medicine. Dermoscopy has developed into a standard method in diagnosing melanoma. This method may provide some insight into the tumor thickness, but no precise measurement is possible. The aim of our study was to evaluate whether ultrasonography may provide important pre-excision information about the tumor and its thickness.

Method: A total of 40 common nevi and 25 cases of cutaneous melanoma were evaluated clinically, by videodermoscopy, and 30 MHz ultrasonography. In ultrasonography assessment of echogenicity, depth of the lesion and vascularity were performed. All images were analyzed in the context of histopathology results.

Results: In ultrasonography melanoma has been visible as hypoechogenic area clearly separated from the environment, usually with uneven borders. Dimensions of lesions were adequate to those seen in histopatology. We found that ultrasound evaluation involved a risk of mistake in evaluation of lesion size related to various causes: presence of hair follicles, sweat glands and sebaceous glands or the inflammatory infiltrates. In 24/25 cases videodermoscopy showed features characteristic of melanoma.

In conclusion, we believe that skin ultrasonography allows evaluation of melanoma thickness prior to surgery and is an important accessory tool to dermoscopy or videodermoscopy, which serve as diagnostic aids to establish the diagnosis.

Videodermoscopy and confocal reflectance microscopy (RCM) features of beard folliculitis

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Beard folliculitis (folliculitis simplex barbae, sycosis barbae) is characterized by pustules penetrated by hairs, with inflammation of the hair follicles localized in the bearded area and on the upper lip. Infection can be spread through contaminated shaving tools. Laboratory examinations are typically not obtained because diagnosis is usually made based on history and clinical examination alone. In cases resistant to standard therapy, cultures, Gram stain, potassium chloride preparation and biopsy are the diagnostic tests of choice. Histologically sycosis barbae is defined as the presence of inflammatory cells within the wall and ostia of the hair follicle, creating a follicular-based pustule.

Videodermoscopy was performed with Fotofinder 2. RCM was performed with Vivascope 1500

We report the case of a 43-year-old man with an acute onset of small pustules surrounded by erythema that were pierced by a central hair easily extracted from the follicle localized on the upper lip and chin. Pustules ruptured and leaved a yellow crust. Deeper changes manifest as erythematous, fluctuant nodules. Skin lesions were associated with discomfort and suppurative drainage. In videodermoscopy we observed: dilated linear vessels around hair follicle, in some areas absence of follicular units with yellow dots and in some dystrophy of hair shaft (hair contraction), scaling and white-yellowish lacunas correspond to pustules.

RCM images revealed the presence of groups of inflammatory cells inside hair follicles, inflammatory cell infiltration at the level of the spinous and granular layers and increased vascularity.

In conclusion, dermoscopy and RCM may be helpful tools in diagnosing beard folliculitis of atypical clinical presentation.

Combined tumor: Atypical Spitz naevus associated with deep penetrating naevus: Case report

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The association of Spitz nevus with deep penetrating nevus is a tumor of rare cancers combined, especially in puberty.

The authors report a case of a 11-year-old girl with a pigmented lesion of about 1x08 cm, centered by a bluish papule on the skin of 0.7x06 detected with sharp margins. The appearance was characterized by a composite pattern with all the features of melanoma. The authors discuss the complexity of the case. Furthermore, the authors discuss aspects dermoscopy and histological features of the tumor combined.

Dermoscopy features of macular amyloidosis

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Macular amyloidosis (MA) is a common variant of primary localized cutaneous amyloidosis. It is secondary to amyloid deposits on dermis, but the etiopathogenic mechanism is still unknown. Clinical presentation consists of grayish-brown pigmented and pruritic macules located on the upper back or arms. Nowadays, a cutaneous biopsy may be performed for a final diagnosis. The amyloid deposits are within the dermal papillae and they are usually globular, resembling colloid bodies, but sometimes they are too small and escape to detection. Congo red stain shows apple-green birefringence under polarizing light. Differential diagnoses of poikiloderma of Civatte and postinflammatory hyperpigmentation could be established. So, the description of dermoscopy patterns for MA could be useful to diagnose and to differentiate it from other entities. We present a series of 15 cases of MA with histological confirmation. First, we describe the main dermoscopic findings in MA. We analyze the results and compare MA dermoscopic features with dermoscopic findings in other entities as postinflammatory hyperpigmentation.

References

1. Lambert WC. Cutaneous deposition disorders. In: Farmer ER, Hood AF, eds. Pathology of the Skin. Norwalk, Conn: Appleton & Lange; 1990:432-50.
2. Rados J, Marinović Kulisić S, Lipozencić J, Budimcić D, Loncarić D. Macular amyloidosis: a case report. Acta Dermatovenerol Croat. 2008;16(3):138-41.
3. Röcken C. Differential diagnosis of amyloidosis. Verh Dtsch Ges Pathol. 2002;86:107-15.

Clinical, histological and dermoscopic changes over time in urticarial vasculitis

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Urticarial vasculitis (UV) is a subset of vasculitis characterized clinically by urticarial skin lesions and histologically by leukocytoclastic vasculitis. The cutaneous lesions are urticarial in appearance, but usually last 24-72 hours and may have residual changes of purpura, scaling and hyperpigmentation. However, it is difficult to find out clinical differentiation between common urticaria and early urticarial lesions of urticarial vasculitis.

Polarized dermoscopes (PD) use the properties of cross-polarized light to view deeper skin structures, not visible to the unaided eye, and they allow better visualization of blood vessels and reddish hue associated with some lesions. In this respect, through PD, clinical, histological and dermoscopic changes over time in urticarial vasculitis were observed. Although clinically hard to distinguish early urticarial lesions in urticarial vasculitis from common urticaria, but histological diagnosis was available to show the early phase of leukocytoclastic vasculitis characterized by prominent dermal edema, focal fibrinoid vascular change and a sparse infiltrate composed of lymphocytes and eosinophils. Although not prominent, dermoscopically purpuric red dots and globules were seen in early lesions. Urticarial lesions faded, made it easier to distinguish between common urticaria and urticarial vasculitis. Purpura or hyperpigmentation lesions showed dermoscopically purpuric dots or globules in a patchy orange-brown background. These structures were associated with fibrin deposits, nuclear dust, and extravasation and degradation of red blood cells, demonstrating fully developed LCV. In conclusion, PD faithfully reflect clinico-histopathologic transition from early to late stages in UV and appear to be helpful in differentiating early lesions of UV from common urticaria.

