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Leser-Trélat Associated with Myeloproliferative Neoplasia: When the Skin Speaks

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Abstract

The Leser-Trélat sign is an uncommon dermatological manifestation characterized by the sudden and rapid onset of multiple seborrheic keratoses, variably distributed across the body. Its clinical significance lies in its association with underlying neoplasms, primarily solid tumors such as gastric, colon, and breast adenocarcinomas. Less frequently, it has been linked to hematological and lymphoid malignancies, reinforcing its role as a paraneoplastic syndrome. These lesions may appear as an isolated finding or alongside other systemic signs, emphasizing the importance of a comprehensive diagnostic approach to identify potential associated neoplasms. We present the case of a 72-year-old male patient who sought medical attention for constitutional symptoms, fever, nocturnal chills, and abdominal distension. Sudden-onset brown seborrheic and keratotic lesions were noted on his chest, back, abdomen, axillary, and cervical regions. Following evaluation, the patient was diagnosed with chronic myeloid leukemia. Given his advanced age and clinical condition, a palliative approach was chosen due to the high risk of complications with chemotherapy, and the patient was subsequently discharged. This case highlights the importance of

recognizing the Leser-Trélat sign as a critical clinical marker for occult neoplasms. Its identification should prompt a thorough evaluation, particularly in patients with systemic symptoms, as it may provide the key to early diagnosis and optimized therapeutic planning.

Keywords

Leser-Trélat Sign, Paraneoplastic Syndromes, Seborrheic Keratosis, Leukemia, Myeloid, Acute

1. Introduction

Paraneoplastic syndromes are defined as clinical manifestations—hormonal, neurological, hematological, or dermatological—caused by biochemical imbalances resulting from the presence of an underlying malignancy [1]. In these cases, the skin, acting as the body's primary defense barrier, is frequently affected by these conditions, ranking second in frequency after endocrine system manifestations [2]. Dermatologic involvement can provide critical clues for the medical team in diagnosing or suspecting underlying neoplastic diseases, as over 50 specific dermatologic presentations have been documented in association with paraneoplastic syndromes [1] [2]. These manifestations can occur at various points in the tumor's progression: before diagnosis, during development, or even after the clinical onset of the tumor, and they do not always correlate with the extent of metastasis [3].

Among these syndromes, Leser-Trélat sign stands out as an uncommon dermatologic manifestation [4]. This dermatological paraneoplastic syndrome is characterized by the sudden onset of multiple, rapidly growing seborrheic lesions with papular and verrucous characteristics [1] [2] [5]. These lesions, typically well-demarcated and dark-toned, predominantly brown or black, are primarily distributed on the chest and back, though they may also be found on the extremities, abdomen, neck, axillae, and face [1] [4]-[6]. The sign is named in honor of Drs. Edmund Leser and Ulysses Trélat, who initially associated the appearance of cherry angiomas with neoplastic conditions; later, in 1900, Hollander formally described it in relation to seborrheic keratoses, establishing its association with paraneoplastic syndromes [3] [4] [6].

This manifestation is primarily associated with solid neoplasms, with the most common being gastric adenocarcinoma, and colon and breast cancers [1] [3] [7] [8]. Less frequently, it has been documented in patients with hematologic malignancies such as lymphomas or leukemias [3] [9] [10]. In most cases, the complete disappearance of cutaneous lesions occurs following effective treatment of the underlying primary tumor, emphasizing the importance of comprehensive neoplastic management for the resolution of Leser-Trélat sign and other associated symptoms [11] [12].

2. Case Presentation

We report the case of a 72-year-old male patient with a history of hypertension, diagnosed 10 years ago, currently under pharmacological management with losartan 50 mg every 12 hours, and paranoid schizophrenia, diagnosed 25 years ago, managed with clozapine 50 mg every 24 hours. He was admitted to a healthcare institution in Cartagena, Colombia, with a clinical picture of approximately two months duration, characterized by asthenia, adynamia, sweating, and predominantly nocturnal chills, along with a significant weight loss of about 6 kg over two months, from an initial weight of 87 kg to 81 kg at the time of consultation, considered a constitutional syndrome-associated condition. The patient reports the onset of multiple brown lesions on the abdomen, chest, axilla, and dorsal region, with an approximate duration of 20 days, with rapid progression and growth, along with a sensation of mass in the cervical region.

