

# Leser-Trélat Sign Associated with an Adenocarcinoma of the Prostate: Case Report

## Prostat Adenokarsinomu ile İlişkili Leser-Trélat Belirtisi

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**ABSTRACT** The Leser-Trélat (LT) sign is characterized by the sudden appearance and rapid increase in number and size of pruritic multiple seborrheic keratoses within a short period of time. Although it has been described in association with a variety of malignancies, the reliability of the LT sign as a paraneoplastic marker has been questioned in the literature. Commonly associated malignancies include adenocarcinomas of the gastrointestinal tract, particularly in the stomach or colon, but also others including squamous cell carcinoma, lymphoma and leukaemias may be observed. However, appearance of the LT sign in genitourinary malignancies is rare. We report a 84-year-old man with the sudden onset and dramatic increase of the pruritic seborrheic keratoses along with a prostate adenocarcinoma. Our case is presented to emphasize the necessity of comprehensive clinical, laboratory and radiologic investigations when considered LT sign.

**Key Words:** Keratosis, seborrheic; prostatic neoplasms

**ÖZET** Leser-Trélat (LT), belirtisi çok sayıda kaşıntılı seboreik keratozun aniden ortaya çıkması ve kısa sürede sayı ve büyüklüklerinde artış olması ile karakterizedir. Çeşitli malignitelerle ilişkili olarak tanımlanmış olsa da, literatürde LT belirtisinin paraneoplastik bir belirteç olarak güvenilirliği tartışmalıdır. Çoğunlukla ilişkili olduğu maligniteler arasında özellikle mide veya kolonda olmak üzere gastrointestinal sistem adenokarsinomları bulunmakta, ayrıca skuamöz hücreli karsinom, lenfoma ve lösemi gibi diğer malignitelerde de gözlenebilmektedir. Bununla birlikte genitouriner malignitelerde LT belirtisinin görülmesi nadirdir. Burada prostat adenokarsinomuyla birlikte birden ortaya çıkarak hızla artan çok sayıda kaşıntılı seboreik keratozları bulunan 84 yaşında bir erkek olgu sunulmaktadır. Olgumuz LT belirtisi düşünüldüğünde kapsamlı klinik, laboratuvar ve radyolojik araştırmaların gerekliliğini vurgulamak amacıyla sunulmuştur.

**Anahtar Kelimeler:** Keratoz, seboreik; prostat tümörleri

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**S**eborrheic keratosis (SK) is a common benign wart-like lesion on the surface of the skin usually found in elderly patients. Sudden onset and dramatic increase in the number and size of seborrheic keratoses (SKs) has been defined as Leser-Trélat (LT) sign in the literature.<sup>1</sup> While this sign is rare and remains controversial, there are many reports of its association with a wide range of malignancies including mainly gastrointestinal adenocarcinomas (stomach, liver, pancreas, colon, rectum) and lymphoproliferative disorders.<sup>1-17</sup> However, appearance of the LT sign in genitourinary malignancies particularly in cases of prostate cancer, as in our

case, is rare.<sup>12-17</sup> Although the pathogenesis is not fully understood, it has been suggested that these cutaneous manifestations may be due to growth factor secretion by the internal malignancy.<sup>1,2</sup> We report here a 84-year-old man with LT sign in association with prostate adenocarcinoma. This condition of our case emphasises that rapid onset of eruptive SKs should prompt search for an internal malignancy.

## CASE REPORT

In September 2010, a 84-year-old man was admitted to our clinic for a complaint of several pigmented skin lesions with rough, warty or greasy surfaces over the back. These lesions were associated with mild pruritus. Although one or two similar lesion were present about 2 years ago, he had noticed sudden increase of their number and size in the previous 12 months. His medical history included diabetes mellitus, hypertension, chronic obstructive pulmonary disease and benign prostatic hyperplasia, as well as total excision of three basal cell carcinomas and transurethral prostatectomy for acute urinary obstruction in September 2009. At the histopathological evaluation of the prostate biopsy specimen, localized adenocarcinoma (a Gleason score of  $3 + 4 = 7$ , stage PT1a) without capsule or seminal vesicle invasion was identified. But, he did not go follow-up visit to urology outpatient department because of the significant improvement of his prostatic complaints. However, in the dermatology clinic his adenocarcinoma diagnosis was emphasized and urology consultation was immediately obtained.

His physical examination revealed multiple, innumerable, parallel to one another, sharply demarcated, round or oval verrucous, light to dark brown papules and plaques with follicular plugs of 3–15 mm in size on the back, consistent with the diagnosis of multiple SKs (Figure 1). In addition, he also had numerous, follicular, 2–4 mm in diameter, slightly erythematous papulopustular lesions scattered on the back. A skin biopsy obtained from a pigmented verrucous papule revealed epidermal changes characterized by marked hyperkeratosis, acanthosis and papillomatosis, consistent with SK (Figure 2). The clinical diagnosis of folliculitis was



FIGURE 1: Multiple verrucous light to dark brown papules and plaques.

