

# PALATAL PLEOMORPHIC ADENOMA AND ITS MANAGEMENT WITH ISLAND FLAPS

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## INTRODUCTION

Pleomorphic Adenoma is the commonest tumour of the minor salivary glands and occurs mostly in the junction between the soft and hard palates.<sup>1</sup> Their surgical removal leads to a defect that is difficult to repair. Island flap technique is used in our cases and is described.

## MATERIALS AND METHODS

Two patients were treated for pleomorphic adenoma of the soft palate by using Island flap technique. They were followed up for 16 months and found to have no recurrence or complications.

## TECHNIQUE

The Island flap technique was described by Edgerton<sup>2</sup> and Millard<sup>3</sup> and later described in detail by Moore.<sup>4</sup>

The technique involves using a rotated unlined Island flap pedicled on the greater palatine artery.

It differs from the commoner palatal rotation flap by freeing posteriorly so that it is only attached by the greater palatine artery which forms the nutrient artery (Fig. 1, 2, 3 & 4).

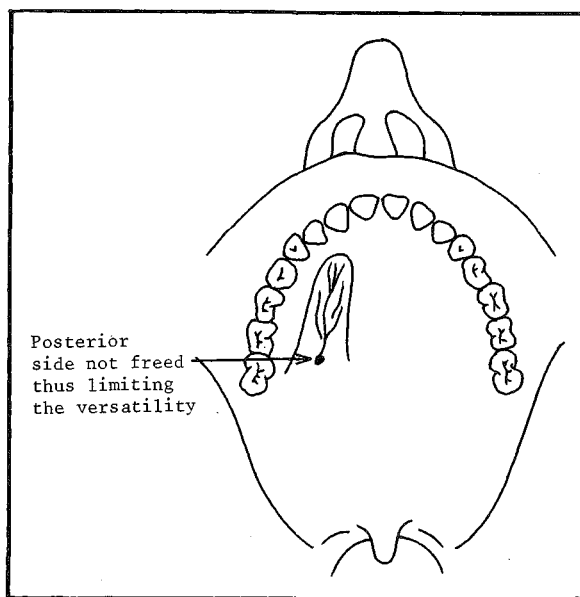


Fig. 1 Conventional rotation flap.

## CASE I

A thirty-eight-year-old Malay female was referred to the Oral Surgery Department in the Dental Faculty in February 1981 with a lump in the palate. She gave a history of a slow growing painless lump, which caused disturbances sometimes in swallowing.

Clinical examination revealed a circumscribed swelling of about 2 cms in diameter on the right side of the palate near the junction of the hard and soft palate (Fig. 5). It was non-fluctuant rubbery

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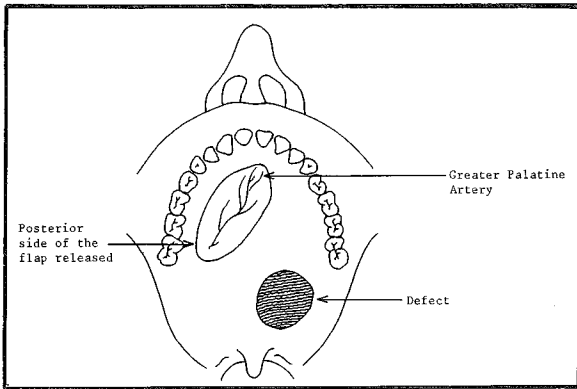


Fig. 2 Outline of Island flap containing greater palatine artery.

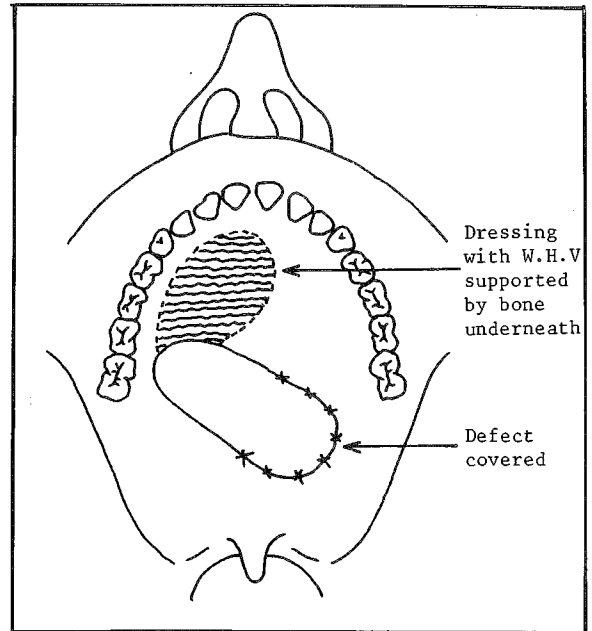


Fig. 4 Flap rotated and sutured over palatal defect.

