

# A Case of Leser-Trelat Sign Associated with Adenocarcinoma of the Rectum

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The sign of Leser-Trelat refers to the abrupt development and rapid increase in number and size of multiple seborrheic keratoses which are associated with an internal malignancy. Herein we describe a case of multiple seborrheic keratoses on the scalp and face of a 58-year-old man who had rectal adenocarcinoma. (*Ann Dermatol* 17(1) 41~44, 2005)

*Key Words:* Leser-Trelat sign, Rectal adenocarcinoma

## INTRODUCTION

The Leser-Trelat sign refers to the abrupt appearance and rapid increase in number and size of multiple seborrheic keratoses which are associated with an internal malignancy. Adenocarcinoma of the stomach, breast, colon and rectum are the most common tumors associated with the Leser-Trelat sign. Besides adenocarcinoma, a variety of tumors can be associated including lymphoma and leukemia.

To date, 6 cases of the Leser-Trelat sign have been reported in Korean literature. Two cases were associated with adenocarcinoma of the stomach<sup>2,3</sup>, 1 case with a pancreatic carcinoma<sup>4</sup>, 1 case with a lung carcinoma<sup>5</sup>, 1 case with a lymphoma<sup>6</sup> and 1 case with a subcutaneous metastatic carcinoma of unknown origin<sup>6</sup>.

We report a case of multiple seborrheic keratoses which showed abrupt development and rapid increase in number and size on the face and scalp<sup>1</sup>.

## CASE REPORT

A 58-year-old Korean man presented with an 8 month history of multiple brownish papules and plaques on the scalp and face. After the first occurrence, the lesions continued to increase in number and size until numerous brownish papules and plaques were distributed on the scalp and face but no other symptoms were observed. Four months ago, he visited our clinic complaining of hematochezia and was diagnosed as having adenocarcinoma of the rectum following a sigmoidoscopic biopsy (Fig. 1). To date, he has had an operation of the lower anterior resection and been treated with chemotherapy. Three months after surgical excision, no decrease in the number of seborrheic keratosis was observed. He was otherwise healthy and had no family history of this condition. Biochemical laboratory analyses were observed to be within normal limits. During the dermatologic examination, a large number of brown, flat, sharply-demarcated tumors, some with a verrucous surface and greasy appearance, were located mainly over the scalp but also on the face too (Fig. 2). A biopsy specimen from one of the lesions showed an epidermal tumor composed of basaloid and squamous cells, with hyperkeratosis and keratin cysts in the epidermis. Melanin pigments were found along the basal layer of the epidermis. The lower border was observed to be in a straight line, which was consistent with seborrheic keratosis (Fig. 3).

Based on the clinical & histological findings mentioned above we were able to make the diagnosis

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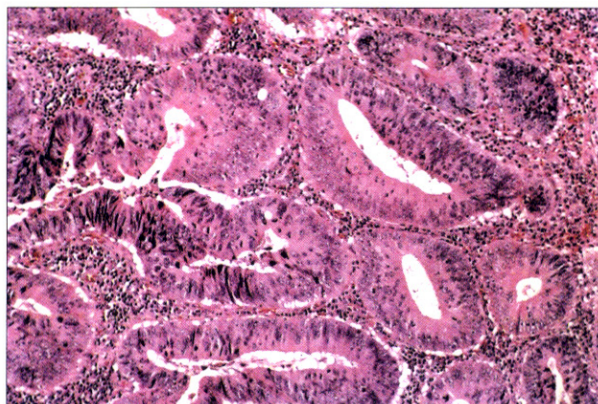


Fig. 1. A biopsy specimen from the rectal mucosa showing moderately-differentiated adenocarcinoma (H&E,  $\times 100$ ).

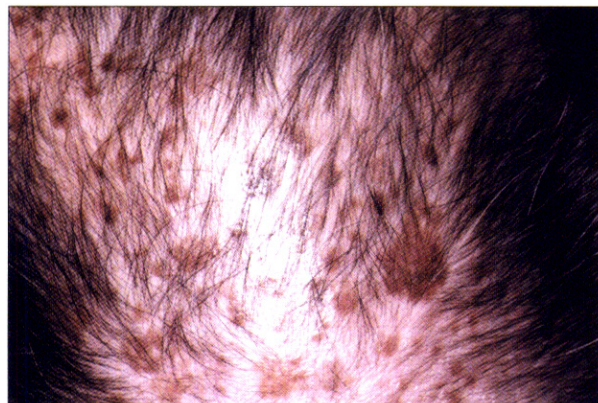


Fig. 2. Multiple, well-demarcated, brown-colored, verrucous papules and plaques on the scalp.

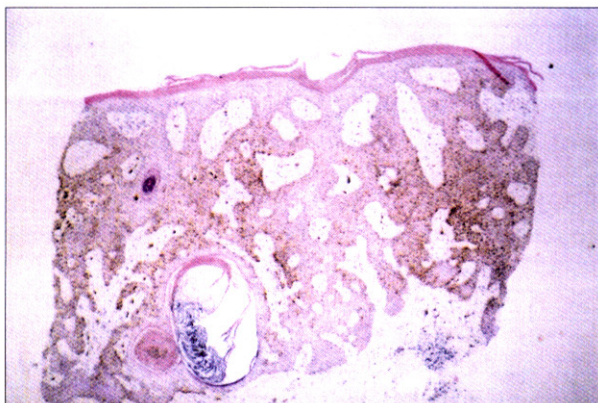


Fig. 3. A biopsy specimen from a papule on the scalp showing an epidermal tumor composed of basaloid and squamous cells with pseudo-horn cysts and hyperpigmentation along the basal layer of the epidermis (H&E,  $\times 40$ ).