References

1. Vázquez-López F, Maldonado-Seral C, Soler-Sánchez T, Perez-Oliva N, Marghoob AA. Surface microscopy for discriminating between common urticaria and urticarial vasculitis. Rheumatology. 2003;42:1079-82.
2. Benvenuto-Andrade C, Dusza SW, Agero AL, Scope A, Rajadhyaksha M, Halpern AC, Marghoob AA. Differences between polarized light dermoscopy and immersion contact dermoscopy for the evaluation of skin lesions. Arch Dermatol. 2007;45:329-38.
3. Calonje E, Brenn T, Lazar A, McKee PH (eds). McKee's Pathology of the Skin with Clinical Correlations, 4th ed. Boston: Saunders, 2011:259-80.

Characteristic dermoscopic features of pseudoxanthoma elasticum: dots in the yellow net

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We describe novel dermoscopic features observed on the pebbly surface of pseudoxanthoma elasticum (PXE) in two adult cases. Clinically, a 45-year-old and a 60-year-old woman showed typical 'chicken skin' appearance on the neck and axillary regions. The lesional skin showed hypotrichosis and concomitant comedones. Histopathologically the affected areas showed degenerated collagen fibers and calcium deposits in the dermis. Notably, dermoscopy clearly revealed that the hypotrichosis was associated with remnant or broken hairs whose follicles were accentuated as brownish dots. In addition, remnant hair follicles were distributed around the yellow pebbly surface, probably corresponding to dermal calcium deposits. Furthermore, abnormal hair follicles were located in gaps in the yellow net. Consistent with these dermoscopic findings, histopathology showed immature hair follicles that were displaced by degenerated collagen fibers and keratotic plugging. Dots in the yellow net pattern would be characteristic dermoscopic feature observed in 'chicken skin' regions of PXE.

Learning process and practice transformation for primary care physicians in the use of dermoscopy

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Access to health care services takes on a new definition when scheduling visits with specialists in urban areas is a six-month wait listing. This is the case for dermatology consults in Pennsylvania. With the rural nature of Pennsylvania and exposure to the environment through farming, lumbering and mining, the Departments of Family Medicine and the Melanoma Center developed a pilot training program for primary care physicians in the use of dermoscopy. Physicians were required to complete workshops in real time as well as extensive self-directed activities that developed the knowledge and skills in dermoscopy and the self-confidence and self-efficacy in its application to patient care. This study looked at the learning process as well as the implication to practice transformation, increasing patient access, early diagnosis and avoidance of unnecessary biopsies.

References

1. Argenziano G, Puig S, Zalaudek I, et al. Dermoscopy improves accuracy of primary care physicians to triage lesions suggestive of skin cancer. J Clin Oncol. 2006;24:1877-82.
2. Carli P, De Giorgi V, Crocetti E, et al. Improvement of malignant/benign ratio in excised melanocytic lesions in the 'dermoscopy era': A retrospective study 1997-2001. Br J Dermatol. 2004;150:687-92.

Dermatoscopic features of basal cell carcinoma

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Introduction: Basal cell carcinoma is the most frequent cutaneous neoplasm. Today all known treatments are effective on the primary stages of BCC, hence it is very important early detection of the tumor. Dermatoscopy has proven to be a helpful tool in diagnosing of BCC.

Methods: Dermatoscopic characteristics were analyzed in 57 patients at 42-90 years of age. We observed 73 BCCs. Multiple BCCs were included. All diagnoses were confirmed by the cytologic or pathologic examination.

Results: Among numerous variations in clinical presentation of BCC, such as superficial BCC, nodular BCC, ulcerating BCC, pigmented BCC, sclerosing BCC most common dermatoscopic features were ulceration in 49 BCCs (67%); shiny white to red structureless areas in 27 (36%); blue/gray ovoid nests in 13 BCCs (17%); leaflike areas in 12 BCCs (16%). The vessels were presented by arborizing telangiectasia in 33 BCCs (45%), which were more frequent in nodular BCCs; hairpin vessels in 33 BCCs (45%), short fine telangiectasia in 18 BCCs (24%) that was more frequent in superficial BCCs. Less frequent we observed glomerular vessels, dotted, comma vessels, linear irregular vessels. The large amount of the dermatoscopic features observed proves that the dermatoscope increases our chances of detecting BCC in early stages.

The importance of dermoscopy in differential diagnosis of trombosed solitary angiokeratoma mimicking malignant melanoma

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Mibelli's angiokeratoma is a rare benign condition. The lesion is a 2- to 8-mm hyperkeratotic or verrucoid nodule that is blue-red or grey and may have a central haemorrhagic crust. It is most often seen on the dorsa of the toes and fingers, knees, elbows, feet, and lateral lower quadrants of the breasts. When extensive thromboses develop in an angiokeratoma, this nodular bluish-black lesion may clinically simulate a nodular melanoma. A 13-year-old girl presented to our outpatient clinic with a one-year history of a dark red-black lesion 0.6x0.8 cm in size on the medial side of her right femoral region. She had a history of bleeding of the lesion following traumas that most of its surface was covered by firm haemorrhagic crusts. Dermoscopic examination revealed dark red-black, sharply demarcated haemorrhagic crusts in different sizes, under which red-blue lagoons could be distinguished. Moreover, some hairpin vessels supporting malignant melanoma were detected at the periphery of the lesion. Finally the lesion was totally extirpated, and based on dermoscopic and histopathologic findings, it was diagnosed as trombosed solitary angiokeratoma of Mibelli. In conclusion, dermoscopy seems to represent an effective and reliable method in differential diagnosis between pigmented non-melanocytic (angiokeratoma Mibelli) and melanocytic lesions (malignant melanoma).

