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Patient with primary tonsillar and gastric syphilis

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Abstract
A male patient with syphilitic lesions in the tonsil and stomach is presented. The patient was infected while practising oral sex with heterosexual friends. He complained of nausea and snoring; his left tonsil was enlarged. Spirochetes were detected in a smear preparation from the left tonsil. As a gastric lesion, initially believed to be cancer, appeared to result from spirochete ingestion, the case is considered to represent primary syphilis. After antibiotic therapy with ampicillin, the left tonsil returned to normal size and gastric changes were no longer evident endoscopically. Gastroscopy should be considered if syphilis of the tonsil is observed, particularly when gastrointestinal symptoms are present. Both the oral and the gastric lesion can be mistaken for malignant neoplasm.

Key words: Syphilis; Stomach; Tonsil; Gastroscopy; *Treponema pallidum*

Introduction

Antibiotic therapy has reduced the prevalence of syphilis, but sexual variation has tended to increase the number of patients and alter the manifestations of the disease. We report a case of tonsillar and gastric primary syphilis resulting from oral sex.

Case report

A 43-year-old male presented to internists at Yamanaka National Hospital complaining of progressive nausea and heartburn over a month. Gastroscopic findings were suspicious of gastric cancer (Figure 1), but pathological examination of a biopsy specimen from the lesion showed only non-specific inflammation (Figure 2a). Rapid plasma reagin (RPR, 1/64) and *Treponema pallidum* haemagglutination (TPHA, 1/10240) serological reactions for syphilis were strongly positive, leading to suspicion of gastric syphilis. As he also complained of snoring the patient consulted the department of Otolaryngology. On oral examination, the left tonsil was enlarged and reddish in appearance (Figure 3). Routine pathological examination of a left tonsillar biopsy specimen also showed non-specific inflammation (Figure 2b) but spirochetes were detected in a smear using the Parker ink method (a more convenient modification of India ink preparations, Saruta, 1983,) (Figure 4). Tonsillar syphilis was diagnosed.

The patient had several heterosexual partners with whom he performed oral sex but did not have a homosexual partner. No genital or skin changes were evident. Human immunodeficiency virus (HIV) infection was not present.

Antibiotic therapy with ampicillin (2 g/day, p.o.) was continued for a month. Tonsillar size was reduced to normal size after two weeks of therapy, and gastric mucosa appeared normal after four weeks. TPHA and RPR titres respectively fell to 1/640 and 1/32 after therapy.

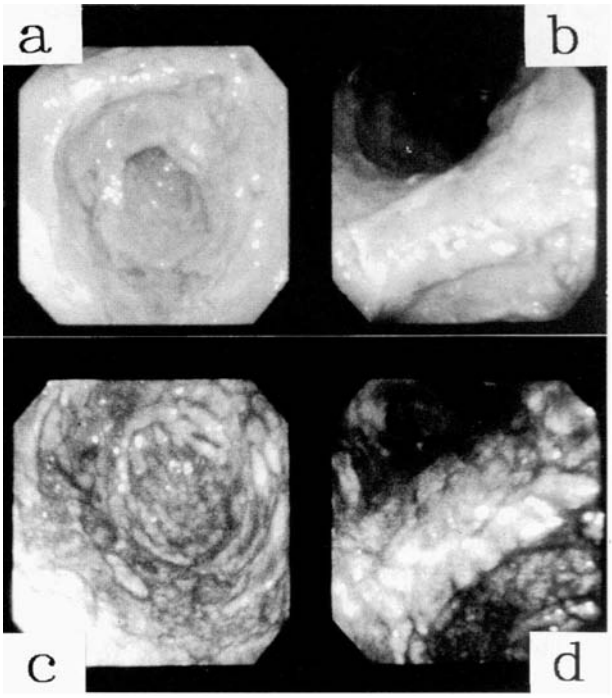

FIG. 1
Pre-treatment gastric endoscopic observations. Ulcers were observed in the gastric mucosa (a, b). Indigo-carmine staining highlighted the edges of the ulcers (c, d). Antrum, a and c; gastric angle, b and d.

Discussion

Gastric syphilis had been suspected by the patient's internists. Without their clinical information, a misdiagnosis of malignant tonsillar tumour, an important otolaryngological entity, could have been made.

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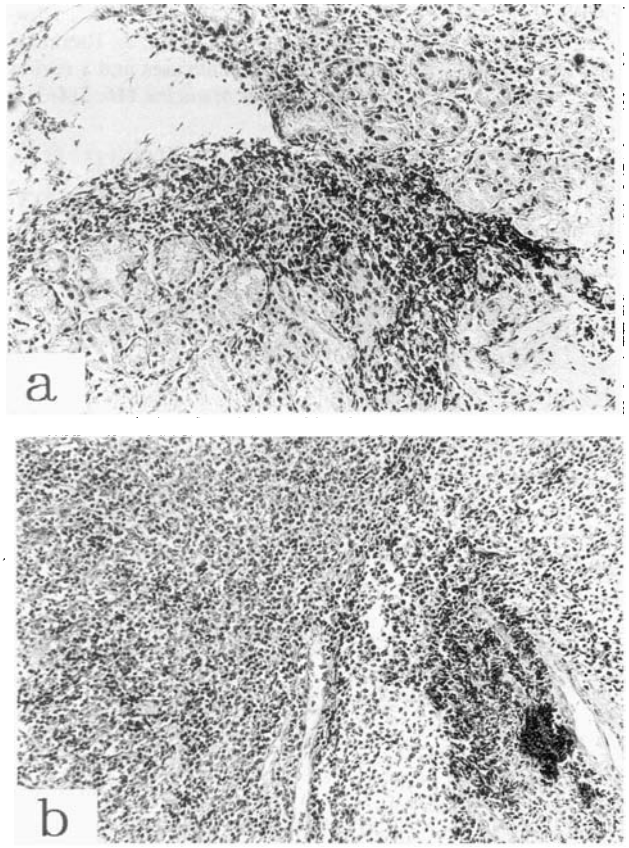

FIG. 2

Pathological observations in the gastric mucosa (a) and the tonsil (b). Nonspecific inflammation was observed (H & E; × 200).

