

## ACQUIRED ICHTHYOSIS REVEALING A HODGKIN LYMPHOMA: A CASE REPORT

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### ABSTRACT

Adults acquired ichthyosis is generally related to systemic diseases such as hemopathies. We report the case of a 62 year-old man with a history of a stomach cancer who presented a generalized edema with skin sclerosis settling over a month. No other examination abnormalities were found. Biological tests revealed hypereosinophilia with a high level of lactate dehydrogenase. Digestive endoscopy found no new lesions. The thoraco-abdomino-pelvic scan revealed multiple lymphadenopathies. The skin biopsy showed the aspect of a paraneoplastic ichthyosis. A lymphadenopathy biopsy revealed a Hodgkin lymphoma in the classic form. Skin lesions regressed under chemotherapy.

### INTRODUCTION

The skin is an essential organ which plays a critical role in many diseases reflection, especially malignant ones. Cutaneous paraneoplastic changes are various.<sup>[1]</sup> One subtype is acquired ichthyosis which, in adults, is generally related to systemic diseases. Hemopathies (i.e. lymphomas) are the most incriminated in this skin disorder.<sup>[2]</sup>

Herein, we report a new case of an adult patient presenting with generalized acquired ichthyosis revealing a Hodgkin lymphoma.

### CASE REPORT

A 62 year-old tunisian white man, smoker, with a history of a stomach cancer treated by partial gastrectomy and gastrojejunostomy in 2003 presented with a generalized pruritus resistant to symptomatic treatments. One month after that, he noticed six kilograms weight gain due to generalized edema and rapid skin changes. He was admitted to the internal medicine department. No other complaints were reported. Physical examination noted a diffuse edema and skin sclerosis. All the skin was tight, thick and hard with dry scales (Fig. 1 and 2).



**Figure 1: Ichthyosis lesions on the left leg.**



**Figure 2: Ichthyosis lesions on the trunk.**

No other abnormalities were found: no fever, no lymphadenopathies, no hepato-splenomegaly and no neurological signs. Some biological features were disturbed. He had a mild hypochromic microcytic non regenerative anemia (7g/dL), a hyperleukocytosis (24000

elements/ $\mu$ L) with 36.4% eosinophils (8730 elements / $\mu$ L) and 13.4% monocytes (3220 elements / $\mu$ L). He had a high level of lactate dehydrogenase (LDH) (877UI/L). No biological inflammatory syndrome was objectified. Proteinuria was negative. Viral screening was negative

(CMV, EBV, HSV, HVB, HVC and HIV). All hypereosinophilia causes were eliminated: no drug intake or toxic exposition was found, no parasites and no allergic features were detected. Chest radiography and cardiac echography were normal. Colonoscopy and oesogastric fibroscopy noted a left dolicho-colon with internal grade II hemorrhoids. Gastric biopsies showed a mild active gastritis with no *Helicobacter pylori* and no signs of malignancy. The thoraco-abdomino-pelvic scan revealed multiple bilateral axillar and inguinal lymphadenopathies measuring 15 mm, sub-centimetric mediastinal lymph nodes, a bronchial syndrome as well as pleural, peritoneal and parietal effusion. The skin biopsy showed a spongiotic epidermis which was the site of moist parakeratosis and hyperplastic acanthosis, with rare images of necrotic keratinocytes in the superficial layers. The superficial dermis and its perivascular areas were the site of a diffuse inflammatory infiltrate, rich in lymphocytes and eosinophils. This aspect was that of a paraneoplastic ichthyosis. The biopsy of an axillar lymphadenopathy revealed a Hodgkin lymphoma in the classic form, mixed cellularity subtype. The patient was treated with chemotherapy in the hematologic department. Skin lesions regressed under chemotherapy.

## DISCUSSION

Many skin lesions can occur during malignant diseases called paraneoplastic. They can precede, occur simultaneously or appear after the disease course. It signs a turning point in the neoplastic disease course, as what was suspected in our patient with a history of gastric cancer. It usually disappears once the primary cause is treated.<sup>[3]</sup> In Hodgkin's lymphoma, the skin involvement is unusual and has been reported in 0.5%-3.4% of the cases.<sup>[4]</sup>

Ichthyosis is a keratinization disorder of the skin. It is a rare disease that can be congenital or acquired. It can be widespread or localized to the trunk and/or legs. Acquired ichthyosis can be related to various etiologies. Malignancies are the most frequent, found in 70%-80% of the cases, particularly Hodgkin's disease.<sup>[5,6]</sup> Other hematologic disorders can be in cause such as non-Hodgkin lymphoma, mycosis fungoid, leukemia, multiple myeloma and Kaposi's sarcoma. Associations to solid neoplasia have been described, as breast, lung and cervical cancers.<sup>[7]</sup> The pathogenesis is not well known. Factors produced by the tumoral cells have been implicated: Transforming growth factor (TGF) alpha and beta which plays a role in the lipid metabolism and the epithelial growth factor (EGF) which stimulates skin keratinization.<sup>[8]</sup>

Non-malignant diseases must be sought such as autoimmune syndromes with an autoimmune response directed to the skin<sup>[9]</sup>, sarcoidosis, endocrinologic diseases (hypothyroidism), infectious diseases (HIV), nutrition abnormalities, vitamin A deficiency. Some drugs can also cause ichthyosis.<sup>[10]</sup>

## CONCLUSION

Skin changes must draw attention in general practice. They can be the sole sign of systemic or malignant evolving diseases. In our patient's presentation, pruritus, blood cells count abnormalities and acquired ichthyosis were highly predictive of a hematolymphoid disease. Nevertheless, this type of skin lesion remains rare in Hodgkin's lymphomas.

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