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# Hematoma-like primary cutaneous peripheral T-cell lymphoma: a rare clinical presentation

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## TEXT

Cutaneous T-cell lymphoma (CTCL) represents a group of cutaneous lymphomas, characterized by a broad spectrum of clinicopathological presentations, ranging from eczematous, psoriatic-like patches and plaques(as in classical Mycosis Fungoides[MF] with good prognosis) to ulcerative/tumoral lesions, as in the case of late MF and/or cutaneous γ-δ T-cell lymphoma,with a typical worse prognosis.[1,2] The WHO-EORTC classification improved the ability to classify CTCLs, but still some rare unusual variants are difficult to classify according to current criteria.[2]

A 61-year-old Caucasian male was admitted to our hospital with a 4-month history of asymptomatic red-violet maculo-papular lesions on his limbs and trunk(Fig.1) Three years before a nodal anaplastic large T cells lymphoma CD30+ was diagnosed and successfully treated with 4 cycles of CHOP regimen(Doxorubicin 50 mg/m$^2$ day 1;Vincristine 1.4 mg/m$^2$day 1;Cyclophosphamide 750 mg/m$^2$ in 250 mL of NS Day 1; Prednisone 100 mg po daily day 1–5), followed by autologous autograft. His personal medical history included: *H.pylori*-associated gastritis, gout under treatment with allopurinol, arterial hypertension and hepatitis B under treatment with entecavir. Laboratory examination revealed pancytopenia(white blood cell 3.900/µl, red blood cell 2.60×106/µl, hemoglobin 10.6 g/dl, platelet 118×103/µl).

Histological examination of the cutaneous biopsy of an abdominal lesion revealed a hyperplastic epidermis,with dermal dense lymphocytic infiltrate consisting of medium-large sized pleomorphic lymphocytes with convoluted hyperchromatic nuclei. The lymphoid infiltrate was not epidermotropic. Immunohistochemistry showed a CD3+,CD4+,CD5+,CD7+/-,CD30+(< 75%),ALK-,TIA1+,Granzyme- lymphocytic infiltrate as well as MIB-1 10%(Figs.2a-2d). A diagnosis of hematoma-like primary cutaneous peripheral T-cell lymphoma(H-PCTCL) was made.Bone marrow biopsy was negative.Currently the patient performs a local treatment with clobetasol and phototherapy, with periodic clinical and instrumental investigations.

To our knowledge, no previous case of H-PCTCL has been reported; while similar manifestations were reported in MF.[3,4] Differently to our case, Hattori et al. described a hematoma-like MF characterized by a more delimited nodular lesion; but, interestingly, similarly to our case, there was a CD30+ large-cell component.[3] According to Benner et al., CD30 negativity in MF is associated with reduced disease-specific survival,while other authors suggest that CD30 expression in MF might be associated with a better prognosis.[5] Whether CD30 positivity in hematoma-like MF and H-PCTCL associates with an aggressive behavior requires further investigation. Indeed, contrariwise to the previous case, our patient didn't show a rapidly progressive fatal course.[3]

Another reported case was a 73-year-old male with similar red-violet hematoma-like lesion of the right shin sustained during a motor vehicle accident.[4]According to the authors,the hematoma-like appearance was due to the previous trauma,thus influencing the growth of a hidden pre-existing neoplasm.[4]In our case, the hematoma-like lesions were widespread and without a preceding trauma.

The hematoma-like lesions in hematoma-like MF and in H-PCTCL may be related to the tissue destruction by the atypical cell infiltrate,with consequent intralesional bleeding.[3] Specifically, certain neoplastic cells may release cytokines or cytotoxic proteins, such as granzyme and T-cell-restricted intracellular antigen, which affect bleeding.[3]

In conclusion we described a case of H-PCTCL. The relationship between atypical T lymphocytes and hematoma-like appearance, as well as the prognosis of this rare manifestation of cutaneous lymphoma, remain unknown.

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## NOTES

**Acknowledgments:** none

**Conflict of interest:** none

## TITLE OF FIGURES

**Figure 1.** Hematoma-like lesions on the abdomen; *insert lower right:* spread of haematoma-like lesions to the back

**Figure 2a.** Hyperplastic epidermis, with dermal dense lymphocytic infiltrate consisting of medium-large sized pleomorphic lymphocytes with convoluted hyperchromatic nuclei. (Hematoxylin and Eosin, 100X)

**Figure 2b.** CD3 positivity (100X)

**Figure 2c.** CD4 positivity (100X)

**Figure 2d.** CD30 positivity, < 75% (100X)