SCLEROTHERAPY OF ORAL HAEMANGIOMA WITH 3% SODIUM TETRADECYL SULPHATE — A CASE REPORT

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SYNOPSIS

An unusually large haemangioma of the palate was presented. Its clinical appearance and treatment were described. The use of 3% sodium tetradecyl sulphate in its treatment was discussed.

INTRODUCTION

Haemangioma, which is common, is generally regarded as a hamartoma rather than a true neosplasm. Though it can occur at any age, it frequently appears at birth or early in life. According to Friedman et al (1) more than 50% of haemangiomas are found in the head and neck region. They are often found in the oral soft tissues and only rarely within the jaws.

Oral haemangioma arising in the oral soft tissue usually appears as a flat or raised bluish mass. Its size varies from a few millimeters to several centimeters in diameter. Small lesion is usually asymptomatic whereas the larger lesion may be traumatized by teeth or may interfere with eating.

Histologically, proliferation of endothelial cells with the formation of vascular channels is characteristic of haemangioma.

Indications for treatment of oral haemangiomas are risk of haemorrhage from trauma, interference with mastication, swallowing or speech, disfigurement and displacement of teeth.

CASE REPORT

A 64-year-old Malay man was referred for management of a palatal mass of 10 to 15 years' duration. It was asymptomatic.

Patient's medical history was non-contributory. He gave a dental history of extraction of teeth which were adjacent to the growth but there was no complication following the extractions.

Clinical examination revealed an apprehensive and fit man. There was no extra-oral abnormality. Intra-orally a large raised mass on a broad base covered the left half of the hard palate (Fig. 1). It measured approximately 5 cm by 3½ cm. It was firm and non-tender. The surface was smooth except for the part that was traumatized by the opposing teeth. The adjacent teeth were displaced and loose.

X-rays showed no calcification within the lesion and no involvement of the underlying bone. On aspiration, fresh venous blood was easily withdrawn. A provisional diagnosis of haemangioma of the palate was made.

Sclerotherapy was chosen to treat the haemangioma. 2 ml of 3% sodium tetradecyl sulphate were injected into the mass at 4 different sites by using a 22 gauge needle. Some hours after the injection patient experienced mild pain in the mass and also sensitivity of the adjacent teeth. When reviewed 10 days later, there was no change in the size of the mass. A second injection of 4 ml of the same sclerosing agent was then given at 4 different sites. Immediately after the injection the patient complained of burning sensation of the face with tearing on the side of the injection. There was also moderate continuous pain in the mass for the ensuing 4 days. A week after the second injection the surface of the mass was ulcerated. Patient was given antibiotic and further injection was deferred. The ulcer increased slowly in size until a portion of the mass sloughed off about 4 weeks after the second injection. 7 weeks after the second injection the mass was much smaller and a third injection of 3½ ml of the same sclerosing agent was administered at 3 sites. The patient experienced similar burning sensation of the face during the injection. The mass was further reduced in size and about 3 weeks after the third injection, a fourth injection of 1½ ml of the same sclerosing agent was given at 1 point. 12 days later an incisional biopsy was done. 11 weeks after the fourth injection and about 5 months after commencement of the sclerotherapy, the mass almost completely disappeared (Fig. 2). On review 10 months later there was no recurrence.

Histopathology

The section show fibrous connective tissue with several blood vessels of varying sizes many of those vessels show thickened walls with evidence of 'endarteritis obliterans'. A surface mucosal covering of parakeratinised stratified squamous epithelium is seen. The histological features are consistent with the clinical diagnosis of a haemangioma which had been injected with a sclerosing solution.

DISCUSSION

Oral soft tissue haemangiomas can be successfully treated by various methods such as surgery, irradiation, cryo-surgery, electrocoagulation, carbon dioxide snow, silver nitrate and sclerotherapy. (2) The choice of treatment depends on such factors as the patient's age, size and site of the lesion and patient's preference. In general, surgery and sclerotherapy are the treatment modalities most commonly used. (3) Sclerotherapy was chosen for this patient because he refused surgery and it was also felt that sclerotherapy would be safer in view of his old age and the large size of the lesion.

Many sclerosing solutions had been used with varying degree of success. Among these are sodium citrate, boiling water, sodium morrhuate, sodium psylliate, inert sugar and monoethanolamine oleate. However, only soaps (sodium psylliate, sodium morrhuate) and akyl sulphates (sodium tetradecyl sulphate) have achieved the most widespread use in treating oral haemangiomas (4, 5). Orbach (6) had described sodium tetradecyl sulphate as a powerful almost ideal sclerosing agent. It is 1½ to 4 times more effective than soaps. It produces minimal systemic or local reactions. Baurmash (5) recommended 1% sodium tetradecyl sulphate