Shiny white streaks: a sign of malignancy in skin tumors

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Introduction: Shiny white streaks (SWS) are a new dermoscopic criteria detected under polarized light that have been associated to melanoma and other skin tumours.

Methods: Analysis of 800 dermoscopic images for the evaluation of the presence of SWS in the diagnosis of malignant skin tumors. The data set comprised 125 melanomas, 133 basal cell carcinomas (BCC), 305 melanocytic nevi, 49 seborrheic keratosis, 36 actinic keratosis, 21 squamous cell carcinomas (SCC), 19 solar lentigos, 11 dermatofibromas, 9 lichenoid keratosis, 1 neuroendocrine carcinoma, and 44 benign tumors (hemangiomas, benign keratomas).

Results: SWS were observed in 107 tumors (13.37%); 41 melanomas (38,32%), 41 BCC (38.32%), 5 nevi (4.67%), 6 dermatofibromas (56,1%), 4 actinic keratosis (3.74%), 3 SCC (2.80%), 2 lichenoid keratosis (1.87%), 2 solar lentigos (1.87%), 2 seborrhreic keratosis (1.87%), 1 neuroendocrine carcinoma (0.93%). Only 1,6% of all nevi presented SWS. The presence of SWS suggested a 10-fold risk of malignancy (melanomas, BCC, SCC, neuroendocrine carcinoma) (OR: 10.534 IC 95% 6.357- 17.455 p<0.0005).

Concerning the subtype of BCC data set (133 lesions) they were; 65 superficial (48.87%), 20 infiltrating (15.03%), 35 nodular (26.31%), 9 tricholemmal (6.76%), 3unspecified (2.25%), 1 pigmented BCC (0.75%). Among all BCC 30.8% presented SWS and there was no significant difference regarding histopathological subtype. Interestingly, SWS were observed more frequently in ulcerated BCCs (p<0.005).

Conclusions: The presence of SWS in a skin tumor is associated to malignancy. Except in the case of dermatofibromas, this criterion is rarely seen in benign cutaneous tumours.

Basal cell carcinoma: the correlations between dermoscopy identified large tumour vessels with tumour thickness and subtype histopathology

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Background: Basal cell carcinoma (BCC) presents with variable thickness in a variety of histopathological subtypes. Dermoscopy features of BCC include large diameter blood vessels.

Objective: To investigate if dermoscopy identified large diameter blood vessels correlate with: (1) thicker tumours and (2) BCC subtype histopathology.

Method: Consecutive BCC cases (n=1098) were assessed in vivo for large diameter blood vessels within the tumour "footprint" prior to full excision. The histopathological identified subtype categories of (1) superficial plus nodular, (2) nodular and (3) aggressive subtypes were compared for the presence of large blood vessels. Large vessels were defined as any vessel with a diameter larger than the largest background vessel out to 10mm from the tumour margin. Tumours with known previous intervention were excluded. Ultrasound gel was applied between the tumour surface and glass plate of the dermatoscopes to avoid vessel compression. Data validation was assessed by two observers (n=108) by a Cohen Kappa value of 0.96 for agreement on the presence of large vessels.

Results: All 3 BCC categories recorded a higher incidence of thicker tumours with large diameter blood vessels. Nodu-

lar BCC consistently has the highest incidence of large diameter vessels compared to the other subtypes ($p<0.005$).

Limitations: Cases were not categorized by tumour horizontal size. Recurrent tumours were excluded from the study.

Conclusion: Thicker tumours do tend to display larger vessels, although the difference in thickness is relatively small. Large diameter vessels add the features used to discriminate BCC subtypes.

Squamous cell carcinoma: dermoscopy guided assessment of the grade of tumour differentiation

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Background: Squamous cell carcinoma management and prognosis is influenced by the grade of tumour differentiation. Dermoscopy features associated with different grades of differentiation in SCC have not been previously reported.

Objective: Compare well differentiated (n=255) to combined moderate and poorly differentiated SCC (n=39) with an emphasis on dermoscopy features.

Method: A prospective study of 294 consecutive cases of histopathology confirmed invasive SCC was conducted to compare the dermoscopy features of well with moderate or poorly differentiated SCC.

Dermoscopy vascular features were recorded in vivo and included: branching, serpentine, dot, hairpin, glomerular and linear vessels, the proportion of pink in the tumour and the number of distinct vessel types. These features were identified using a Heine Delta 20 dermatoscope. Photographic images were recorded by a Dermlite foto dermatoscope coupled to a Canon EOS 550D camera.

Vascular feature validation was assessed for inter-observer agreement using Kappa values, which ranged from 0.66 to 1.00.

Results: Moderate and poorly differentiated SCC, display branching (28%, $P<0.001$) and serpentine (62%, $P<0.005$) blood vessels are more frequent than well differentiated tumours. The proportion of pink areas in the tumour varies between differentiation grades. Moderate and poorly differentiated tumours display larger numbers of vessel types. Increasing tumour depth from 1 to greater than 4mm was found to be associated with an increased proportion of moderate or poorly differentiated SCC.

Limitations: All data was generated using non-polarized light dermoscopy. Data was not categorized by anatomic site or tumour horizontal diameter.

Conclusions: Dermoscopy enhances the identification of the grade of tumour differentiation in SCC.

A novel acquisition device for total body photography

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Detecting changes in lesions is the most sensitive clinical sign for the early detection of melanoma. Thus, some diagnostic procedures incorporated some years ago the 'evolving' factor on their methods. This 'Evolving' parameter measures changes in colour, shape and/or size of pigmented lesions as an early sign of melanoma. Total Body Photography (TBP) has been reported in the literature describing its advantages on diagnosing skin diseases, combining images acquired with high-resolution digital cameras and baseline photography. These images are referenced by patient and date of acquisition and then compared over time with other explorations using specific software to automatically detect changes or by a physician that visually compares them.

TBP systems acquire nowadays around 20 images in standardized patient positions covering the face, neck, area behind the ears, scalp (in bald individuals), anterior and posterior trunk, and the extremities (including palms and soles). Our proposed method acquires 800 images covering the full body with a much higher resolution (in the order of 25 pixels per millimetre). Also the system incorporates a cross-polarized lighting in order to both reduce the reflexions on the images and also to see deeper pigmentation.