of Leser-Trelat sign. We removed the seborrheic keratosis lesions by CO<sub>2</sub> laser treatment and since then have monitored his progress on a regular basis

## DISCUSSION

Late in the 19<sup>th</sup> century, Edmund Leser and Ulysse Trelat independently described the relationship between internal malignancy and cutaneous hemangioma, and so seborrheic keratosis associated with internal malignancy became known as the Leser-Trelat sign<sup>1</sup>. In 1900, Hollander<sup>7</sup> first suggested the association of seborrheic keratosis and internal malignancy and in 1965 Ronchese<sup>8</sup> proposed four diagnostic standards. 1) the sudden appearance and rapid increase in number and size of seborrheic keratosis. 2) the development of an itching sensation. 3) there was no previous history of skin lesion<sup>5</sup>. 4) the association with internal malignancy. Nowadays, the sudden appearance and rapid increase in the number and size of seborrheic keratosis associated with internal malignancy is recognized as the most important criterion in diagnosing Leser-Trelat sign<sup>9</sup>.

Although the definitive basis of the relationship between seborrheic keratosis and malignancy is still unclear, it is suggested that growth factors such as transforming growth factor- $\alpha$  (TGF- $\alpha$ ), epidermal growth factor (EGF) and melanocyte-derived growth factor which are secreted by tumors may be directly involved in the occurrence of seborrheic keratosis. In biopsy samples taken from the seborrheic keratosis lesions of a patient with malignant melanoma, Ellis *et al.*<sup>10</sup> observed that the EGF receptor exhibited dense staining in all layers of the epidermis except for the stratum corneum and observed an increase of TGF- $\alpha$  in the urine. After removal of the malignant melanoma, the epidermal EGF receptor and TGF- $\alpha$  in the urine was decreased. Therefore they postulated that these growth factors might influence the development of seborrheic keratosis. Because the incidence of both malignancy and seborrheic keratosis is high in adults, it is still a matter of debate as to the co-existence is coincidental<sup>1,10</sup>.

Most frequently associated malignancies are adenocarcinoma of the stomach, breast, colon and rectum. Lymphoma, leukemia and lung cancer may also be associated<sup>1</sup>. Although a wide variety of sites have been reported, the trunk is the most common

**Table 1.** Summary of Reported Cases of Leser Trelat Sign in Korean Literature

Cases	Age	Sex	Cutaneous lesions		Site and type of internal malignant tumor
			Duration evolution	Distribution	
Park et al. <sup>4</sup>	39	F	10 days	Face, neck, palms	Pancreas carcinoma
Kim et al. <sup>2</sup>	51	F	5 months	Face, neck	Stomach, adenocarcinoma
Chin et al. <sup>3</sup>	62	M	5 months	Face, trunk, extremities	Stomach, adenocarcinoma
Chun et al. <sup>5</sup>	78	F	5 months	Trunk	Lung, small cell carcinoma
Hyun et al. <sup>6</sup>	31	M	12 months	Scalp	Hodgkin's lymphoma
	44	M	6 months	Scalp	Axilla, metastatic adenocarcinoma
Present case	58	M	8 months	Scalp, face	Rectum, adenocarcinoma

site of seborrheic keratosis. Other sites are, in order of frequency, the extremities, face, abdomen, neck, axilla and inguinal area. In our case the scalp was mainly affected and it is known that the involvement of the scalp is rare<sup>6,10</sup>. Symptoms including an itching sensation can develop. Other cutaneous diseases, in addition to seborrheic keratosis, can accompany Leser-Trelat sign. Of these, the most frequently observed is acanthosis nigricans<sup>9</sup>. There are also acquired ichthyosis, Cowden's disease, acrokeratosis paraneoplastica, hypertrichosis lanuginosa and florid cutaneous papillomatosis<sup>1</sup>.

The course of Leser-Trelat sign is variable. Sometimes it correlates with the course of the malignancy, so some cases which show improvement of seborrheic keratosis after treatment of the malignancy have been reported<sup>2,9</sup>. It is known that most associated malignancies have an invasive trait and bad prognosis<sup>1,9</sup>. However in our case, there was no lymph node metastasis at the time of the first visit. There was also no recurrence or metastasis for three months after the complete removal of the malignant tumor.

In various examples of Leser-Trelat sign reported in Korea up to now, the average age of onset was 51.9 years and the average period of the seborrheic keratoses was 6 months. Malignancies combined with seborrheic keratoses include: 2 cases with stomach cancer<sup>2,3</sup>, 1 case with pancreatic cancer<sup>4</sup>, 1 case with lung cancer<sup>5</sup>, 1 case with malignant lymphoma and 1 case with subcutaneous metastatic cancer of unknown origin<sup>6</sup>. In our case, a rectal carcinoma was associated. To the best of our knowledge, no case has been reported in association with rectal carcinoma in Korean literature (Table 1).

To date, the correlation between seborrheic keratosis and malignancy has not yet been definitely and it is still a matter of debate. But more than eighty cases have been reported around the world and we expect the association could become clear in the future due to further analysis and study. Therefore, if a patient provides a history of acute onset and/or rapid increase in the size and number of multiple seborrheic keratoses, proper screening tests can be conducted immediately to detect any underlying cancers which may be present and hopefully still at a curable stage<sup>1,6,10</sup>.

We present a case of Leser-Trelat sign which was associated with adenocarcinoma of the rectum and report it in conjunction with a review of available literatures.

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