The Parker ink method demonstrated *Treponema pallidum* in a smear from the tonsil. However, as morphological distinction between *Treponema dendritum*, a normal inhabitant of the oral cavity, and *Treponema pallidum* may be difficult without a treponemal antibody stain, serological tests such as RPR and TPHA are recommended. Because the gross appearance of gastric syphilis may mimic gastric cancer, syphilis unfortunately has been diagnosed pathologically several times after gastric resection (Ikebe *et al.*, 1994).

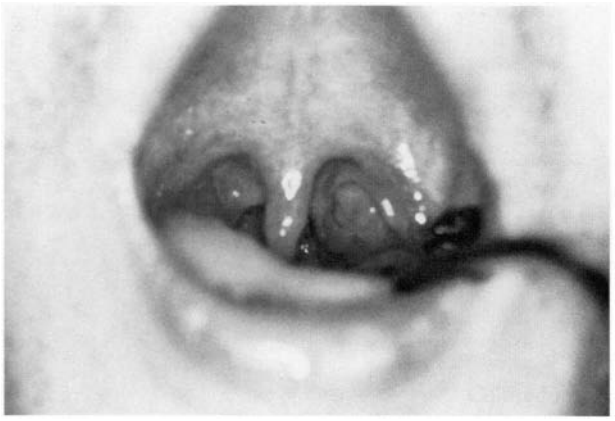

FIG. 3

Tonsils before treatment. The left tonsil was enlarged.

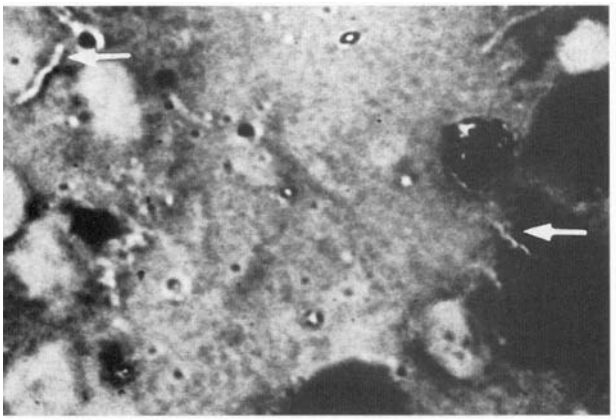

FIG. 4

Spirochetes were detected in a smear from the left tonsil, (Parker ink method; contrast enhanced using Adobe Photoshop 3).

Direct primary infection of the oral cavity and of the stomach reflect spirochete ingestion during oral sex (Fiummaram and Walker, 1982) as in the present heterosexual patient. Such infection should not be considered limited to homosexual populations or encounters (Viers, 1981). Ohshiro *et al.*, (1987) also have reported a case of primary gastric syphilis in the absence of gastric or skin changes.

Well-known complaints related to gastric syphilis include upper abdominal pain, vomiting, weight loss, and nausea (Winters *et al.*, 1992; Ikebe *et al.*, 1994). Our patient did not experience weight loss, which reflects chronic dysfunction of the stomach, as this would not be expected in the first month after exposure.

The chief otolaryngological complaint in our case was snoring, apparently caused by swelling of the left tonsil. Simple swelling of the tonsil, without condylomalatum, supports a diagnosis of primary syphilis. Curiously, such tonsillar swelling occurs more often on the left than on the right according to the literature (Fiummara and Berg 1974; Fiummara, 1976). Otolaryngologists should include syphilis in the differential diagnosis of tonsillar enlargement to avoid a misdiagnosis of malignant tumour.

Early syphilis is cured easily with antibiotics such as penicillin, and inappropriate surgery must be avoided. In a patient with primary tonsillar syphilis, gastroscopy should be considered, particularly if gastrointestinal symptoms are present.

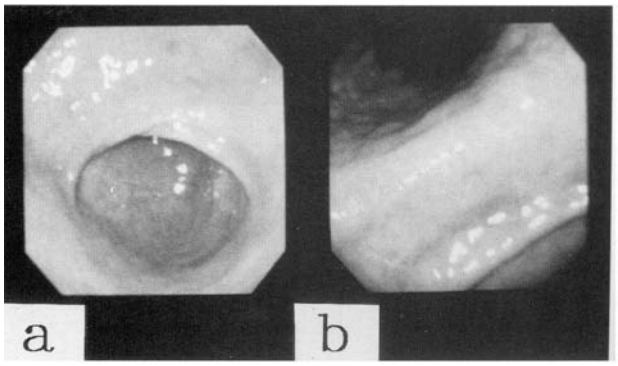

FIG. 5

Gastric mucosa of the antrum (a) and the gastric angle (b) after 4 weeks of antibiotic therapy. No significant change was observed.

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