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Lymphangioma of Tongue

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Lymphangioma of the tongue is an uncommon condition. Patients may present with either a cyst of the tongue or macroglossia. A large tongue causes difficulty in mastication and articulation. In newborn period an abnormally large tongue may cause serious feeding problems. We have observed three cases of lymphangioma of which two were cysts and one had macroglossia.

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Case Reports

Case 1: A 3-day-old boy presented with a swelling protruding out of the mouth since birth. The swelling measured 7.5 by 5 cm and involved the anterior two-thirds of the tongue. It was cystic in consistency. Transillumination of the swelling was negative. There was no respiratory distress. Aspiration of the swelling showed turbid fluid. Microscopic examination of the fluid showed fat globules and pus cells; no organisms were cultured. After aspiration of 30 ml of fluid the swelling completely disappeared and the patient could close his mouth. He was treated with antibiotics and fed through Ryles tube. The swelling reappeared within a week but was smaller in size. The aspiration was repeated twice at four days interval; no further recurrence of the swelling was noticed.

Case 2: A 5-year-old girl presented with a gradually enlarged protuberant tongue since the age of 2 yr (*Fig. 1*). The patient could not close her mouth or speak coherently. The whole anterior two-thirds of the tongue was enlarged. The patient was treated by partial glossectomy. Under general anesthesia two overlapping hemostatic cum traction sutures of No/0 silk were placed at the root of the tongue and were tied tightly over two pieces of corrugated rubber drains, about two inches long to avoid cutting through (*Fig. 2*). The portion of the tongue to be removed was marked out on both the surfaces of the tongue with marking ink. A straight cutting needle was passed through the apex of the dorsal 'V' and was brought out through the apex of the ventral 'V'. The anterior two-thirds of the tongue thus marked out was removed using cutting diathermy. Hemostasis was secured after hemostatic sutures were removed one after the other. The remaining



Fig. 1. Clinical photograph of case two showing a large protruding tongue.

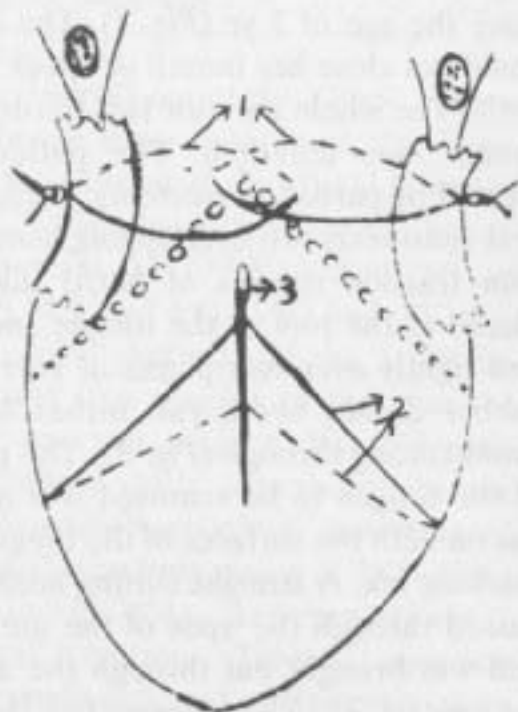


Fig. 2. Diagram showing principle of partial glossectomy; (1) hemostatic cum traction sutures; (2) Dorsal and ventral incision lines; (3) Straight cutting needle.

lateral portions of the tongue were apposed in three layers. Histopathological examination of the excised specimen revealed a lymphangiomatous hamartoma. In the postoperative period the girl could close her mouth comfortably. During follow-up the shape and size of the tongue was normal, the child could swallow normally but had initial difficulty in articulation which improved with time.

Case 3: A 5-month-old boy was presented with a 2 by 2 cm swelling on the right side of the anterior two-thirds of the tongue since birth. He had no feeding problem. It was cystic in consistency. Under general anesthesia the cyst was completely excised using the technique described in the previous case. The cyst contained clear fluid and histopathological examination of the cuts revealed fibrous tissue wall lined with flattened endothelium. His postoperative recovery was uneventful. He was seen three months after surgery when the tongue was normal.

Discussion

The number of publications on lymphangioma of tongue and macroglossia are few(1,2). Macroglossia is defined as chronic painless enlargement of the tongue. Causes of macroglossia are: lymphangioma, hemangioma, arteriovenous malformation, neurofibromatosis, congenital hypothyroidism, amyloidosis, etc. In our series, Cases 1 and 3 had solitary lymphatic cysts and Case 2 had macroglossia. In the first case glossectomy was not required. It is possible that an infection in the cyst had destroyed the lining epithelium leading to complete regression. Patients with hamartomatous macroglossia involving the anterior two-thirds of the tongue can be treated by partial glossectomy. This principle of

glossectomy as described by Upadhaya and Rao(3) can also be utilized with advantage for all procedures on the anterior two-thirds of the tongue. Use of non-crushing bowel clamps as described by Robinson(4), placed at the root of the tongue is cumbersome and is often ineffective in controlling bleeding during surgery.

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Nitroblue Tetrazolium Test in Protein Energy Malnutrition

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Nutritional status, immune response and infection are related intimately. Undernutrition is known to cause fall in cellular mediated immunity. This is ascribed to the altered metabolic activity of polymorphonuclear cells (PMN) resulting in their diminished microbicidal capa-

city(1). Nitroblue tetrazolium test (NBT) is well documented method of assessing the intraneutrophilic metabolic function(2). An attempt has been made in this study to assess the significance of NBT test in protein energy malnutrition (PEM).

Material and Methods

Fifty children with PEM and twenty five healthy children formed the study group. They were grouped as follows:

Group A: Twenty five, normal healthy children, age and sex matched formed the control group. Complete clinical examination, total leucocyte count (TLC), absolute neutrophilic count and NBT test were done.

Group B: Twenty eight cases of marasmus forming this group underwent similar screening.

Group C: Twenty two cases of kwashiorkor formed the third group. Presence of overt infection was ruled out by clinical and laboratory examination in all children. NBT test was done by the method described by Park *et al.*(3). NBT score was expressed as percentage of positive neutrophils. The absolute NBT score was estimated from total and differential leucocyte count. Statistical analysis was done by 't' test.

Results

The observed TLC in children of Groups A, B and C were 9340/mm³, 8964/mm³, and 9604/mm³, respectively. The difference was statistically not significant ($p > 0.05$). The percentage and absolute NBT score in the three groups is shown in Table I. NBT score in marasmus and kwashiorkor was comparatively low (mean 4.35 and 2.28%, respectively). The difference

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