Such volume of images will be mapped to a standard reference system, which encodes a 3D representation of the body of the patient. This allows the registering of the spatial position of each lesion, automatically managing duplicated views of the same lesion from different perspective points. Further works will allow lesion segmentation, characterization and automatic comparison.

Pigmented basal cell carcinoma mimicking cutaneous melanoma in two patients: the diagnostic aid of dermoscopy

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Introduction: Pigmented basal cell Carcinoma (BCC) can be clinically confused with melanoma, dermoscopy being

a useful tool in differential diagnosis by identifying criteria that favor one or the other. We present two cutaneous melanoma-simulating lesions to the naked-eye, but with significant BCC dermoscopic features, emphasizing the usefulness of this diagnostic method in the approach of pigmented lesions.

Case 1: CCPL, white, 19-year-old, male, student, presenting a dark, papular lesion with irregular pigmentation and asymmetric borders on his left arm deltoid region, four years of progress, and a "change-in-aspect" in the last 12 months. Dermoscopy revealed ovoid nests, spokewheel-like pigmented structures, and maple leaf-like pigmentation, typical of pigmented BCC. Histopathology: BCC

Case 2: FFA, white, 43-year-old, female, doctor, presenting a 1cm pigmented lesion on her right paravertebral region, crusted surface with a pearly, pigmented edge. Dermoscopy revealed arborizing vessels, ovoid nests, specific for pigmented basal cell carcinoma, and a greyish blue veil, more common in melanoma, directing us to a dermoscopic high score, characteristic of lesions at high risk of malignancy. Lesion excised. Histopathology: BCC.

Conclusion: Dermoscopy can assist in directing the conduct in cases of cutaneous melanoma simulating lesions, and is an essential semiological method for these lesions, once it allows the identification of several criteria for melanocytic and non-melanocytic lesions. In INCA, dermoscopy is used as a screening exam for dermathological surgery, allowing faster surgery of melanocytic lesions suggesting melanoma and elective resection of BCC.

Chaos and Clues: an algorithm for the diagnosis of malignancy (any type) in pigmented skin lesions by dermatoscopy

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There are a number of published algorithms developed to assist in the diagnosis of malignancy in pigmented skin lesions. Many of these algorithms require mathematical calculations making application to routine practice laborious.

We present an algorithm based on 'Revised pattern Analysis' known as 'Chaos and Clues.'

Structures are clearly defined and named with simple geometric, rather than metaphoric, terminology. There is no need to make a presumptuous decision about melanocytic status as a first step. There are no mathematical calculations and the method is designed to integrate seamlessly into routine skin examination.

'Chaos and Clues' was evaluated in a study on 463 consecutively treated pigmented skin lesions, including 29 melanomas, in a primary care practice in Australia and was shown to diagnose pigmented skin malignancy (including melanoma, pigmented basal cell carcinoma and pigmented squamous cell carcinoma in situ) with a sensitivity of 90.6% and a specificity of 62.7%.

The algorithm is presented on a poster complete with an algorithmic flowchart, a step-by-step explanation of the method illustrated with high resolution dermatoscopy images, and a summary of validation studies.

References

1. Kittler H. Dermatoscopy: Introduction of a new algorithmic method based on pattern analysis for diagnosis of pigmented skin lesions. Dermatopathology: Practical & Conceptual. 2007;13(1):3.
2. Rosendahl C, Tschandl P, Cameron A, Kittler H. Diagnostic accuracy of dermatoscopy for melanocytic and nonmelanocytic pigmented lesions. J Am Acad. Dermatol 2011;64:1068-73.

Recovering intrinsic skin reflectance under arbitrary illumination from dermoscopy images

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Introduction: New dermoscopes come with a polarization feature that allows the user to reduce the effect of reflections and glare. However, the built-in white LEDs used for polarization cause a special redial lighting artifact resulting in separate areas of over and under-exposure that must be removed before any image analysis. For example, the consistent lighting is an extremely important feature in segmenting lesions from normal skin.

Method: We have proposed a new approach that finds intrinsic images by a fast entropy minimization and subtraction. First, two images with different lightings (polarized and non-polarized) are captured from the same skin surface. Pixels are transformed from 3D RGB triples into a 2D colour space G/R, B/R, and then logarithms are taken. The values across different lightings tend to fall on straight lines in 2D and change of illumination simply amounts to movement along such lines. Therefore, it is straightforward to devise a 1D illumination-invariant image by projecting the 2D chromaticity points into a direction perpendicular to all such

lines. We find the projection angle such that minimizes the entropy. This intrinsic images plus a calibration image of the normal skin is used to find the artifact pattern to be subtracted from dermoscopy images to recover the image that portrays only the inherent reflectance properties of skin.

Results: The qualitative results of our experiments show that the proposed method can significantly improve the quality of images and our quantitative results show 11.5% improvement in skin lesion segmentation accuracy in illumination corrected data sets.

Dermoscopic and histopathologic diagnosis of inverted follicular keratosis clinically mimicking basocellular carcinoma and lentigo maligna

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Inverted follicular keratosis is almost always a solitary lesion, occurring mainly in adult life. About 85 % of these lesions are found on the face. The duration of the lesion, when known, has varied between six weeks and three years. Most of the lesions are between 3 and 8 mm in maximum diameter. They are generally asymptomatic, firm, pinkish papules. Clinically they are often considered to be viral warts, basal cell carcinoma or a variety of benign lesions. They are thought to originate specifically from the infundibulum of the hair follicle. Differential diagnosis includes "irritated" seborrheic keratosis, keratoacanthoma, viral warts, and squamous carcinoma, An 85-year-old female patient admitted our out-patient clinics with a complaint of itchy papular lesion on her right cheek for 2 months. Dermatologic examination revealed centrally located grey-blue papular lesion 0.5 cm in size, with a peripheral hyperpigmented macular component 1.5 cm in size. Dermoscopically, macular part of the lesion was consisting of pseudo-pigment network. Central papular lesion was white-grey in colour, where hairpin vessels, linear and glomerular vessels in radial distribution could be seen. On the papular part of the lesion 3 crypt-like structures brown in colour with different sizes were seen. Histopathologic examination revealed multilobulated cells with narrow cytoplasm, and slight pleomorphism; focal keratinizations and squamous nests inside the lesion. There was a chronic inflammatory response at the periphery of the lesion consisting of foreign body type giant cells. PAS stain was negative. Where some immunohistochemical stainings including HMB-45, cytokeratin-7, and S-100 were negative, EMA and HMWCK were found to be positive. According to these histopathologic and dermoscopic findings our case was diagnosed as inverted follicular keratosis. We present this case to draw attention to the importance of dermoscopy and histopathology in the diagnosis of inverted follicular keratosis.

