Dermatology Practical & Conceptual

Lymphoma Developing in a Patient With Long-term Antitumor Necrosis Factor Therapy

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Introduction

Some studies have shown that tumor necrosis factor (TNF) alfa inhibitor therapy may increase the risk of lymphomas [1]. It is historically known that psoriasis can also increase the risk of cutaneous lymphomas. Here we present a case of a primary cutaneous anaplastic large cell lymphoma in a patient under treatment with adalimumab for psoriasis and psoriatic arthritis.

Case Presentation

Patient presented to the clinic with a shallow one-month ulcerative lesion, with infiltrated borders on the buttock. The patient had been on adalimumab for, approximately, the last 10 years due to psoriasis and psoriatic arthritis (Figure 1). A biopsy was performed for histopathology and immunohistochemistry analysis. The report showed cohesive sheets of large CD30-positive anaplastic cells confirming the

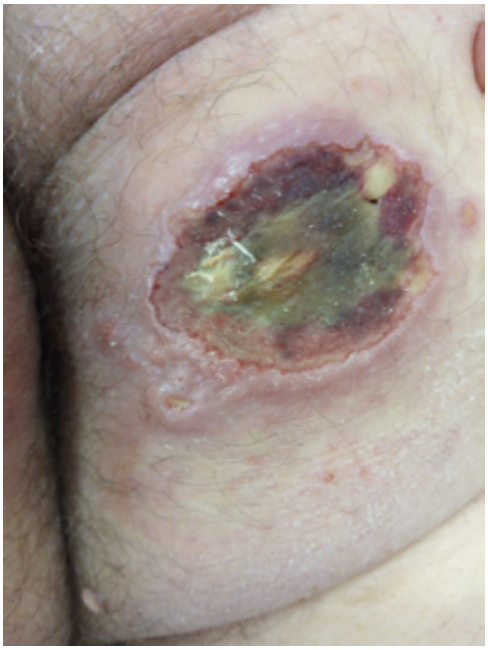

Figure 1. Ulcer on the buttock.

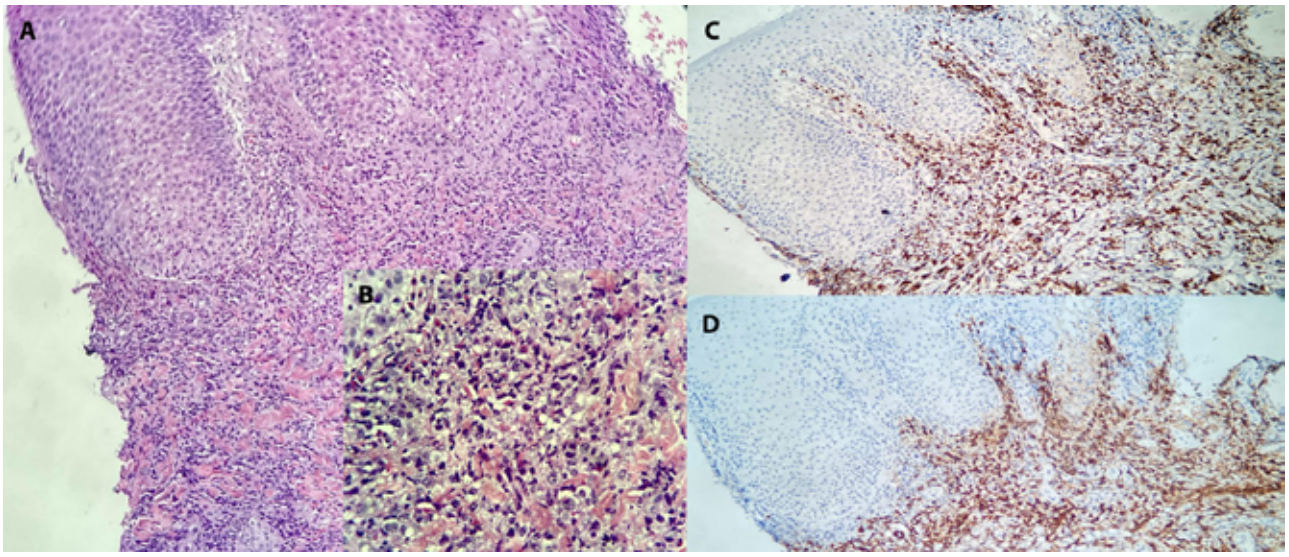

Figure 2. (A) Histopathology shows (x10) an acanthotic epidermis and a diffuse infiltrate of lymphocytes and some neutrophils on the dermis. (B) Histopathology shows (x40) a diffuse lymphocyte infiltrate with irregularly shaped nuclei, prominent nucleoli and abundant cytoplasm. (C) Immunohistochemistry shows CD3 positive lymphocytes. (D) Immunohistochemistry shows diffuse and strong positivity for CD30 on neoplastic cells.

diagnosis of CD30+ anaplastic T-cell lymphoma. Staging determined a cutaneous primary lymphoma with no other organs involved. The patient is currently under treatment for the disease (Figure 2).

Conclusions

Studies have shown that the most common lymphoma subtype associated with anti-TNF therapy is non-Hodgkin B-cell lymphoma [1]. In the other hand, it is known that psoriasis itself can increase the risk of cutaneous lymphoma. In this case, T-cell lymphoma is the most associated lymphoma subtype, mainly mycosis fungoides. Our patient presented a primary cutaneous anaplastic large cell lymphoma. This subtype of cutaneous T-cell lymphoma usually presents as a solitary nodule that often develops ulceration, as presented in this case. The prognosis is usually favorable with extracutaneous dissemination occurring in approximately 10% of the patients. Radiotherapy is usually the initial choice of treatment, but chemotherapy could also be considered. More recently, a study by Langley et al stated that longer-term ($\geq$ 12 months) treatment with a TNF alfa inhibitor, but not shorter-term treatment, was associated with increased risk for malignancy [2]. The patient presented here had been under treatment for, approximately, 10 years.

In conclusion, studies are controversial regarding if there is an increased risk of malignancy due to anti-TNF alfa therapy, with a tendency of relating it to the duration of the treatment. We presented a case of a patient with a long-term treatment with adalimumab for psoriasis and psoriatic arthritis who developed a cutaneous lymphoma. Further studies are needed to determine the risk of lymphomas in patients with long term anti-TNF therapy, but physicians should remain aware of this possibility when following patients under this treatment.

References

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