Clinical records

Sublingual dermoids

By A. Resouly (Poole)

Dermoids in the sublingual area are rather unusual. They present as a lump in the floor of the mouth, or the patient may notice the development of a double chin. They may present in any age group, and have even been reported in the new-born (Hitchins, 1970), the commonest incidence being in the second and third decades.

The differential diagnosis, pathology, embryology and investigation of the condition are discussed.

It is felt that this tumour should be dealt with by an E.N.T. Department as airway obstruction during induction of anaesthesia is a real problem and a tracheostomy may become necessary (Kinnman, 1968; Stewart, 1973).

Incidence

The incidence of dermoids shows no sex bias. The largest series of dermoids, 1,495 cases, was reported by New and Erich (1937) who found that 23 per cent of Head and Neck Dermoids are in the floor of the mouth. Of all Dermoids only 6·9 per cent were in the Head and Neck. A similar distribution was found in a smaller series of 50 cases, reported by Brownstein (1973).

Differential diagnosis

The differential diagnosis of a mass in the submental area, which may either be purely sublingual or present as a double chin, must distinguish between

(i) Sublingual Dermoid
(ii) Ranula
(iii) Thyroglossal Cyst
(iv) Benign or Malignant Tumours of the Floor of the Mouth
(v) Salivary Gland Tumours
(vi) Branchial Cleft Cyst
(vii) Cystic Hygroma

A ranula is a tumour with an ill-defined border and is rather soft in nature, whereas a sublingual dermoid is a firm, well-defined tumour which tends to push the tongue backwards and upwards.

Thyroglossal cysts tend to be strictly in the midline, lying above the hyoid bone, and they move with the tongue.

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Tumours of the floor of the mouth are usually solid in nature and easily distinguished.

Branchial cysts and cystic hygromas are invariably laterally situated and have their own characteristic features.

Pathology

Meyer (1955) divided these tumours into three groups according to their histological appearances. This classification can be applied to any dermis-containing tumour in the body.

(i) Epidermoid Tumours are lined by stratified squamous epithelium and contain no other cells apart from supporting connective tissue.

(ii) Dermoid Tumours are also lined by squamous epithelium, but in addition have skin appendages such as hair follicles, sweat and sebaceous glands.

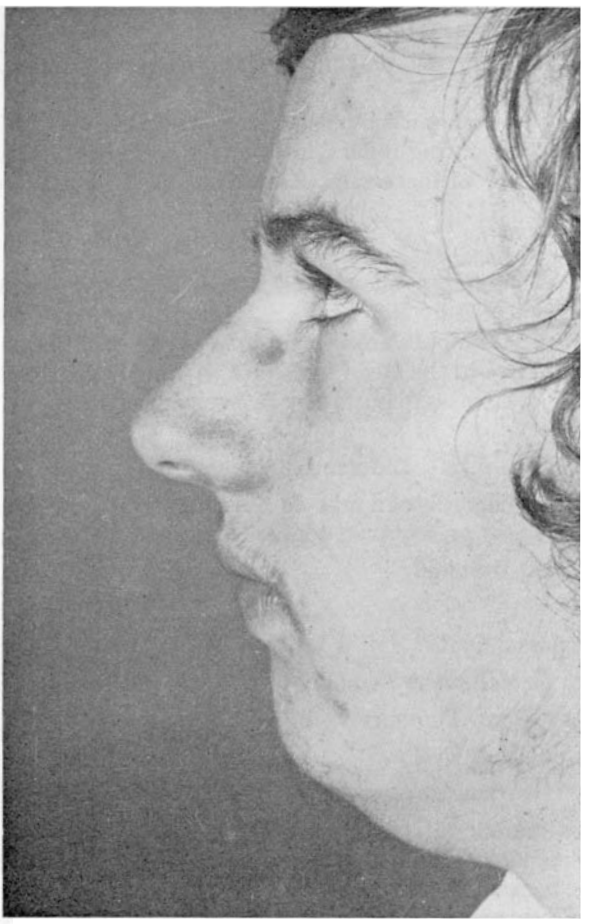


FIG. 1.
Lateral view showing Double Chin.

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(iii) Teratoid Tumours are tumours in whose walls mesenchymal elements are seen as well as features from the first two groups. Thus cartilage, respiratory and gastro-intestinal elements are seen.

A histochemical study carried out by Yoshimura (1970) on a sublingual epidermoid has shown a distribution of enzymes similar to those found in normal skin. This great similarity lends support to the theory of embryological epithelial cell nests being left behind during the fusion of the mandibular and first arch components.

Embryology

The floor of the mouth is formed by the meeting in the midline of the two mandibular arches with elements of the first branchial arch involved in the process as well (Gray's Anatomy)—presumably some epithelial cells get entrapped during the fusion process. Later on in life through a stimulus unknown to us these cells multiply to form a dermoid. Some do not present themselves 'till the patient is in his forties, while others have been reported in the new-born. Hitchin (1970) and Seward (1965) have admirably reviewed the embryology of the floor of the mouth in relation to both the midline and laterally situated dermoids.

Investigations

Routine Blood Picture and a Chest X-ray are normal but not very helpful.