Dermoscopic, trichoscopic, and histopathologic findings of a rare case of tufted hair folliculitis

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Tufted hair folliculitis which affects the scalp, is a rare, progressive pattern of scarring alopecia. The presence of groups of 10-15 hairs emerging from a single follicular opening in adults is its characteristic feature. Tufts of hair associated with scars have been described in association with several other forms of alopecia. Staphylococcal organisms frequently are cultured from lesions of tufted hair folliculitis, but their role in pathogenesis is unclear. Patients with tufted hair folliculitis report slowly developing hair loss. Pain or swelling of the affected scalp frequently accompanies the hair loss. Crust and scales adherent to the scalp and hair are frequently seen. The ability to express pus from the follicular orifice is a constant finding. This process usually is limited to a single area of the scalp that enlarges gradually. The most prominent feature of this disorder is the presence of tufts of 8-15 hairs that appear to emerge from a single follicular orifice in a "doll's hair" pattern. Adjacent to and intermingled with the tufts are areas of scarring alopecia, with complete loss of follicles. The area of tufts and scarring is somewhat well circumscribed and may be accompanied by varying degrees of edema, erythema, and tenderness. Tufts of hair amid areas of scarring, giving the classic appearance of tufted hair folliculitis, have been described in patients with a number of different disorders, including scars from surgery or trauma, acne keloidalis, folliculitis decalvans, dissecting cellulitis of the scalp, lichen planus, and pemphigus vulgaris. A 37-year-old male patient admitted to our out- patient clinics with complaint of itchy areas on his scalp for 8 years. Clinical examination revealed scattered cicatricial alopecia areas and tufted hairs limited to his parietal region. There were crusts and scales around hairs and scalp in trichoscopy. Tufts of 8-15 hairs that appear to emerge from a single follicular orifice were seen. Perifollicular teleangiectasic erythema was detected in cicatricial areas. We present this rare case to demonstrate and discuss the trichoscopic, dermoscopic, and histopathologic findings of tufted hair folliculitis.

Longitudinal melanonychia in children

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Background: Dermatologists often come up against a problem of treatment for longitudinal melanonychia in children. Clinical, dermatoscopic and pathological criteria that permit clear differentiation between benign melanocytic activation and proliferation from nail matrix melanoma have not been established for children. The clinical and dermatoscopic features that are considered to be possible indicators of nail unit melanoma in adults are sometimes observed in benign melanocytic activation and hyperplasia in children.

Nail melanoma in children is very rare. Thus, there is still a controversy whether a single band of LM with clinical and dermoscopic features that suggest melanocyte hyperplasia in a child should be excised or not.

Objectives: We aim to provide more insight into the diagnosis of longitudinal melanonychia in children.

Methods: In the present study, we examined the characteristics of longitudinal melanonychia in children, which have been followed in our institute.

Results: In some LM lesions in children, color irregularity, irregular lines and triangular pigmentation were seen at first sight. In addition, pigmentation of the periungual skin was sometimes observed. These features were suggestive of malignant melanoma in situ. However, further dermoscopic examinations often revealed features indicating benign nature of the lesions, including regular lines in the LM and parallel furrow, fibrillar, lattice-like and globular patterns in pigmentation on the periungual skin (pseudo-Hutchinson's sign).

Conclusions: We often encounter embarrassing LM cases in children. However, even in such cases, thorough dermoscopic examinations might give us clues to deny malignant melanoma.

References

1. Tosti A, Piraccini BM, de Farias DC. Dealing with melanonychia. Semin Cutan Med Surg. 2009;28(1):49-54.
2. Tosti A, Piraccini BM, Cagalli A, Haneke E. In situ melanoma of the nail unit in children: report of two cases in fair-skinned Caucasian children. Pediatr Dermatol. 2012;29(1):79-83.

How many malignant melanomas might we miss when not using the dermoscopy?

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Introduction: Dermoscopy is a portable tool for the diagnosis of pigmented skin lesions. The aim of this prospective study was to evaluate how many malignant melanomas might not be excised based on clinical examination alone, but would be removed if dermoscopy were used. The secondary aim was to describe the morphologic characteristics of these misdiagnosed (false negative) MMs.

Material and methods: All patients coming for a routine check-up underwent a total body clinical examination, followed by dermoscopic evaluation. Lesions found to be suspicious on either clinical or dermoscopic evaluation were excised for histopathologic examination. Prior to surgical removal, the clinical and the dermoscopic index of suspicion was scored, categorized on a scale of: 0- not suspicious for MM, 0.5- low index of suspicion 1- high index of suspicion for MM, and clinical and dermoscopic imaging was performed. For all biopsy-proven MMs, the clinical and dermoscopic scores were retrospectively evaluated and proportions of true positive MMs (clinical and dermoscopic scores >0) and false negative MMs (clinical or dermoscopic scores =0) were compared using chi square test. Images of those that received a clinical or dermoscopic score of 0 were evaluated and the morphologic characteristics of those false negative MMs were described.