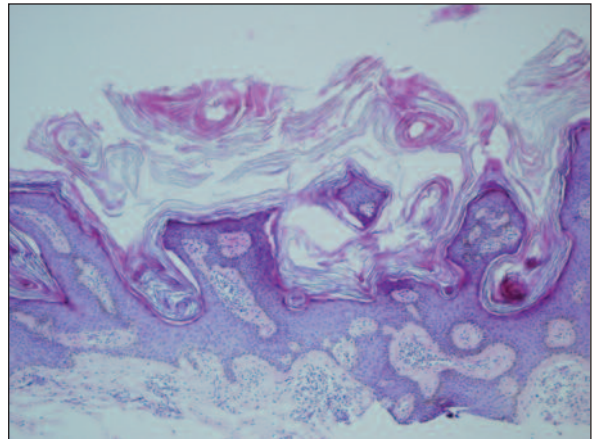


FIGURE 2: Histopathological appearance of incisional skin biopsy (HE, x10).

also confirmed by histopathological evaluation of a skin biopsy taken from a papulopustular lesion. Coagulase-negative staphylococci were obtained by cultures of the pustular lesions.

Because of the detection of possible metastasis of present prostate adenocarcinoma as well as another possible internal malignancy, further examinations were performed. Among the laboratory investigations, hematologic and biochemical data were normal except elevated both free PSA (1.27 ng/mL: 0–0.42 ng/mL) and total PSA (8.34 ng/mL:

0-4 ng/mL) plasma levels. Additional staging examinations, including diagnostic chest radiography, abdominal ultrasound and thoracoabdominal computed tomography disclosed no abnormalities. He was referred to department of urology for treatment of prostate adenocarcinoma, and given that the tumor was localized, radical orchiectomy was recommended.

## DISCUSSION

LT sign was first reported by two European surgeons, Edmund Leser and Ulysse Trelat in 1890 and Hollander confirmed this as a sign of malignancy in 1910. This rare entity characterized by the sudden eruption of multiple SKs which are most often observed on the back and chest with a typical "rain drops" or "splash" pattern. In almost half of the affected patients, it is accompanied by pruritus.<sup>1-3</sup> The clinical manifestations of this sign may precede, coincide with, or follow the diagnosis of malignancy.<sup>5-16</sup> In our case, the recognition of sudden appearance of multiple pruritic SKs over the back appear as almost simultaneously with prostate adenocarcinoma.

Although the existence of the LT sign has been explored for many years, its validity is still a point of controversy.<sup>1-5</sup> A LT-like eruption has also been described in nonmalignant conditions such as human immunodeficiency virus infection, erythroderma, lepromatous leprosy and in association with heart transplants, but it is most frequently encountered in the presence of internal malignancies.<sup>1</sup> Although various retrospective analyses and primarily case-control studies have been undertaken to assess for true linkage, the reliability of the LT sign as a paraneoplastic marker has been questioned.<sup>1-3,5</sup> It was stated that, because both the number of SK and the incidence of malignancies increase with age, their association could be just a coincidence in the elderly population. In the LT sign, the sudden proliferation of SK is important because SK itself is a very common condition but an eruptive course of SK is not. It must not be confused with the gradual onset of SK which is common in the elderly.<sup>1-3</sup> Additionally, the coexistences with other well-recognized paraneoplastic

conditions of eruptive SKs such as acanthosis nigricans, tripe palms and/or acrokeratosis paraneoplastica are recorded in some reports. Thus, the sudden appearance of eruptive SKs associated with pruritus seems to be the essential criterion for suspicion of malignancy.<sup>1,10,17</sup>

The pathogenesis of LT sign is still not fully understood. In the patients of internal malignancies, an increased secretion of transforming growth factor- $\alpha$ , insulin-like growth factor, epidermal growth factor or melanocyte-derived growth factors by tumour cells is believed to act as a growth factor on the epidermis thereby leading to eruptive SKs.<sup>1-3</sup>

Regarding the type of associated malignancies, the LT sign is usually associated with an adenocarcinoma, often in the stomach or colon, but also breast, colon, rectum, esophagus, pancreas, ovary, uterus, bile duct, duodenum, kidney, gallbladder, liver and thyroid have been reported. Lymphoma, leukemia, mycosis fungoides, Sezary syndrome, melanoma, leiomyosarcoma, neurofibrosarcoma, squamous cell and small cell carcinoma of the lung, laryngeal squamous cell carcinoma, malignant hemangiopericytoma, cancer of the pleura, transitional cell carcinoma of the urinary bladder, germinoma of the brain, ependymoma, osteogenic sarcoma and thymoma have also been reported with the LT sign.<sup>6-17</sup>

Genitourinary malignancies, particularly prostate malignancy as in our case, have rarely been reported with the LT sign.<sup>12-17</sup> To our knowledge, this is to date the fourth case of adenocarcinoma of the prostate associated with the LT sign.<sup>15-17</sup> Recently, prostate adenocarcinoma in association with LT sign, ichthyosis acquisita and acrokeratosis paraneoplastica as the coexistence of three paraneoplastic dermatoses was reported.<sup>17</sup> The LT sign coincided almost simultaneously with prostate adenocarcinoma in these case reports, as in our case.

It is mentioned that the LT sign is of limited value as a tumor marker in the early detection of malignancy because it generally develops in advanced malignancies. However, it can occur even in early malignant tumors in some cases as in our case. Nevertheless, SK itself is a benign disease, and many malignant tumours are free of metastases.

Generally, the size of primary tumors is unrelated to the number and size of SKs, and if primary tumors are surgically resectable, long term survival can be expected.<sup>3</sup>

In conclusion, our report emphasized that in patients of the rapidly developed eruptive and itchy SKs known as LT sign, complete physical examinations and further investigations are mandatory.

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