Palatal Perforation Secondary to Tuberculosis: A Case Report

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Abstract Palatal perforation though rarely seen in adults but may have infectious, inflammatory, neoplastic, or traumatic cause. We present here a case of palatal perforation due to tuberculosis which was managed successfully using greater palatine artery pedicled flap closure at our centre.

Keywords Palatal perforation · Tuberculosis · Greater palatine artery · Pedicled flap

Introduction

Tuberculous lesions of the oral cavity do occur, but are relatively uncommon. There is a general agreement that lesions of the oral mucosa are seldom primary, but rather are secondary to a pulmonary disease. Although the mechanism of inoculation has not been definitely established, it appears most likely that the organisms are carried in the sputum and enter the mucosal tissue through a small break in the surface. Lesions of secondary tuberculosis may occur at any site on

the oral mucous membrane, but the tongue is most commonly affected followed by the palate, lips, buccal mucosa, gingiva and frenulum. The usual presentation is an irregular, superficial or deep, painful ulcer which tends to increase slowly in size. Long standing ulcers on palate can lead to palatal perforation. Palatal perforation though rarely seen in adults but may have infectious, inflammatory, neoplastic, or traumatic cause [1]. We present here a case of palatal perforation in a 48 year old female secondary to tuberculosis which was managed successfully at our centre using greater palatine pedicled artery flap closure.

Case Report

A 48-year-old lady from lower socioeconomic group was referred to our centre for the management of palatal perforation. History of present illness and medical history revealed that she had undergone anti tubercular treatment (ATT) for pulmonary tuberculosis 15 years back. During the course of treatment she developed nasal regurgitation due to palatal perforation following painful ulcers in the mouth for which she is wearing a palatal obturator since then. No other history of systemic illness, drug allergy, and deleterious oral habit was revealed. Family history was inconclusive. Nothing significant was revealed in general physical examination. Intraoral examination revealed poor oral hygiene with a large palatal perforation in the midline of the posterior hard palate approximately 2.5 cm in diameter (Fig. 1). Clinical diagnosis of midline palatal perforation secondary to tuberculosis was made. PA chest radiograph showed features of past tubercular infection (Fig. 2). Surgery was planned; edge of the perforation was excised and sent for biopsy. Greater palatine artery based pedicle flap was raised on right side, rotated towards the

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Fig. 1 Palatal perforation

Fig. 2 PA chest radiograph showed features of past tubercular infection

perforation and sutured using 3-0 black silk (Fig. 3). Patient was kept on Ryles tube feed for 2 weeks. Sutures were removed on 10th postoperative day. No dehiscence of the flap was noticed (Fig. 4). Patient is on monthly follow-up presently. Biopsy from the edge of the perforation showed caseating epithelioid cell granulomas with Langhans' type giant cells. No fungal organisms were seen on PAS and Grocott stain. ZN stain did not reveal any AFB (Fig. 5). Keeping in view the past history of tuberculosis the histopathology was consistent with Tubercular perforation of palate.

Discussion

Tuberculous perforation of the palate is quite rare and may occur as either a primary or a secondary infection. Oral lesions of tuberculosis, though uncommon, have been seen in both the primary and secondary stages of the disease and tend to be superficial lesions, like aphthous ulcers, and usually heal spontaneously after the appropriate anti-tuberculosis treatments [2–4]. In the literature, there are few reports about tuberculous infection of the nasolacrimal

Fig. 3 Greater palatine pedicled flap sutured over the defect

Fig. 4 Pedicle in situ after 4 weeks

gland also [5–7]. No patient has been reported with tuberculous lungs along with palatal fistula so far. The patient's mouth looked like she may have had a cleft palate before, and the fistula was the complication of the surgery. However, she was totally healthy without any lesions in her mouth until she was diagnosed and underwent ATT 15 years ago and treated successfully for her pulmonary tuberculosis. Her palatal fistula remained as a complication. Our theory here is that tuberculous infection may have had caused tissue destruction (caseous necrosis) and contracture fibrosis resulting in the formation of a palatal perforation. In conclusion, palatal perforation in tuberculosis is a rare entity. The combination of pulmonary tuberculosis with palatal fistulae has not been reported previously in the

Fig. 5 Biopsy from the edge of the perforation showed caseating epithelioid cell granulomas with Langhans type giant cells (H&E stain; $\times 100$)

literature. We report a unique case of palatal fistula in a patient with a previous history of pulmonary tuberculosis infection. Management of these defects should use conservative surgical procedures. If the patient has undergone multiple unsuccessful procedures a radial forearm flap may be the best choice [8].

Conflict of Interest None.

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