Results: Between august 2008 and august 2010, 5700 patients came for routine examination. Fifty-nine biopsy-proven MMs (1%) were identified. The proportion of MMs receiving a clinical score of 0 was 27%, 0.5 was 33% and 1 was 40%; dermoscopy was more accurate in identifying true positive MMs, the proportion of MMs receiving a dermoscopic score being 0 was 15%, 0.5 was 3% and 1 was 82% ($p< 0.01$). Among these 59 MMs, 16 (27%) of MM received a clinical score of 0 (false negative MMs); 3 of them (18.7%), would still have been excised because of clinical suspicion for BCC, but other 12 lesions (81.3%), would not have been excised on clinical grounds alone. The false negative MMs were morphologically characterized as being significantly smaller in size and having a light color or being amelanotic higher than true positive MMs.

Conclusions: Dermoscopy enable the clinician to correctly diagnose a subset of MMs that would be false negative MMs on clinical examination alone. Especially, dermoscopy is helpful above and beyond clinical examination for smaller and lightly pigmented MMs.

Proportion of malignant to benign skin lesion excision at the era of dermoscopy

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Introduction: Since dermoscopy had been introduced and popularized many authors quote the ration of 4 to 1 (benign to malignant pigmented lesion ratio- nevus to MM) at the highly skilled pigmented lesion clinics, to be a magic number reflecting the efficiency of dermoscopy in reducing unnecessary skin lesion excision. But in true life plastic surgeons and dermatologist are excising a great variety of other skin lesion. In this prospective study we are evaluating the work of one plastic surgeon and calculating the ratios between the different types of excised skin tumors with and without dermoscopy.

Material and methods: From August of 2008 until July 2010 all cutaneous lesions that were excised by a single plastic surgeon were first examined by dermoscopy and then the lesions were photographed with the dermoscope. All excised cutaneous lesions were recorded in the surgeon logbook and in a computerized database according to the pathology report in a standardized manner; this was defined as the study group. The control group compared of all patients that were treated by the same surgeon between October 2001 to December of 2003 in which the entire log book with the clinical evaluation and pathology reports was available, and at that time patients had only clinical evaluation without dermoscopy examination. Once the data was gathered, analysis using excel program was used in order to evaluate the exact ratios of each type of lesion excised as part of the total excised skin lesion, the total malignant to benign ratio was determined and the ratio of benign to malignant ratio of the pigmented lesion was calculated as well (malignant melanoma to nevus). The proportion of the different types of malignant tumors within the total malignant lesions, and the proportion of the different types of benign lesions within the benign lesions group was calculated as well

Results: In the study group 1817 lesions were excised, there were 1491 (82%) benign lesions and 329 (18%) malignant lesions. In the dermoscopy group 2162 lesion were excised, there were significantly less benign lesions excised 1278 (59%), and significantly more malignant lesions 884 (41%) excised. The ratio of nevus to melanoma was 1:34 and it has been decreased significantly to 1:12 on the dermoscopy group. The ratios between the different malignant lesions had an increase in the BCC and MM excision in the dermoscopy group. The overall MM excision has doubled from 1:90 to 1:44 from all excisions.

Discussions: Dermoscopy has proved to be an efficient tool to prevent unnecessary skin biopsies. It has increasing significantly the proportion of malignant lesions excised, and doubled the amount of MM excision. It has a significant impact on morbidity reduction (reducing the amount of unnecessary surgeries), and great economic saving impact by the same manner.

Clinical behaviour of the desmoplastic melanoma subtype

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Introduction: Desmoplastic melanoma (DM) has been shown to have adverse features including deeper invasion, propensity for perineural spread, and higher rates of local recurrence and distant metastasis. Current literature has focused on the subclassification of DM into pure (pDM) and mixed (mDM) subtypes and their differing capacity for nodal spread and recurrence. We report a single institution's experience of DM, examining the clinical behavior of the two histologic subtypes and implications for management.

Methods: A 10-year review of all patients diagnosed with DM at the Peter MacCallum Cancer Centre was undertaken. Cases were divided into 2 groups based on histologic classification: pDM and mDM.

Results: Sixty-five patients were reviewed (42 pDM and 23 mDM patients). The majority of both subtypes arose in the head and neck with presentation as a pigmented lesion more frequent for mDM (60.9% vs 38.1%). Breslow thickness was greater in the pDM than in the mDM group (mean 7.0 vs 3.5mm). One of 11 pDM and none of 5 mixed DM patients had positive sentinel lymph node bopsy (SLNB). Disease recurrence occurred in 26 of 61 patients (43%) overall (14 mDM and 12 pDM patients). Regional LN metastasis was seen in 18% of patients with a higher rate seen in the mDM group.

Conclusion: Clinicopathologic features of pDM and mDM subtypes differ. Despite a low rate of positive SLNB, a significant number of both pDM and mDM patients developed regional nodal disease. These factors should be taken into account when managing the different subtypes of DM.

References

1. George E, McCain SE, Slingluff CL, Polissar NL, Patterson JW. Subclassification of desmoplastic melanoma: pure and mixed variants have significantly different capacities for lymph node metastasis. J Cutan Pathol. 2009;36:425-32.
2. Busam KJ. Cutaneous desmoplastic melanoma. Adv Anat Pathol. 2005;12:92.
3. Pawlik TM, Ross MI, Prieto VG, et al. Assessment of the role of sentinel lymph node biopsy for primary cutaneous desmoplastic melanoma. Cancer. 2006;106:900.

Dermatoscopy follow-up examination of clinically atypical nevi

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Introduction: Dysplastic nevus has got a definite set of clinical, dermatoscopy and morphological features and shows a high risk of skin melanoma occurrence. Statistical research data reveal that from 7 to 18% of the total population are patients with dysplastic nevus. However, despite the revealed clear correlation between a dysplastic nevus and high risk of skin melanoma occurrence, the referential data demonstrate that the majority of the dysplastic nevi never developed into a melanoma.

Method: In Moscow Oncological Hospital к 62, the dermatoscopy follow-up examination was carried out from 2004 through 2008 to monitor the dynamics in structure of melanocytic nevi in 44 patients with high risk of melanoma. The total number of investigated clinically atypical nevi was 223. The final diagnosis was based on histopathological examination.

Results: A definitely clear change in the dermatoscopy structure was recorded in 10.3% of the total clinically atypical melanocytic nevi. All the changed nevi had the features of the melanocytic dysplasia of different categories. In 75% of clinically diagnosed atypical nevi, there was no evidence of the melanocytic dysplasia and there was no change in the nevi dimension or structure for the follow-up period of 6 to 24 months.