On physical examination, the patient appeared to be in poor general condition, with vital signs showing blood pressure at 112/78 mmHg, tachycardia (102 beats per minute), normal respiratory rate (17 breaths per minute), and normal temperature (36.8˚C). He had puffy facies, hypochromic mucosa, and mobile, non-painful, stony lymphadenopathies in the cervical lymph node chains, with none found in the submandibular, axillary, or inguinal chains. Cardiopulmonary auscultation was normal, and the neurological exam showed no abnormalities. The abdomen showed marked distension associated with hepatomegaly, with the liver palpable 5 cm below the costal margin, and non-painful splenomegaly. A striking finding was the presence of multiple hyperpigmented seborrheic and keratotic lesions on the chest, back, abdomen, axillary, and dorsal regions, in light and dark brown tones, greasy to the touch (Figure 1). Given this finding and the patient's symptoms, along with the sudden appearance of these lesions, the case was considered Leser-Trélat sign, necessitating a search for the patient's potential neoplasia.

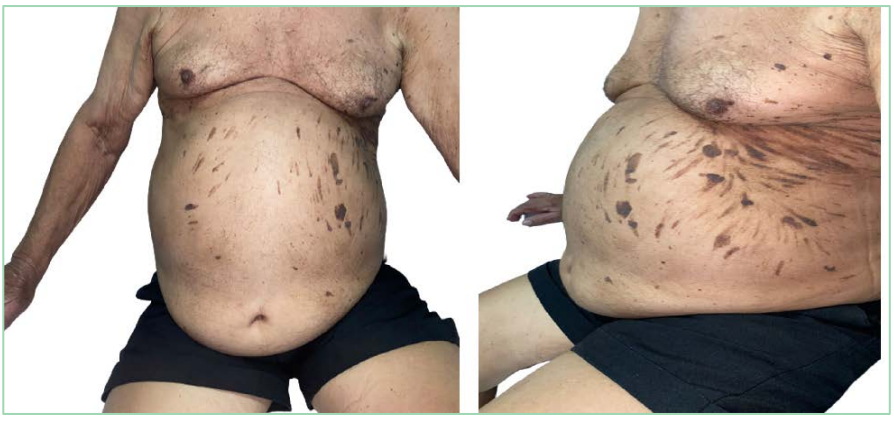

Figure 1. Leser-Trélat sign: Hyperpigmented seborrheic and keratotic lesions, in light and dark brown tones.

The patient's laboratory tests revealed a complete blood count with marked leukocytosis (101,010 μL), with 64% neutrophils (64,646 μL), 34% lymphocytes

(34,343 μL), and 2% eosinophils (2021 μL), as well as thrombocytosis confirmed by manual platelet count (795,000 μL) and anemia of grade I WHO (hemoglobin 10.8 g/dL). C-reactive protein was normal, as were sodium (145 mEq/L), potassium (4.8 mEq/L), and chloride (101 mEq/L). Renal function was impaired, with creatinine at 1.57 mg/dL and blood urea nitrogen at 21.4 mg/dL, along with markedly elevated uric acid at 11.65 mg/dL and elevated phosphorus at 7.8 mg/dL, with normal calcium, meeting two elevated Cairo-Bishop criteria, suggesting that the patient was in tumor lysis.

Imaging studies, including a contrast-enhanced computed tomography scan of the neck reported as normal, contrast-enhanced thoracic scan showing mild peribronchial thickening on the right, and a contrast-enhanced abdominal scan revealing hepatosplenomegaly with a liver size of 180 mm and spleen size of 220 mm in its anteroposterior diameter, were also conducted (Figure 2).

