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Eruptive Seborrhoeic Keratoses Induced by Oral Esomeprazole: A Coincidental Finding or Linked Pathogenesis?

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Authors' contributions

This work was carried out in collaboration among all authors. Author ND designed the study, collected data, did the literature search and also wrote the first draft of the manuscript. Authors ÇÖ and SP collected data and wrote part of the manuscript. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Aim: Eruptive seborrhoeic keratoses are characterized by rapid onset of multiple seborrhoeic keratoses. They can be associated with internal malignancies, inflammatory dermatoses and drug reactions. Our aim was to present a case with eruptive seborrhoeic keratoses appeared during treatment with oral esomaprazole and to discuss possible etiopathogenesis.
Presentation of Case: Herein we report a 24-year-old female patient with eruptive seborrhoeic keratoses appeared during 1-year treatment with oral esomeprazole.
Discussion and Conclusion: Although, the association between esomeprazole treatment and eruptive seborrhoeic keratoses may be a coincidence, previously reported growth factor changes in both conditions may be pointing out a linked pathogenesis.

Keywords: Eruptive seborrhoeic keratoses; esomeprazole; leser-trélat sign; epidermal growth factor.

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1. INTRODUCTION

Eruptive seborrhoeic keratoses are characterized by large numbers of seborrhoeic keratoses that developed simultaneously and abruptly over a short time period on previously normal skin. The etiology of eruptive seborrhoeic keratoses is not clear, however connection with malignancies, erythroderma and various drugs has been reported [1,2]. To the best of our knowledge, previously, no association with esomeprazole treatment was reported. Herein we report a female patient with eruptive seborrhoeic keratoses developed during treatment with oral esomeprazole treatment.

2. CASE

A 24-year-old female presented with multiple eruptive pigmented lesions on trunk that developed within the last year following 1-year treatment with oral esomeprazol (20 mg/day) used for gastroesaphageal reflux. The other medical and drug history were unremarkable. On physical examination at least 50 pigmented stuck-on appearing papules especially located over lateral trunks were detected (Figs. 1A, B). Dermoscopic examination revealed comedo-like openings on brownish background and rare milia-like cysts (Fig. 2). Histopathological examination revealed mild epidermal hyperkeratosis, acanthosis and horn cysts, which were consistent with the diagnosis of seborrhoeic keratosis (Fig. 3). Further examinations including complete blood count, routine blood chemistries, peripheral smear, cancer-screening tests, further gastrointestinal and pelvic work-up did not reveal any abnormality and anti-HIV antibody was negative. In the follow-up of 6 months, no signs of cancer have developed. An informed consent for publication was obtained from the patient.

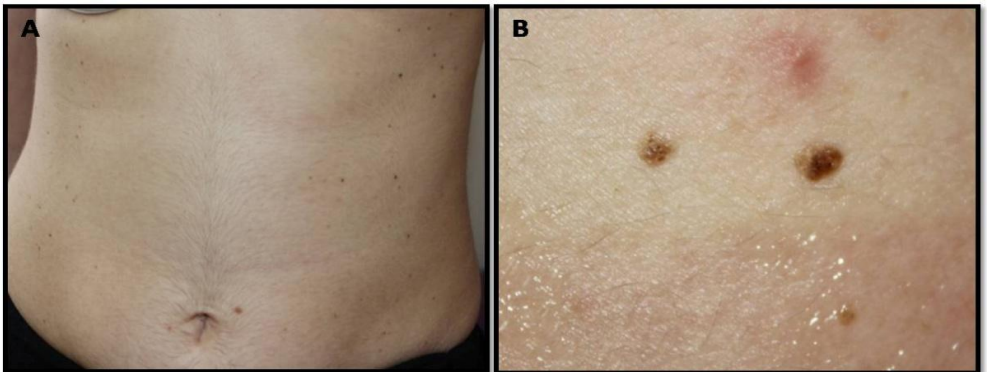

Fig. 1A, B. Multiple brown-black coloured, stuck-on appearing papules over the trunk