The obtained data of dynamic dermatoscopy examination demonstrate that the noninvasive method in question should be applied to detect the skin melanoma at its early stages, dysplastic nevus and to reduce the number of excisions of clinically atypical benign melanocytic skin lesions.

Subclinical extension of morphea-like basal cell carcinoma: hyperspectral evaluation

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Background: It is important to evaluate subclinical extension of morphea-like basal cell carcinoma (BCC) before planning surgery because recurrence may be caused by incomplete tumor excision. Dermoscopy and/or ultrasonography sometimes fails to identify the extent of subcutaneous involvement.

Aim: To verify the usefulness of hyperspectral images of BCC in identifying the extent of subcutaneous involvement and setting the margin required for complete tumor excision.

Patient and method: The patient was a 64-year-old Japanese female. The pigmented tumor was located on the nose. Dermoscopic and ultrasonographic images were taken and hyperspectral data were measured using a hyperspectral imager (MSI-03: Mitaka Kohki, Japan). The hyperspectral data were analyzed and converted into several images using an original spectral analysis algorithm. The resultant images were compared with the dermoscopic and ultrasonographic images and, furthermore, with histopathological findings.

Results and discussion: An image constructed from the hyperspectral data satisfactorily represented subclinical extension of morphea-like BCC, while dermoscopic images could not. The radial size was consistent with the tumor size estimated based on the histopathological examination. With respect to the ability to predict tumor size, hyperspectral images are superior or at least comparable to ultrasonographic images. The hyperspectral imaging technique presented here is considered to have considerable promise in setting the margin required for complete tumor excision.

Trichoscopy of adult alopecia areata—a pattern study

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Dermoscopy of hair-trichoscopy allows exploration of the hair at 10 to 800x and to observe precisely the types of hair, follicular openings, the peripilar signs and to follow up the evolution of the disease or the treatment efficacy prior to naked eye clinical observation. I studied 84 adults with 143 plaques of alopecia areata by trichoscopy before and after 3 months of treatment. 71,3% of plaques had regularly distributed yellow dots, corresponding to hyperkeratotic plugs in hair follicle. 51,7% had exclamation mark hair. 46,1% had dystrophic–broken hair; 27,9% had cadaverised hairs, black dots in the hair follicles. 8,8% had short pseudo regrowing hairs that are apparently regrowing but they are atrophic hairs and are a sign of activity of alopecia areata. They mostly disappear at 3 months trichoscopic follow up. 13,2 % had corkscrew hairs; 4,8% had circle hairs; 4,1% had vellus hairs-0,03 mm or less in thickness; 3,5% had white dots-feature of fibrosis; they have extensive persistent alopecia areata. I did not find any pseudo moniletrix hairs. The most frequent pattern is the presence of regular yellow dots (71,3 %), the second the presence of exclamation mark hairs (51,7%), and the third is the presence of dystrophic-broken hairs (46,1 %). The presence of pseudo regrowing hairs is a sign of the activity of alopecia areata. They are thin hairs that differ from normal thick, real regrowing hairs, sign of treatment efficacy.

References

1. Rudinicka L, Olszewska M, Rakowska A, et al. Trichoscopy: a new method for diagnosing hair loss. J Drugs Dermatol. 2008;7(7):651-4.
2. Tosti A. Dermoscopy of Hair and Scalp Disorders: Pathological and Clinical Correlations. Informa Healthcare. 2008:1-168.

Blue-white variant of pigmented basal cell carcinoma

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Introduction: The typical dermoscopic features of basal cell carcinomas have been well known. Besides them, some other dermoscopic features such as multiple brown to black dots and globules, blue/white veil-like structures, and non-arborizing vessels have also been described. Recently, "diffuse blue-white areas" has been reported as a dermoscopic pattern in some pigmented BCCs, namely "blue-white variant."

Method: We aimed to evaluate our cases with blue-white variant of basal cell carcinoma seen at the dermoscopy unit between 2003 and 2011. We reviewed the patient files; and for the cases with blue-white variant of basal cell carcinoma, the clinical and dermoscopic images and histopathological sections were re-evaluated.

Results: Eleven cases were detected. Three of them were excluded because of poor image quality. Eight cases (2 females, age ranged 45-66 years) were included. On dermoscopy, diffuse blue-white areas were observed together with arborizing telangiectasia, non-arborising vessels, focal areas of ulceration, milia-like cysts or thin scales. In all of them, melanoma was considered in the differential diagnosis. Histopathologically all of the lesions were compatible with nodular or nodulo-ulcerative type of pigmented BCC. Diffuse blue–white areas corresponded to aggregates of basaloid cells together with the diffusely distributed pigmented melanophages in the stroma. Although this type of pigmented BCC is rare, it needs a special attention mimicking a melanoma.

References

1. Altamura D, Menzies SW, Argenziano G et al. Dermatoscopy of basal cell carcinoma: morphologic variability of global and local features and accuracy of diagnosis. J Am Acad Dermatol. 2010;62(1):67-75.
2. Scalvenzi M, Lembo S, Francia MG et al. Dermoscopic patterns of superficial basal cell carcinoma. Int J Dermatol. 2008;47 (10):1015-8.

Dermoscopic features of linear porokeratosis: different aspects in its development

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Linear porokeratosis (LP) is a rare form of porokeratosis characterized by linear hyperkeratotic papules and annular plaques arranged along the Blaschko lines. Here, we report a case and describe the dermoscopic features of LP for the first time.

A twenty-two-year-old-woman had red-brown hyperkeratotic linear and annular plaques with elevated borders extending from the right mammary to the right axilla along the Blaschko lines.