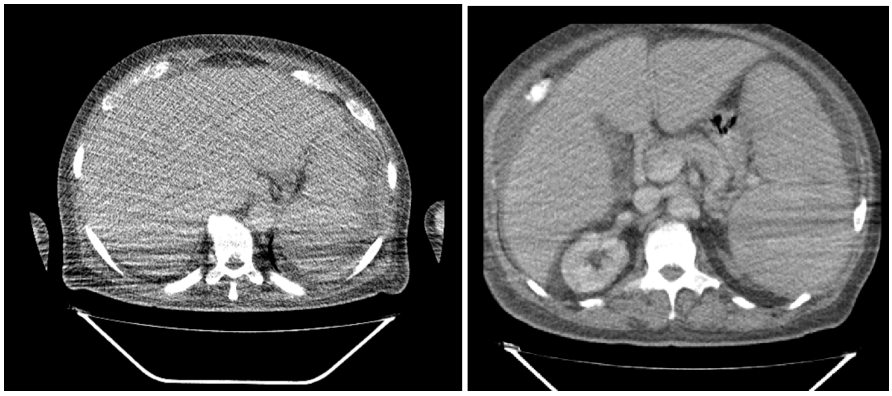

Figure 2. Hepatomegaly of 180 mm and splenomegaly of 220 mm in anteroposterior diameter.

Based on clinical, laboratory, and imaging findings, a bone marrow biopsy was performed, revealing a diagnosis of chronic myeloid leukemia. During hospitalization, treatment for tumor lysis syndrome was initiated, including optimal volume resuscitation with balanced solutions. Management also involved the administration of a xanthine oxidase inhibitor, in this case, allopurinol, due to its availability, as rasburicase, which is preferred for acute management due to its ability to convert uric acid to allantoin, was unavailable.

Considering the patient's advanced age, comorbidities, and disease progression, a palliative approach for chronic myeloid leukemia was chosen. After managing the acute decompensation, discharge was planned, as the patient's short- to medium-term prognosis is poor.

3. Discusión

The Leser-Trélat sign, characterized by the sudden appearance of multiple seborrheic keratoses with rapid growth, is a clinically significant indicator, as it can be associated with oncological conditions where early diagnosis may be critical to prognosis [1] [3] [13] [14]. Although more commonly associated with solid

tumors such as gastric, colon, and breast adenocarcinomas, it has also been documented in patients with hematologic neoplasms, including some forms of leukemia and lymphoma [3] [10] [12] [15]. This case, involving a 72-year-old male patient presenting with multiple keratotic lesions alongside systemic symptoms such as fever, chills, abdominal distention, and significant weight loss, underscores the importance of considering paraneoplastic diagnoses in the context of unusual and rapidly evolving dermatological changes, especially in patients at risk for malignancies.

From a pathophysiological perspective, the Leser-Trélat sign occurs due to increased production of tumor-derived growth factors or cytokines, such as epidermal growth factor and transforming growth factor-alpha, which induce rapid keratinocyte proliferation in the skin [1] [4] [11]. The association between cutaneous lesions and underlying neoplasia, as observed in this patient with chronic myeloid leukemia, serves as a reminder that the skin can mirror systemic manifestations and should be carefully evaluated within a broad clinical context [6]. Although chronic myeloid leukemia typically has a slow course, it can decompensate and present with severe systemic manifestations [16] [17]. In this case, the association of the Leser-Trélat sign with chronic myeloid leukemia reaffirms the diverse spectrum of paraneoplastic syndrome presentations and the necessity for a comprehensive diagnostic approach.

Diagnosis of Leser-Trélat is clinical and based on proposed criteria. Fink et al. suggest that the appearance of 20 or more seborrheic keratoses within six months may indicate this syndrome [18]. Other authors, such as Lindelöff et al., extend this time range up to 18 months while maintaining a similar minimum lesion threshold [19]. The correlation between the Leser-Trélat sign and the type of malignancy varies, but resolution of lesions often aligns with successful treatment of the primary tumor. Although no specific therapy exists for seborrheic keratoses associated with this syndrome, some studies suggest that up to 45% of lesions may regress following adequate treatment of the underlying tumor, underscoring the importance of comprehensive cancer management as an indirect means to relieve dermatologic symptoms [12].

4. Conclusion

The Leser-Trélat sign represents a clinically significant dermatologic manifestation often indicative of an underlying malignancy, particularly rapidly progressing solid or hematologic neoplasms. This sign, marked by the abrupt onset of multiple seborrheic keratoses, emphasizes the skin's role as an indicator of systemic pathology. Its recognition should trigger a thorough diagnostic workup to identify potential primary tumors. While no targeted therapy exists for these lesions, they often regress with effective cancer management. Future research should focus on elucidating the underlying mechanisms linking skin and systemic malignancies, enabling earlier detection and enhancing multidisciplinary strategies to optimize patient outcomes.

Consent

The study was funded with personal resources. The case is published with the prior informed consent of both the institution and the patient.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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