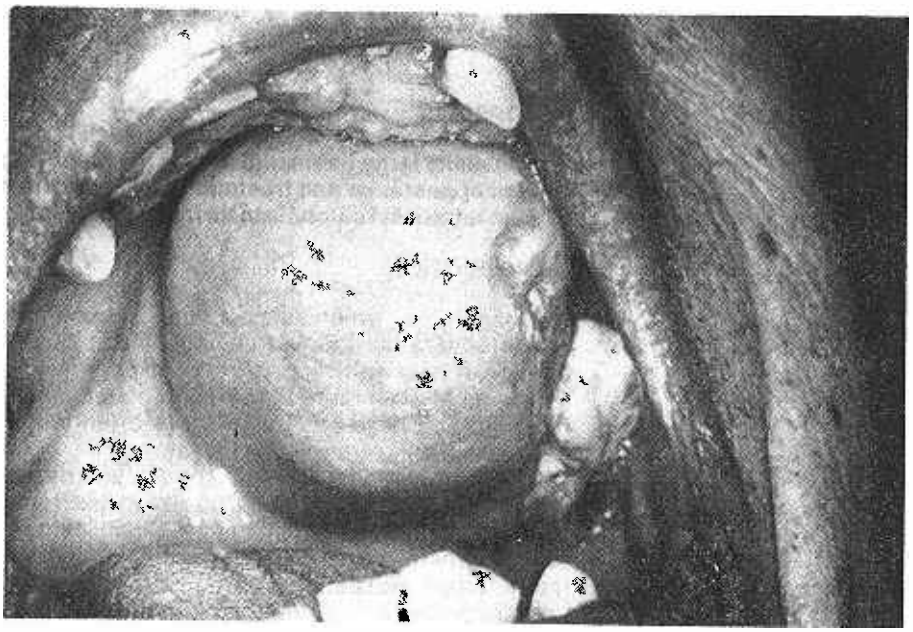

Figure 1 — Haemangioma of the left half of the hard palate before sclerotherapy.

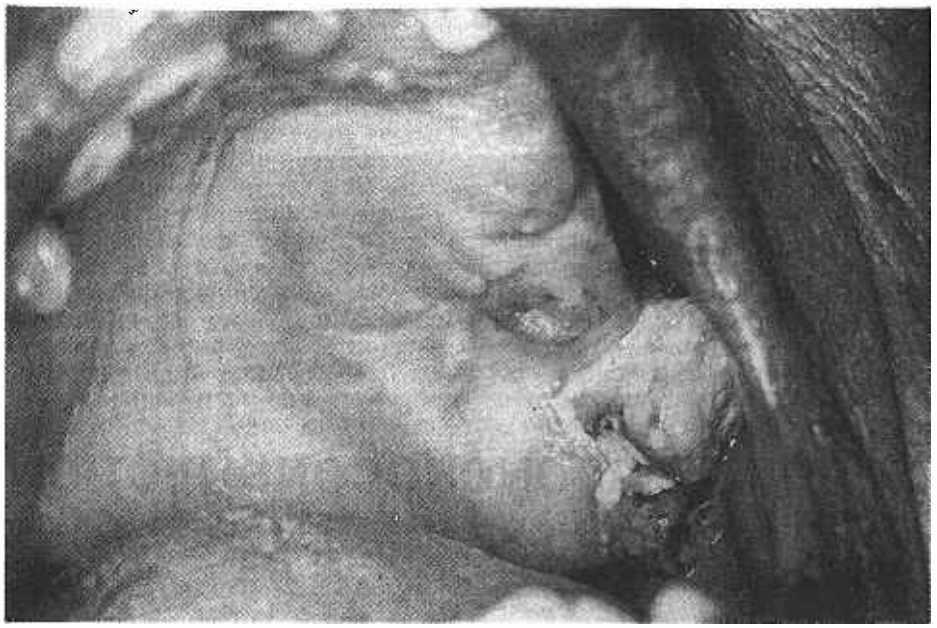

Figure 2 — Appearance 5 months after commencement of sclerotherapy.

for oral haemangioma and a maximum of 1 ml per injection. He suggested a minimum of 2 weeks to lapse before another injection is given and the use of needle not larger than 24 gauge. He based these recommendations on 5 cases he had successfully treated. The largest lesion in his series measured only 1.75 cm in diameter. In this particular case, the lesion was much larger and so 3% sodium tetradecyl sulphate was chosen and a much larger dose per injection was used. The larger dose used probably accounted for the post injection pain because the injection was necessarily interstitial. The momentary burning sensation during and after the injection was probably caused by intravascular injection. The average time lapse in this particular case was more than the recommended minimum of 2 weeks. Ulcer formation in this particular case was due to tissue necrosis. According to Terrell (7) the incidence of tissue necrosis is directly proportional to the concentration of the sclerosing agent. Furthermore, he believed that small doses and avoidance of superficial injections will also reduce the incidence of necrosis. In this reported case the necrosis was probably due to the 3% concentration and the larger dose used.

The sclerosing agent used in this reported case is sold as 3% Thrombovar. It is a colourless solution containing 3% sodium tetradecyl sulphate as the active ingredient with 2% benzyl alcohol as preservative and is physiologically buffered to pH 7.6. It causes an intense destruction of the vein intima with minimal surrounding reaction. It obliterates the varices by subintimal proliferation and fibrosis.

Sclerotherapy of oral haemangiomas is not only effective as shown in this particular case but also simple, economical and safe. No local anaesthetic is required and the patient needs no hospitalisation. The sclerosing agent is inexpensive and readily available. There is no risk of haemorrhage during the treatment. However, sclerotherapy is contraindicated in cases of superimposed local infection or uncontrolled diabetes. (5)

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