The dermoscopic features observed in the case were varying according to the age of the lesions. The "early" papular lesions exhibited peripheral, thin whitish-yellow "thread-like structure" together with brown-black dots at the inner side. The early plaques revealed the same peripheral thread-like structure, however the dots were at the outer side and the ones in the inner part coalesced to form a gray-brown "network-like appearance." The early larger plaques showed linear arrangement of these dots both in the inner and the outer side of this thread-like peripheral structure, thus appeared as a "whitish-yellow track" together with a network-like appearance at the center again. The "mature" plaques showed the peripheral whitish-yellow track together with a central "reddish vascular network" instead of gray-brown network-like structure. Finally in the oldest lesions central "pinkish- white scar like area" accompanied the features of the mature plaques.

Dermoscopic features of other types of porokeratoses have been defined in a few case reports in the literature. However, to our knowledge, the dermoscopic features of LP are described for the first time. In addition, we point out "the variation of the dermoscopic findings in relevance to the age" and a new dermoscopic feature, "the gray-brown pigment network-like appearance," which may help improve the clinical and differential diagnosis.

References

1. Pizzichetta MA, Canzonieri V, Massone C, Soyer HP. Clinical and dermoscopic features of porokeratosis of Mibelli. Arch Dermatol. 2009;145(1):91-2.
2. Panasiti V, Rossi M, Curzio M, Bruni F, Calvieri S. Disseminated superficial actinic porokeratosis diagnosed by dermoscopy. Int J Dermatol. 2008;47(3):308-10.

The open pores with plugs in porokeratosis clearly visualized with the dermoscopic furrow ink test

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Porokeratosis was named based on Mibelli's concept that the column of parakeratosis, the cornoid lamella, emerges only from ostia of eccrine ducts. However, in 1970, Reed et al. proposed the cornoid lamella was not originated from the ostia of eccrine duct. Although this hypothesis has been generally accepted, some researchers have reported that cornoid lamella is sometimes seen in infundibular and eccrine ductal epithelium as well as epidermis. Several dermoscopic findings of porokeratosis have been reported, including the whitish peripheral rim, the brown globules and/or dots, red dots/red lines and scar like structures in the center of the lesions. We studied 5 cases of porokeratosis of Mibelli dermoscopically. In all cases, dermoscopic findings showed the small shining white or brown spots inside the lesions. The staining of the skin surface by white board marker (furrow ink test) visualized more clearly multiple open pores with plugs and some of which corresponded to hair. Pathological findings showed that keratotic column was seen in the part corresponding to hair and sweat pore. Open pores might be an important sign suggesting porokeratosis. The staining method by white board marker, furrow ink test, could allow us to better visualize the texture of skin.

Dermoscopic findings in Bowen's disease on the lip

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A 37-year-old Japanese male presented with a 4-month history of a solitary dark brown plaque located on the right angle of the mouth. There was no significant medical history, and he was otherwise healthy. On the physical examination, there was a well-demarcated, solitary dark brown plaque that measured 7.8 x 5.6 mm in size.

Dermoscopic examination demonstrated slate-blue dots/globules and irregular blue-white network in the center of the lesion. Atypical vascular pattern and multiple gray to brown dots in lines were observed at the periphery. Glomerular vessels were not observed. We suspected a pigmented skin lesion and performed the excisional biopsy.

The histopathology showed the psoriasiform pattern with regular acanthosis with thickening of the rete ridges and overlying hyperkeratosis. Epidermis showed full-thickness involvement with an atypical keratinocytes. Atypical mitoses were also observed. Basal hyperpigmentation was observed. Dermal papillae are elongated upward and filled with melanin pigment. There was no evidence of dermal invasion. Inflammation was not observed in the dermis. In the papillary and reticular dermis, numbers of dilated vessels were increased. Considering these findings, the diagnosis of pigmented Bowen's disease was made and the local wide resection was performed by the plastic surgeon.

Bowen's disease on the lip is exceedingly rare and this is the first reported case featuring the dermoscopic findings as far as we know. We discuss the dermoscopic/dermatopathologic correlation and conclude that Bowen's disease should be considered in the differential diagnoses of mucosal pigmented lesions.

The impact of sub-specialization and dermatoscopy use, on accuracy of melanoma diagnosis among primary care doctors in Australia

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[J Am Acad Dermatol10.1016/j.jaad.2011.12.030]

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Introduction: Dermatoscopy improves accuracy of melanoma diagnosis but the impact of sub-specialization in skin cancer practice among general practitioners on melanoma diagnostic accuracy is not known.

Objective: To assess the impact of dermatoscopy use and sub specialization on the accuracy of melanoma diagnosis by general practitioners.

Methods: We did a prospective study on the Skin Cancer Audit Research Database and measured melanoma 'number needed to treat' (NNT), with 21,900 lesions excised to diagnose 2,367 melanomas.

Results: Melanoma NNT fell from a high of 17.0 (95% confidence interval [CI] 14.5-20.7) among general practitioners with a generalist practice to 9.4 (8.9-10.1), among

those with a specific interest in skin cancer, and 8.5 (8.1-9.0) among those practising only skin cancer medicine ($p<0.0001$). Melanoma NNT fell from a high of 14.6 (12.0-18.6) among dermatoscopy low / non-users, to 10.9 (9.8-12.4) among medium users, and 8.9 (8.6-9.3) among high users ($p<0.0001$). The association between NNT and practice type remained ($p<0.0001$) when adjusted for dermatoscopy use and other variables. The association between NNT and dermatoscopy use disappeared ($p=0.41$) when adjusted for practice type and other variables.

Limitations: There is selection bias with respect to participating doctors and completeness and accuracy of data are not independently verified in SCARD.

Conclusions: General practitioners who subspecialize in skin cancer have a higher use of dermatoscopy and diagnose melanoma with greater accuracy than their generalist counterparts.

References

1. Vestergaard ME, Macaskill P, Holt PE, Menzies SW. Dermoscopy compared with naked eye examination for the diagnosis of primary melanoma: a meta-analysis of studies performed in a clinical setting. Br J Dermatol. 2008;159:669–76.
2. Kittler H, Pehamberger H, Wolff K, Binder M. Diagnostic accuracy of dermoscopy. Lancet Oncol. 2002;3:159–65.
3. Rosendahl C, Hansen C, Cameron, et al. Measuring performance in skin cancer practice: the SCARD initiative. Int J Dermatol. 2011 Jan;50(1):44–51.