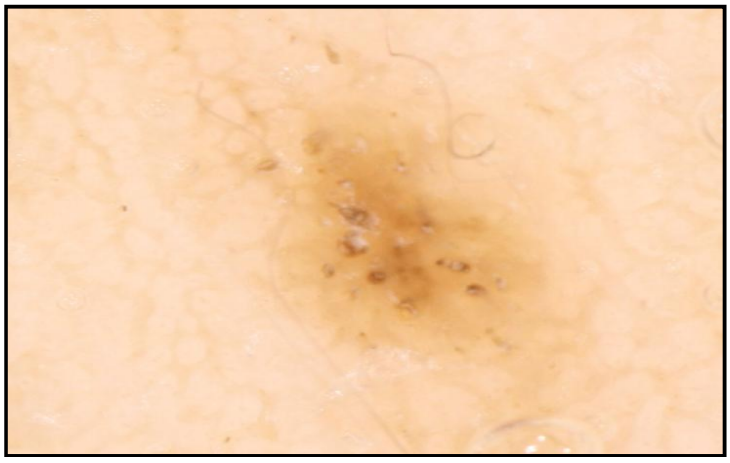

Fig. 2. Comedo-like openings on a brownish background and rare milia-like cysts on dermoscopy

(Heine Delta 20 plus nonpolarised dermatoscope, Heine Optotechnik, Herrsching, Germany; original magnification: ×10).

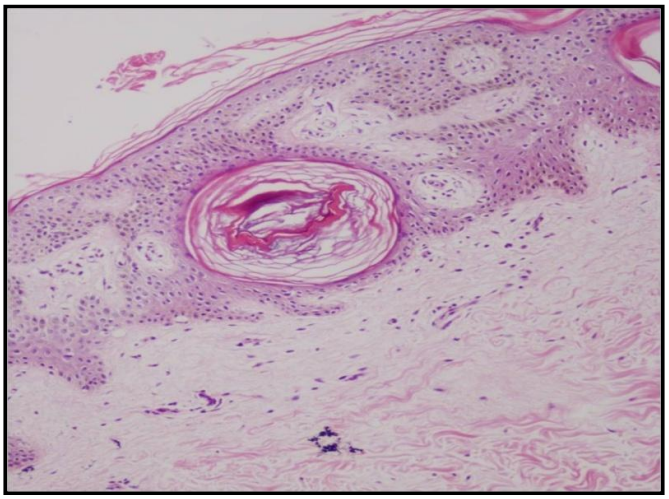

Fig. 3. Mild epidermal hyperkeratosis, acanthosis, and epidermal cysts filled with keratin (HE×100)

3. DISCUSSION

Eruptive seborrhoeic keratoses have been reported with malignancies especially in elderly patients representing Leser-Trélat sign [1]. Commonly associated malignancies include gastrointestinal tract adenocarcinomas, hematopoietic neoplasms, breast, renal and lung cancers [3-5]. They have also been reported in association with inflammatory skin conditions (erythroderma due to pityriasis rubra pilaris, psoriasis, eczema, sunburn and eczematous drug eruptions), human immundeficiency virus infection and surgery [1,5,6]. Furthermore eruptive seborrhoeic keratoses have been rarely associated with anti-tumor necrosis factor-alpha (TNF-α) agents such as adalimumab and efalizumab, however exact etiopathogenesis has not been reported [1,6].

Pathogenesis of eruptive seborrhoeic keratoses is not clear, however role of epidermal growth factors such as transforming growth factors and melanocyte-derived growth factors acting on keratinocytes has been proposed [3,4].

Esomeprazole is a proton pump inhibitor. It was previously reported that 14 individuals taking proton pump inhibitors reported seborrhoeic keratosis to the Food and Drug Administration between January 2004 and October 2012. However, there is no previous data about association between eruptive seborrhoeic keratoses and oral esomeprazole [7].

Exact effects of proton pump inhibitors on tumours are not known exactly. Recently, in a study investigating the effects of oral esomeprazole on molecular pathways in ethanol-induced gastric animal model, it was shown that platelet derived growth factor-beta and nerve growth factor were significantly increased and inflammatory cytokines (IL-6, IL-8 and TNF-α) were significantly decreased after esomeprazole administration [8]. These growth factor changes may explain a possible association between esomeprazole treatment and eruptive seborrhoeic keratoses. However, in recent years there are also ongoing studies about antitumour effects of proton pump inhibitors. There is ongoing evidence that various cancers have proton pumps and intracellular pH influences cancer progression. And it has been shown that proton pump inhibition may have antitumour effects by inhibiting tumor growth and metastasis, and inducing reversion of resistance to chemotherapy [9-11].

4. CONCLUSION

In conclusion, in this report eruptive seborrhoeic keratoses following oral esomeprazole therapy have been described. Although this association may be a coincidence, possible changes in growth factors and inflammatory cytokines may be playing role in etiopathogenesis. The exact effects of proton pump inhibitors on tumours need to be clarified with further research.

CONSENT

All authors hereby declare that informed consent was obtained from the patient for publication of this report and accompanying images.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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