Radiological Examination of the Head and Neck is of paramount importance. A good lateral soft tissue film of the Neck will outline the air passages and will be of assistance to the anaesthetist in his pre-operative examination. If the

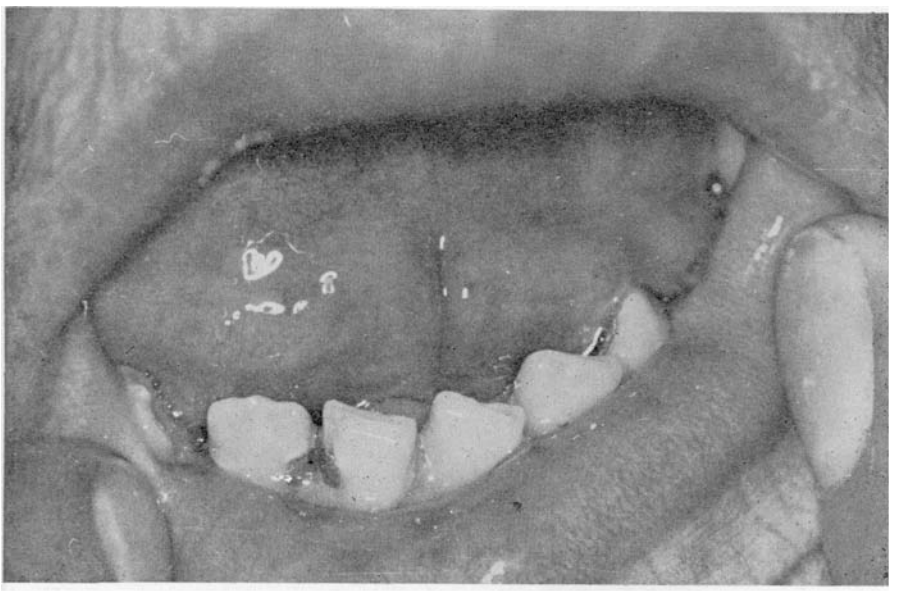


FIG. 2.
Showing large Sublingual Mass.

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tumours are large they may render endotracheal intubation impossible (Stewart, 1973).

The injection of a radiopaque medium into the cyst to outline its size and extension was described by Forster (1968). In the case to be described this was carried out.

A Radioactive Thyroid Scan should be carried out to make sure that one is not dealing with a thyroid-containing thyroglossal cyst.

Case report

D.C., a 16-year-old male, presented to the Oral Surgery Department with a sublingual swelling. This swelling had been there for about a year. His parents noticed that he had developed a double chin and slight impairment of speech.

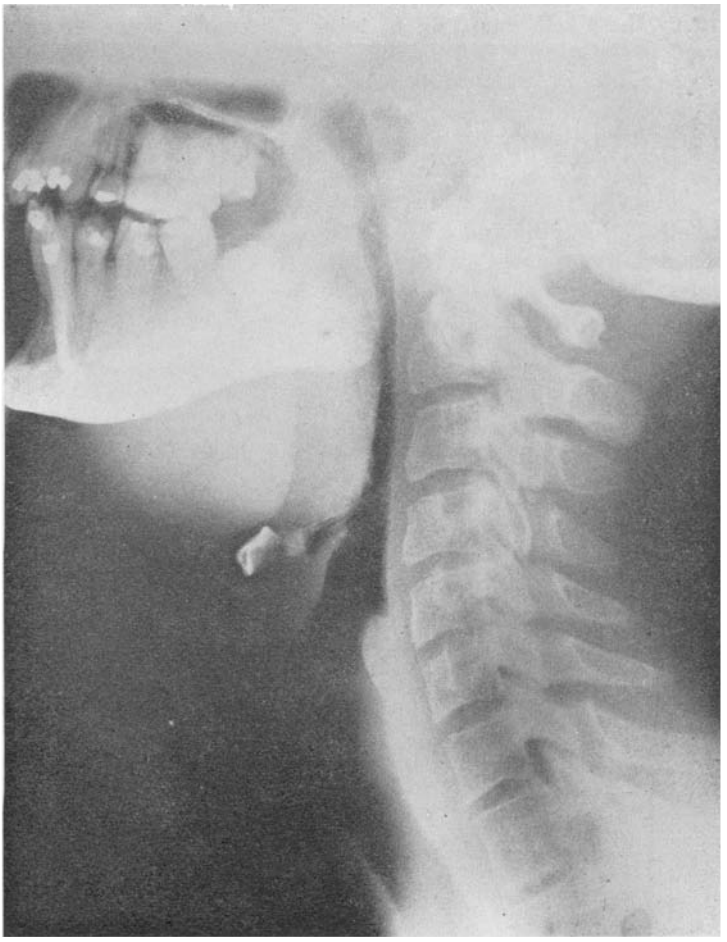


FIG. 3.
Lateral X-ray of Neck with Dicnosyl injected into swelling.

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FIG. 4.
Dermoid dissected away from Neck.

Examination of his mouth showed the tongue to be pushed upwards and backwards and virtually hidden by the tumour.

Soft tissue X-rays of neck before and after the injection of Lipiodol helped to outline the size of the tumour.

He was referred to the E.N.T. Department for help in case of airway obstruction.

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Intubation was uneventful and a curved transverse incision was made in the submental region. The tumour was exposed after cutting away several layers of muscle fibre. The latter often misled the identification of the true cyst wall. Putting a finger in the mouth and pushing the floor downwards helped enormously in the dissection and excision of the tumour.

The wound was then sutured and drained.

In the first 48 hours post-operatively there was a lot of oedema of the neck and the patient's airway was carefully watched. He then made an uneventful and satisfactory recovery.

Discussion

If the sublingual dermoid is a small one then a routine transoral approach is made. The mucosa of the floor of the mouth is divided in the midline and the tumour shelled out. Rise (1964) described such a case where the tongue was divided to get good access.

Larger sublingual dermoids have intrinsic problems. The larger dermoids may make intubation impossible, necessitating an unplanned pre-operative tracheostomy under local anaesthesia (Kinnman *et al.*, 1968).

In the case described here the Operating Theatre Staff were alerted to this possibility. This tumour should be dealt with by practising Head and Neck Surgeons where the facilities for a tracheostomy are always available.

Acknowledgements

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