

Case Study**Eruptive seborrheic keratoses induced by oral esomeprazole: A coincidental finding or linked pathogenesis?****Abstract****Aim:**

Eruptive seborrheic keratoses are characterized by rapid onset of multiple seborrheic keratoses. They can be associated with internal malignancies, inflammatory dermatoses and drug reactions. Our aim was to present a case with eruptive seborrheic keratoses appeared during treatment with oral esomeprazole, and to discuss possible etiopathogenesis.

Presentation of case:

Herein we report a 24-year-old female patient with eruptive seborrheic keratoses appeared during 1-year treatment with oral esomeprazole.

Discussion and Conclusion:

Although, the association between esomeprazole treatment and eruptive seborrheic keratoses may be a coincidence, previously reported growth factor changes in both conditions may be pointing out a linked pathogenesis.

Keywords: eruptive seborrheic keratoses; esomeprazole; Leser-Trélat sign; epidermal growth factor.

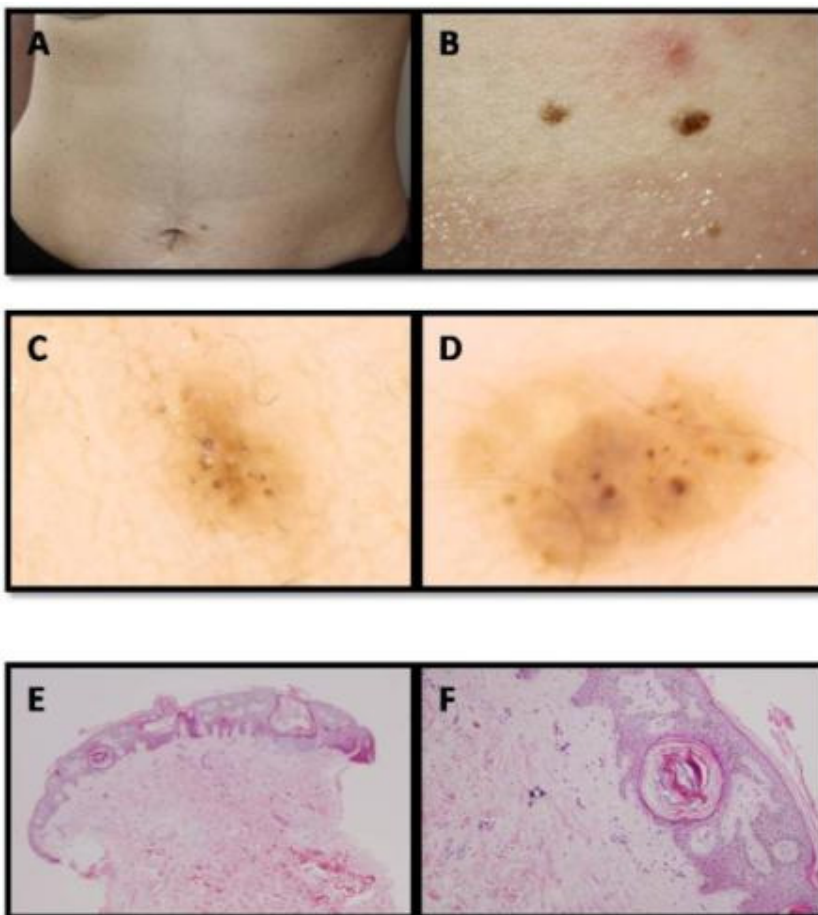
Introduction

Eruptive seborrheic keratoses are characterized by large numbers of seborrheic keratoses that developed simultaneously and abruptly over a short time period on previously normal skin. The etiology of eruptive seborrheic 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 an immunocompetent female with eruptive seborrheic keratoses developed during treatment with oral esomeprazole treatment.

Case

A 24-year-old female presented with multiple eruptive pigmented lesions on trunk that developed within the last year following 1 year oral esomeprazole treatment (20 mg/day) used for

gastroesophageal reflux. The other medical and drug history was unremarkable. On physical examination at least 50 pigmented stuck-on appearing papules especially located over lateral trunks were detected (Figure 1A, B). Dermoscopic examination revealed comedo-like openings on brownish background, and rarely milia-like cysts (Figure 1C,D). Histopathological examination revealed mild epidermal hyperkeratosis, acanthosis, and horn cysts (Figure 1E, F). Further examinations including complete blood count, routine blood chemistries, peripheral smear, cancer-screening tests, further gastrointestinal and pelvic work-up were within normal limits and anti-HIV antibody was negative. In the follow-up of 6 months, no signs of cancer have developed.



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Figure 1. A, B: Multiple brown-black coloured, stuck-on appearing papules over the trunk; C, D: 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: $\times 10$); E, F: mild epidermal hyperkeratosis, acanthosis, and epidermal cysts filled with keratin (HE $\times 20$, $\times 100$).

43 Discussion

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

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

55 Esomeprazole is a proton pump inhibitor. Recently, in a study investigating the effects of oral
 56 esomeprazole on molecular pathways in ethanol-induced gastric animal model, it was shown that
 57 platelet derived growth factor-beta and nerve growth factor were significantly increased and
 58 inflammatory cytokines (IL-6, IL-8 and TNF- α) were significantly decreased after esomeprazole
 59 administration [7].

60 In conclusion, in this report eruptive seborrheic keratoses following oral esomeprazole therapy have
 61 been described. Although this association may be a coincidence, possible changes in growth factors
 62 and inflammatory cytokines may be playing role in etiopathogenesis, which needs to be further
 63 searched.

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