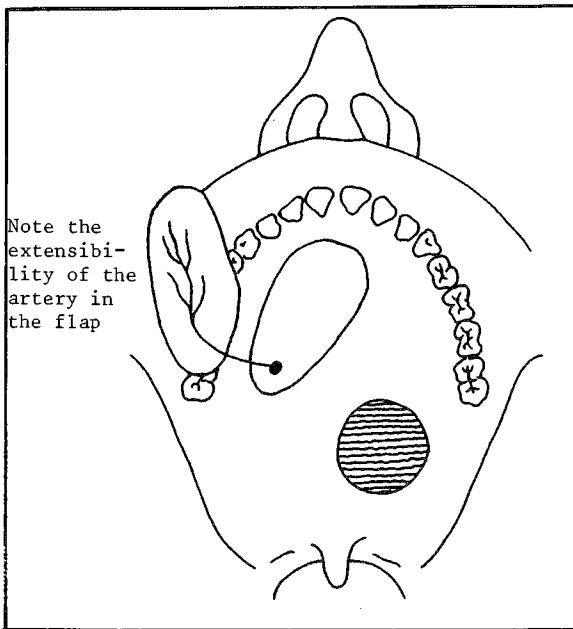


Fig. 3 Flap completely freed.



Fig. 5 Case I - Mirror image of swelling of the right side of palate near junction of hard and soft palates.

and painless. Her haematological investigations showed no abnormalities and radiologically there was no palatal bone destruction. An incision biopsy was done under local anaesthesia and histopathological examination showed the lesion to be pleomorphic adenoma.

The lesion was completely excised in March 1981 under local anaesthesia with an adequate margin. This left a defect with no bony support and extending into the nasopharynx (Fig. 6). An Island flap was raised from the left side (Fig. 7), rotated and tucked under the bridge of mucosa to cover the defect where it was sutured with black silk sutures.

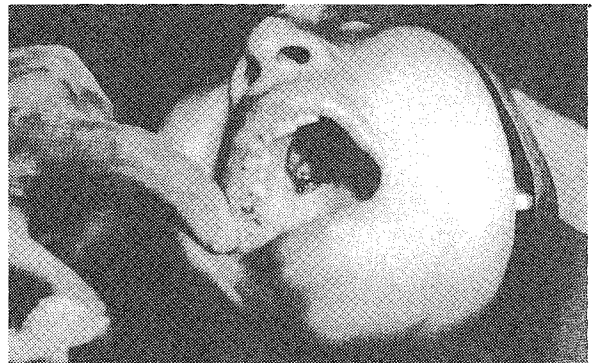


Fig. 6 Defect leading into nasopharynx following excision of pleomorphic adenoma.

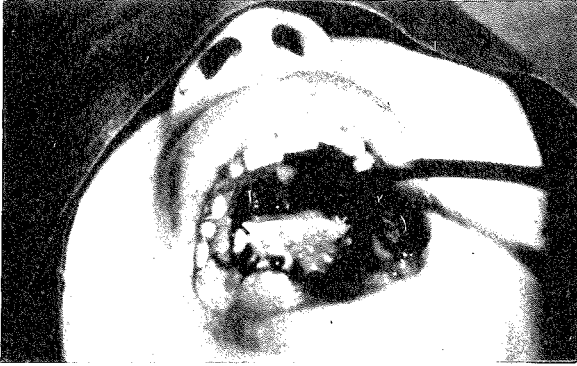


Fig. 7 Island flap rotated and sutured in place to cover palatal defect.

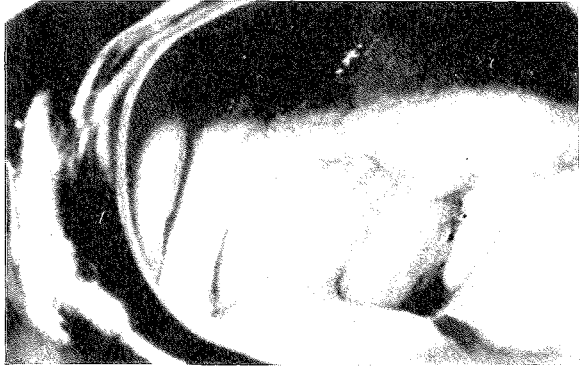


Fig. 9 Case II — Swelling on right side of soft palate near anterior pillar of fauces.



Fig. 8 Whitehead's varnish pack in place.

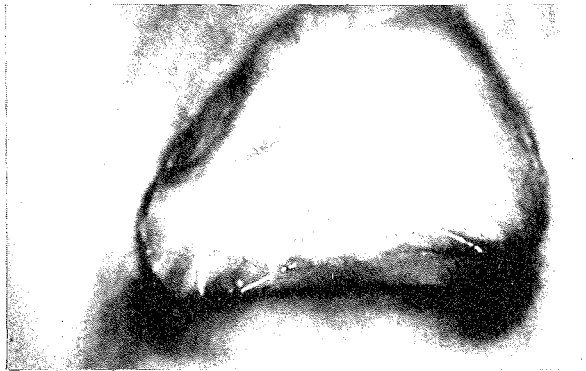


Fig. 10 Case II - Repair with Island flap following excision adenoma.

