Journal of Korean Medical Science
Vol. 11, No. 3, 271-274 June 1996

Sebaceous Glands in the Esophagus

Jong Yup Bae, Chae Yoon Chon*, Hoguen Kim

*Department of pathology and internal medicine**
Yonsei university Medical College, Seoul, Korea

We report a case of sebaceous glands in the esophagus diagnosed by endoscopic biopsy. The patient was a 47-year-old Korean man presented with postprandial pain of several months duration. An endoscopic examination disclosed an early gastric carcinoma in the gastric antrum and a 0.4x0.4cm sized irregular lobulated nodule in the middle esophagus. Microscopically, the lobule was proven to be sebaceous glands in the submucosa. Possible histogenesis of this lesion is discussed.

Key Words : *Sebaceous glands, Esophagus*

INTRODUCTION

Sebaceous glands are derived from ectoderm and widely distributed over the body surface to form a pilosebaceous unit. Ectopic sebaceous glands have been reported arising at the oral cavity, external genitalia, eyes, orbits, nipples, palms and soles, salivary glands, tongue and larynx (Guiducci and Hyman, 1962). The histogenesis for ectopic sebaceous glands is unclear. Several possible mechanisms including heterotopia and metaplasia have been suggested. Hormonal effect, especially androgen was also reported (Miles, 1958). In the esophagus, ectopic sebaceous glands are an extremely rare condition and approximately 21 cases have been reported since the first case was reported in 1962 (De La pava and Pickren, 1962). We report a case of ectopic sebaceous glands in the esophagus. The possible histogenesis is also given.

CASE REPORT

A 47-year-old man was admitted to the department of Internal Medicine because of postprandial pain of three months duration. Endoscopy showed an early gastric carcinoma type IIc+III at the lesser curvature of the antrum. In the esophagus, a 0.4 x 0.4cm sized irregular lobulated yellowish nodule was also found incidentally 30 cm away from the incisor (Fig. 1). The surrounding mucosa of the esophageal lesion was grossly normal. Under the impression of esophageal polyp, a biopsy was taken.

Fig. 1. Endoscopic photograph showing an irregular lobulated yellowish nodule.

Address for correspondence : *Jong-Yup Bae, Department of Pathology, Yonsei University Medical College, #134 Shinchon-dong, Seodaemoon-gu, Seoul 120-752, Korea. Tel : 361-5267, Fax : 362-0860*

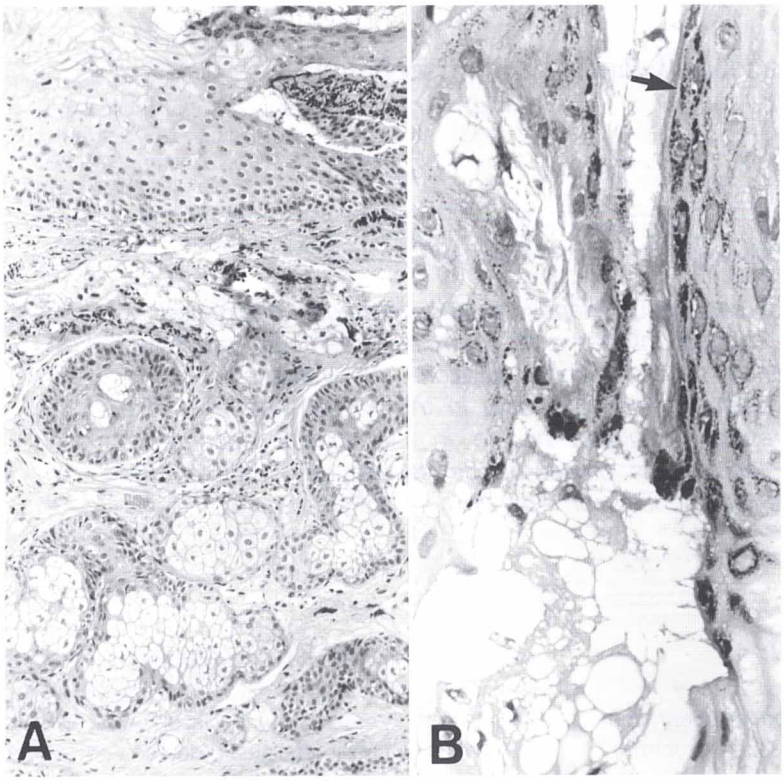

Fig. 2.

A : Microscopic photograph shows several lobules of polygonal cells with clear cytoplasm toward central common duct in the submucosal layer.

