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Pruritus as a Paraneoplastic Symptom of a Lung Cancer

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Abstract: Paraneoplastic itch is defined as pruritus that occurs either within the natural progression of malignancy or preceding the diagnosis of malignancy. The true frequency of this symptom is unclear, epidemiological data in this field are limited. Itch in malignant disease may additionally impair patients quality of life. We report the case of an 80-year-old patient who consulted for a chronic pruritus that had been evolving for 6 months. The clinical and paraclinical examination revealed the presence of a bronchial adenocarcinoma.
Keywords: Itch, chronic, paraneoplasic, malignancy, bronchial adenocarcinoma.

INTRODUCTION

Pruritus is an unpleasant sensation on the skin eliciting the desire to scratch. Chronic pruritus (CP) refers to daily/almost daily itching, lasting more than 6 weeks [1]. Clinically, pruritus has been described as the most frequent symptom in dermatological condition. It has demonstrated a significant impact on patient's quality of life (QoL) that causes various problems related to sleep, anxiety, attention, and sexual function. Moreover, CP poses a significant burden on the society in terms of health-care cost and treatment challenges [1]. In addition, many systemic diseases are also known to be associated with pruritus and further incapacitating nature of this condition.

Paraneoplastic itch is defined as: (i) itch that occurs early during the natural process or even precedes the clinical evidence of the malignancy, (ii) it is not caused by the neoplastic mass invasion or compression, and (iii) subsides after the removal of the tumor. We report a case of à patient with chronic pruritus that revealed bronchial adenocarcinoma.

CASE REPORT

Patient of 80 years, without notable pathological antecedent, in particular no use of tobacco, consulted for an insomniant generalized pruritus evolving since 6 months, without other signs of appeals notably pleuro pulmonary digestive .... The dermatological examination showed the presence of diffuse excoriations [Figure1] with 2 small angiomatous nodules on the back [Figure 2] and an acquired ichtyosis in the legs [Figure 3]. The patient had benefited of a first assessment of pruritus, the NFS showed an hypereosinophilia at 530, renal, hepatic, thyroid check and stool co-parasitology were normal, chest x-ray showing suspect right apical opacity [Figure 4], a chest CT scan has been advocated confirming the presence of a T4N1Mx right lung tumor process confirmed by histology [Figure 5]. A biopsy of the angiomatous lesions was performed by suspecting cutaneous metastases of the lung tumor returned no specific. The patient was put under emollient cream and UVB therapy and then was sent to oncology for the continuation of his care.

Fig-1: Diffuse excoriations post itching

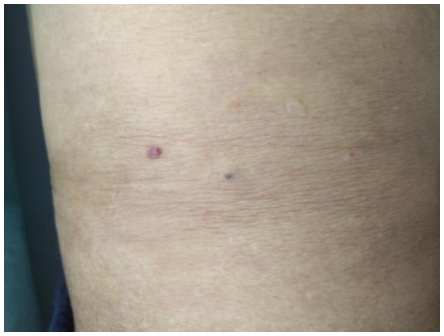

Fig-2: 2 small angiomatous nodules on the back

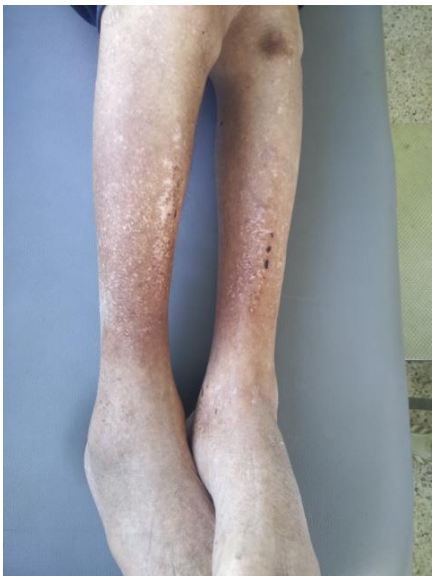

Fig-3: Acquired ichthyosis

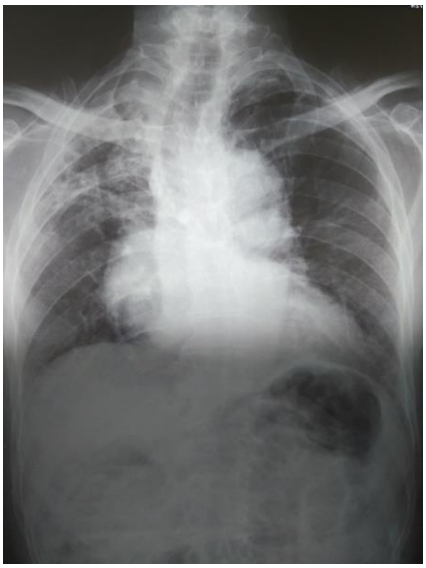

Fig-4: Suspecte right apicale opacity

DISCUSSION

Prevalence of chronic itch has been reported decades ago as high as 30% in patients with Hodgkin's disease [2]. A small-scale study showed that approximately 15% of patients with non Hodgkin's disease suffered from generalized pruritus [3]. According to a retrospective study recently conducted at MD Anderson [4], the incidence of itch is about 19% in patients with Hodgkin's disease who were referred to dermatology. Itch has been reported to be a preceding sign in patients with multiple myeloma [5]; however, there is no data on its prevalence. Several small scale studies examined the underlying etiology of idiopathic generalized pruritus and found that malignancy is a causé in less than 10% of the patients. Lymphoma and leukemia were the most common malignancies [6-8]. Pruritus as a paraneoplastic sign in solid tumors of different types has been anecdotally reported [2]. Pruritus was found in one out of the nine patients with paraneoplastic syndromes among 68 patients who suffered with nonsmall cell lung carcinoma [9]. In patients with extrahepatic cholestatic, itch may be caused by obstructive tumor in the pancreatic head and primary sclerosing cholangitis [10]. Intractable pruritus has been reported as an initial presentation of insulinoma [11]. Although the pruritus may occasionally be present years before the tumor becomes detectable, a full investigation for a causative solid tumor is probably not warranted, unless other skin manifestations or clinical signs suggestive of malignancy exist. However, exact mechanism for this association has not been fully understood. It has been postulated that immunological mechanisms, toxic metabolites, iron deficiency, and dry skin may trigger pruritus in such patients. Commonly, antihistamines are not considered to be helpful for relieving itch [12].

Treatment of paraneoplastic itch is centered on targeting the underlying malignancy responsible for the systemic reaction. In cases of malignancy that are refractive to treatment, other therapies have been found to be effective for paraneoplastic itch, including selective serotonin reuptake inhibitors, mirtazapine, gabapentin, thalidomide, opioids, aprepitant, and histone deacetylase inhibitors [13].

CONCLUSION

Chronic itch could be a presenting sign of malignancy. In any case with high index of suspicion a thorough work-up is required. Exact mechanism for this association has not been fully understood. It has been postulated that immunological mechanisms, toxic metabolites, iron deficiency, and dry skin may trigger pruritus in such patients. Commonly, antihistamines are not considered to be helpful for relieving itch. However, eradication of the tumor can help diminish or abolish the itch.

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