

A Congenital Cyst on the Floor of the Mouth

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(Received July 31, 1968)

INTRODUCTION

So called "Macroglossia" is generally rare condition. It is a painless and progressive enlargement of the tongue usually present in infants and children, that causes mechanical troubles, such as dysarthria or dysphagia.

Recently, we experienced a case of a congenital cyst on the floor of the mouth which might be considered congenital ranula or cystic hygroma.

CASE REPORT

A 4-month-old male baby was admitted to otolaryngological ward of Yamaguchi University Hospital because of a congenital mass on the floor of the mouth in November, 1967.

Past history and family history : Non-contributely.

Present illness : According to the baby's mother, he was born in July of 1967 in easy labor, then the mother noticed a large mass on the floor of the mouth. Since then, the mass did not become so large in its size, but the baby opened his mouth in all times without dysphagia or dyspnea.

In November of 1967, the baby was seen by an otologist and was recommended to be given some treatment by department of otolaryngology of Yamaguchi University Hospital.

EXAMINATIONS

Physical examination revealed that an apparently healthy male baby had a very curiously big mass, walnut sized, smooth surfaced, elastic soft and fluctuant cystic, located on the floor of the mouth.

Routine blood examination showed slight simple microcytic anemia ; consisting of red blood cell 380×10^4 , white blood cell 10400 and hematocrit of 28.8%. Bleeding time was 3 minutes. Serologic test for syphilis was negative. Examination of urine showed negative for protein, sugar and urobilinogen.

X-ray of the chest showed no abnormal shadow and E.C.G. findings were within normal limits.

OPERATION

The fourth day of his admission, the baby was performed on the operation for removal of the mass on the floor of the mouth under the local anesthesia.

A shallow incision was made on the surface of the mass. The mucous flaps were separated as wide as possible, then thin capsulated cystic mass was exposed. We tried to remove this mass completely, but were not able to do because of severe adhesion with the mucous around the mass. So, an incision was made on the wall of the mass, then thick mucinous viscid fluid like white of the egg which came out flowing was sucked by a injection tube. There was no possibility of removing the sac wall, so the mucosa of the floor of the mouth and sac wall of the mass was sutured together with catgut to keep the wound open and operation was finished.



Fig. 1. Photograph of the preoperative condition of the floor of the mouth. A large mass bulging of the floor of the mouth is noted.

Histopathological diagnosis :

Cyst on the floor of the mouth, fibrous wall and a single layer of flattened epithelium lined over the cyst wall (Fig. 2).

Postoperative recovery was well and the floor of the mouth reduced to normal. Fourty days after discharge from the ward, physical check was done. Visual examination and palpation revealed no recurrence of cyst and no closing the incision wound, without dysphagia or dyspnea (Fig. 3).

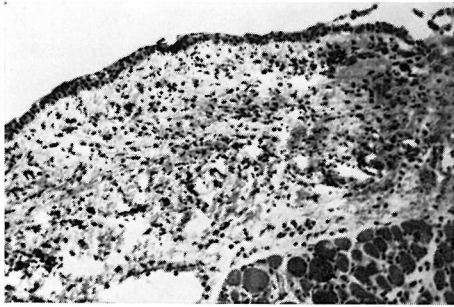


Fig. 2. Microphotograph of the cyst wall. Fibrous wall and a single layer of flattened epithelium lines over the cyst wall.

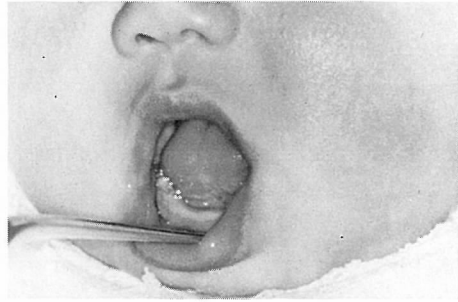


Fig. 3. Photograph of the floor of the mouth. Postoperative 60 day.

COMMENTS

So-called “Macroglossia” is generally known as a rare condition, which is usually present in infants and children. Table 1 shows many etiologic factors or causative disease.

Congenital cyst of the tongue or the floor of the mouth is further rare but is particularly interesting because of the difficulty of their diagnosis and the problem of their complete removal.