B : The superficial layers contain keratohyaline granules(arrows) responsible for the luminal keratin plugs.

Microscopically, several lobulated sebaceous glands were found in the submucosal layer. Each lobule consisted of polygonal cells with clear cytoplasm and located toward the central common duct (Fig. 2A). The excretory duct was lined by stratified squamous epithelium. The superficial layers contained keratohyaline granules responsible for the luminal keratin plugs (Fig. 2B). Some collections of inflammatory cells, predominantly lymphocytes were present in the vicinity of the sebaceous glands. Mild hyperplasia of the overlying epithelium of the esophagus was also evident. The other histologic findings suggesting reflux or infectious esophagitis such as balloon cells or vascular lakes were absent.

DISCUSSION

The sebaceous glands are found in close association with hair follicles to form the pilosebaceous apparatus. In adult, the sebaceous glands are unevenly distributed over the body surface, being most numerous on the face and scalp, less numerous over the thorax and abdomen, and sparsest on the extremities. Ectopic sebaceous glands have been reported arising at a variety of sites, including the oral cavity, genitals, eyes and orbits, nipples, palms and soles, and parotid glands (Guiducci and Hyman, 1962). As is well known, aggregations of yellow bodies on the lip forming unsightly patches is Fordyce's disease or condition (Fordyce, 1896, 1909).

Fordyce found abnormal lesion in the oral cavity and reported the gross findings as a yellow body in 1896 and attributed the condition to be a degenerative change, however no reference to sebaceous glands was made at that time. In the years that followed, the presence of sebaceous glands was described on the lip (Chambers, 1928). From that time numerous cases have been reported. In one report (Halperin et al. 1953), Fordyce's spots were present in the mouth in 82% of their patients. In comparison to the oral cavity, ectopic sebaceous

glands in the esophagus is extremely rare. The first case of ectopic sebaceous glands in the esophgus was reported in 1962 (Samuel et al., 1962). In their report, sebaceous glands were observed in 4 cases (2%) of 200 cadavers. The gross finding of ectopic sebaceous glands in esophgus was reported in 1976 (Frederick et al.). They found multiple minute, yellowish, macules in the midesophagus. Recently several cases diagnosed by endoscopic biopsy have been reported (Ramaknishnan et al., 1978 ; Salgado et al., 1980 ; Bambirra et al., 1983 ; Auld et al., 1987 ; Betta et al., 1987 ; Finet et al., 1991 ; Hoshihara et al., 1991 ; Kumagai et al., 1991 ; Akagi et al., 1992 ; Kumagai et al., 1993 ; Hoshika et al., 1995).

The histogenesis of sebaceous glands in the esophagus is unclear. Several hypotheses have been postulated to explain the sebaceous glands at various sites. The first is embryological misplacement (heterotopia) of sebaceous glands at ectodermal tissue juxtaposed to cutaneous sites. The second is metaplasia of submucosal glands. The theory of metaplasia is supported by the finding that substantial increase in incidence of Fordyces' condition in accordance with old age (Miles, 1958) and sebaceous glands were rarely, if ever found in the lip and cheek of fetus and children (Rector, 1941). This theory is also evidenced by the finding that in the esophagus, most of the reported sebaceous glands were found in old patients.

Recently a case of multifocal sebaceous glands of the esophagus was reported (Hoshika et al., 19 95). In that case, the number of nodules was more than 100 and they were arranged in several rows. The arrangement of these glands is very similar to the normal anatomic position of esophageal submucosal glands. This finding also suggests that sebaceous glands arose from a metaplastic change in the submucosal glands of the esophagus. The possible mechanism causing the submucosal glands metaplasia of the esophagus is not known at present.

The hormonal effect, especially androgenic effect may be included in the one of the possible mechanism because the androgen is responsible to the development of dermal sebaceous glands (Miles, 1958). However, several factors seem to involve in the formation of the esophageal sebaceous glands.

The esophageal sebaceous glands should be differentiated from the other submucosal tumors or mucosal proliferative lesions. Endoscopically, the granular cell tumor, leiomyoma and esophageal pseudodiverticulum usually present as a small submucosal mass. However, the relative small size and yellow color of the esophageal sebaceous gland make it possible to differentiate from the other submucosal masses of esophagus. The glycogen acanthosis and papilloma present as a small mucosal mass. The ectopic sebaceous glands of esophagus differ from these mucosal proliferative lesions.

We report a case of esophageal sebaceous glands in 47-year-old man without esophagus-related symptom.

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