The defect at the anterior part of the palate where the flap was raised, was covered with a ribbon gauze pack soaked in Whitehead's varnish which was sutured in place (Fig. 8). Caps. Ampicillin 250 mg q.d.s. and Ephedrine 0.1% nasal drops t.d.s. were prescribed for 5 days post operatively. The postoperative recovery was uneventful and the sutures were removed after 10 days. The flap was found to have 'taken' well. She complained of no difficulty in swallowing or speech. She was followed up to now, and no recurrence was observed although she needs to be followed up for a minimum of 5 years.

#### CASE II

A twenty-eight-year-old Chinese female was referred to us from the Department of Prosthetic Dentistry with a history of difficulty in opening the mouth for the past one month. She complained of pain on opening the mouth. On examination the patient was found to be wearing an upper full denture. A firm, painless circumscribed swelling was found in the soft palate near the right anterior

pillar of the fauces (Fig. 9), which had caused an expansion behind the tuberosity leading to ulceration by the posterior border of the denture. An incision biopsy was done under local anaesthesia. The biopsy report was pleomorphic adenoma. Her haematological investigation showed nothing abnormal. The excision of the tumour was carried out with a wide margin under general anaesthesia. The tumour was extensive, firm and encapsulated. A communication from the nasopharynx to the oropharynx was inevitable. An Island flap was raised from the same side, rotated to cover the defect and sutured with black silk sutures. The raw area from where the flap was raised, was covered with ribbon gauze Whitehead's varnish pack and a custom made acrylic plate was inserted and held by peralveolar wires to support the flap and the pack. After two weeks when the sutures and the pack were removed, the flap was found to have taken well. The patient had no difficulty in swallowing and her speech was not impaired in any way. The movements of the soft

palate were normal. The patient is still under observation for the past 15 months and no recurrence has been noticed (Fig. 10).

## DISCUSSION

Pleomorphic adenoma of the minor salivary glands occurs mostly in 40-60 age group but can occur at any age and there is no sex preponderance. It is a slow-growing painless tumour. The commonest site is the palate. 55% of the intra oral salivary gland tumours occur in the palate, of which 55% are pleomorphic adenoma. 25-30% are mucoepidermoid tumours, 15-25% are cylindromas, and 5% are carcinoma.<sup>1</sup> If there is no ulceration in the palate which is rare, they usually present as a swelling or a denture that has lost its fit. Though presented while they are small, these smaller adenomas are much more likely to recur after removal than is the large tumour.<sup>5</sup> The minor salivary gland tumours behave in a more malignant fashion than the same tumour occurring in the major salivary gland.<sup>6</sup> This stresses the fact that their surgical excision should be with adequate margin. This fact is also emphasised<sup>7,8</sup> and is explained by the following histopathological features:

1. The periphery of the tumour is surrounded by a "pseudo capsule", a condensation of fibrous tissue which is thick at some places and thin at others where the tumour tissue is directly in contact with surrounding tissue.
2. There is a tendency for cleavage near the periphery and some cleavages adhere to the adjoining normal tissues.
3. The tumour grows by simple expansion as well as by finger-like infiltration which pierce the capsule. These get walled off with fibrous tissue and become "daughter tumours".

Due to the above, simple enucleation or curettage poses a danger of recurrence. When excised with an adequate margin in the palate specially in the soft palate communication with the nasopharynx is inevitable. This can be closed by surgical means or by a prosthesis. When a prosthesis is worn, due to movement of the soft palate, fluid leakage at the margins is difficult to prevent and also meticulous attention to oral hygiene is necessary. Thus the surgical method of

closure by a simple Island flap is a useful technique with least inconvenience to the patient. Henderson<sup>9</sup> used a modified form of Island flap technique to close an extensive defect created by the surgical excision of a large fibromyxoma of the maxilla in a patient 12 years of age. In addition to closing defects following excision of pleomorphic adenoma, Island flaps have been used with success by the authors to close oro-antral fistulae and also as an inner lining in the repair of defects created by the surgical excision of carcinoma of the cheek.

## CONCLUSION

For surgical repair of defects created by excision of pleomorphic adenoma, the use of Island flaps involves a simple technique and is easy to perform even under local anaesthesia, and it avoids the need for prosthesis even when the defect is fairly extensive.

## ACKNOWLEDGEMENT

The authors wish to acknowledge the assistance of Encik Razali bin Haji Arshad of the Dental Illustration units in preparing the illustrations and Puan Absah bt Mohd. Dom for her secretarial assistance.

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