According to New, G.B.,⁴⁾ the congenital cysts of the tongue or of the floor of the mouth that must be considered are : ranula, dermoid cyst, cystic hygroma, aberrant thyroglossal cyst and etc :

Table 1. Macroglossia (Cited by Sekitani, T.¹⁾)

Akaiwa, H. (1938) ²⁾ Macroglossia, congenital	Subba Rao, Y.V. (1958) ³⁾ Macroglossia
due to ;	due to ;
lymphangioma	cavernous lymphangioma
myoma	rhabdomyoma
haemangioma	
neurofibroma	
congenital myxedema	myxedema
mongolian idiot	congenital idiot
cretinismus	cretin
acromegaly	acromegaly
	lingual gigantism
Macroglossia amyloides diffusa	Primary mesodermal amyloidosis
	thyroglossal cyst
	intralingual dermoid intralingual ranula
	syphilitic fibrosis

Ranula — The term “ranula” has been used to designate any cyst of the anterior part of the floor of the mouth: it should be used only to designate the thin-walled, epithelium-lined cyst that grows slowly, is sometimes of a bluish tinge, and is soft and easily compressible. It is generally thought to be due to an obstruction of a duct of the sublingual gland, but this does not seem plausible in all cases because of bilateral nature of the cyst in some instances and because only a part of the gland may be affected. This cystic tumor may be present at birth or may appear shortly afterward. It is readily distinguished from the dermoid cyst, owing to thinness of its wall.

There is no urgency about removal of a ranula unless it is causing difficulty in breathing or eating by displacing the tongue. Complete removal of the cyst is the treatment of choice. As the wall of the cyst is thin, dissection must be carried out carefully in order to remove all the lining. The large cyst may be opened and the lining destroyed by superficial surgical diathermy, or an operation consisting of excision of the dome of the cyst and suturing of the lining of the cyst to the mucous has been advocated.

Cystic Hygroma. — Cystic hygroma is a multiocular lymph cyst which usually occurs primary in the neck but may involve the floor of the mouth. The cyst usually is found in the floor of the mouth or in the submental or the submaxillary region. It is a multiocular lymph cyst. It has thin walls and an endothelial lining: it usually is filled with clear lymph. Examination discloses a smooth, thin cyst in the floor of the mouth, which causes bulging of the tongue.

Surgical removal is satisfactory if the patient can stand the operation. It is usually a long procedure if the lesion is bilateral. In case of an unilateral lesion, operation usually is satisfactory.

Dermoid cyst. — A dermoid cyst which involves the floor of the mouth and the submental and submaxillary regions may be situated either above or below the mylohyoid muscle or may extend from one region to the other through the muscle. A large cyst causes bulging of the floor of the mouth. The tongue may be back against the pharynx and may not be visible; the submental region may be filled out like a large orange.

Dermoid cysts may occur in infants and interfere with breathing and deglutition.

Complete removal of a dermoid cyst is advisable, and the approach should be made either externally or through the floor of the mouth, depending on where the largest part of the is situated.

Thyroglossal cyst. — An aberrant thyroglossal cyst may cause repeated inflammatory swelling of the base of the tongue if it becomes infected. If a portion of the cyst remains below the hyoid bone, it produces swelling in the neck or a thyroglossal sinus externally in the midline. If there is incomplete obliteration of a thyroglossal duct and a portion remains in the region of the

foramen cecum, repeated infection may causes great deal of trouble.

The treatment of this lesion consists in removing the cyst or cystic tract in the interval between infection.

Histopathological differentials of them are showed in Table 2.

In our case, the cyst on the floor of the tongue might be considered congenital ranula or cystic hygroma because of its visual examination, palpation, operative condition, thick mucinous viscid fluid like white of the egg which came out flowing and histopathological examination.

In the literature written by authors, similar cases to ours are found in only two, Subba Rao,³⁾Y.V. and New, G.B.⁴⁾.

Table 2. Histopathological Differentials (Cited by Sekitani, T. ¹⁾)

	Ash & Raum (1959) ⁵⁾	New's report (1947) ⁴⁾
Ranula	Flattened cuboidal or squamous epithelium and they usually contained cholesterol.	Squamous epithelium. In some instance ; varying from squamous cells to stratified or ciliated cell. mucoid degeneration
Dermoid cyst	Frayed squamous epithelial lining. hairs, hair follicles, sebaceous glands.	has a thick fibrous capsule and dermoid lining.
Thyroglossal cyst	ciliated pseudostratified epithelium. Milky fluid aspirated. a thyroglossal duct never contains lymphatic tissue. aberrant thyroid but no lymphatic tissue.	is lined by stratified or ciliated epithelium An aberrant thyroglossal cyst
Cystic hygroma	single layer of robust endothelium. lymph vessels	multilocular lymph cyst thin wall, endothelial lining with clear lymph

SUMMARY

A case of macroglossia due to congenital ranula or cystic hygroma was reported. Literature review are made about the possible origin of the cysts on the floor of the mouth or of the tongue and histopathological differentials.

ACKNOWLEDGEMENT

Gratefull acknowledgement is made to Prof. Shoichi Honjo for his kind guidance and careful review of the manuscript.

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