

## An Exuberant Case of Retentional Acne: Chloracne

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**Citation:** Visintainer Melo P, Fortes Escobar G. An exuberant case of retentional acne: Chloracne. *Dermatol Pract Concept.* 2022;12(3):e2022128. DOI: <https://doi.org/10.5826/dpc.1203a128>

**Accepted:** November 15, 2021; **Published:** July 2022

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**Funding:** None.

**Competing interests:** None.

**Authorship:** Both authors have contributed significantly to this publication

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### Case Presentation

A 39-year-old woman presented with an 11-year history of facial lesions. She had worked on tobacco, corn and bean plantings for 23 years, having contact with multiple pesticides. Physical examination showed open comedones and cysts, predominating on the malar region, over a grayish background (Figure 1, A and B). Her family history revealed 2 sisters with similar lesions, who had also worked in agriculture, while four other sisters without contact with pesticides, had no skin lesions. Laboratory exams were normal and skin biopsy showed diffuse hyperkeratosis and infundibular dilatation, with sebaceous gland disappearance (Figure 1C). At the moment, the patient is using isotretinoin 40 mg/day with

a partial response, mostly on the open comedones. Furthermore, manual extraction of the larger retentional lesions was associated and she remains under follow-up.

### Teaching Point

Chloracne is an acneiform eruption caused by the ingestion, inhalation or transcutaneous penetration of halogenated aromatic hydrocarbons [1]. These compounds induce hyperkeratinization of keratinocytes, transformation of sebocytes to a keratinocytic phenotype and increase melanogenesis [2]. Most importantly, the sudden onset of a large number of acneiform lesions in the same household should lead the physician to consider chloracne.



**Figure 1.** (A and B) Numerous open comedones and cysts over a light grayish background, predominating on the malar region. (C) Histopathology showing infundibular dilatation, diffuse hyperkeratosis and absence of sebaceous gland (H&E, x40).

## References

1. Chessa MA, La Placa M, Patrizi A, et al. Six cases of chloracne in Italy: the success of combined therapy. *J Eur Acad Dermatol Venereol.* 2021;35(2):e108-e111. DOI: 10.1111/jdv.16835. PMID: 32706914.
2. Furue M, Tsuji G. Chloracne and Hyperpigmentation Caused by Exposure to Hazardous Aryl Hydrocarbon Receptor Ligands. *Int J Environ Res Public Health.* 2019;16(23):4864. DOI: 10.3390/ijerph16234864. PMID: 31816860. PMCID: PMC6926551.