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Case Report

CYSTIC HYGROMA OF NECK – A CASE REPORT AND LITERATURE REVIEW

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ABSTRACT

Cystic hygroma usually present as a painless swelling of the neck involving both the anterior and posterior triangle, with 44% in anterior triangle and 56% in posterior triangle. It is benign congenital tumour of neck region found mostly in children, but it can occur in any age. This is a rare case report of a child in which successful surgical removal of the cystic lesion with preservation of vital structure of the neck was performed. A discussion and brief literature review of cystic hygroma in child is described.

Key words: Cystic Hygroma; Painless; Benign; Congenital; Surgical Removal.

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INTRODUCTION

Hygroma is a Greek word which means 'water-containing tumour'.[1] Cystic Hygroma is a developmental abnormality in which progressive dilatation of lymphatic channels found resulting in lymphatic fluid accumulation. The term cystic hygroma is also known as lymphatic malformation or lymphangioma or hydrocele of neck. It is often present at birth and most cases are diagnosed in infancy (<2 years).[2]

Cystic hygroma could classify into separated (multiloculated) or non-separated single cavity (non-loculated). The incidence of cystic hygroma is very rare and is estimated to be 1 case per 6000-16000 births.[3]

CASE REPORT

A 8 years old girl weight of 26 kg, height of 4.5", resident of manki, presented to the Jeevan Rekha Multispecialty Hospital, Manki, Rajnandgaon, with the chief complaints of painless mass in the right side of neck since childhood, when her parents noticed a small swelling on the left side of neck, As the child growing the mass was increasing in size gradually. She also gave history of fullness of neck on left side and some discomfort on moving her neck to downward.

There was no history of pain, dyspnea and dysphasia, hoarseness of voice, low grade fever or loss of

weight. The swelling did not move during deglutination. Patient gave no history of trauma in past in the respected area. There was no history of bleeding or pus discharge, no history of increasing in size of the swelling during meal.
She was non-diabetic, non-hypertensive, no history of thyroidism, no history of previous hospitalization and no history of drug allergy. Her past dental history and family history was not relevant.

Patient was examined on a sitting position under the broad daylight after taking an inform consent. She was conscious allert, co-operative and well oriented to the time place person. She was nutritionally well hydrated with pulse of 88beats/minute in the right radial artery which was regular in rhythm normal volume in character. Blood pressure was 110/76 mmhg in the left arm supine position. Respiratory rate was 17 breaths/minute, regular thoraco-abdominal.

No signs of cynosis, pallor, icturus, clubbing or pedal edema. Examination of the cranial nerve was normal. The trachea was centrally placed with a visible mass in the left side of neck.

There was a cervical swelling present in the neck region, which was well defined oval shaped mass measuring around 8.5-6 cm^2 in the left side of the neck involving anterior triangle of neck. Colour of the mass was normal to the anatomic site. There was no erythema, sinus, scar or fistula present. Submandibular duct opening was visualized with normal salivary flow of the mouth.

On palpation the mass was soft, fluctuant and non-tender. Extension of the mass was supero-inferiorly, from transverse process of atlas to supra clavicular fossa and antero-posteriorly thyroid gland and paratracheal region or right side to posterior triangle of neck of left side. There was no lymphadenopathy present and systemic examination was normal. Her face was bilaterally symmetrical.

Routine blood investigations were normal. X-Ray chest (PA) view showed prominent bronco vascular marking? Bronchitis. Fine needle aspiration cytology (FNAC) revealed straw coloured fluid and it shows microscopically (cytology) lymphocytes, which suggest chronic inflammation.

Ultrasonographic evaluation of neck revealed evidence of large well defined cystic lesion of approximately size 77×43mm with Interval low-level echoes seen in left lateral aspect of neck suggestive of large cystic mass? Cystic hygroma. CT-Scan of neck revealed large well-defined unilocular hypo dense cystic lesion in left anterior neck space lateral to carotid trachea and thyroid, posterior and medial sternocledomastoid muscle with contralateral deviation of the trachea and thyroid most likely suggestive of unilocular cystic hygroma and the patient was scheduled for surgical excision.

Under general anesthesia through a MacFee incision (fig.3.) full thickness flap was raised and sternocledomastoid muscle was separated (fig.4.), the branches of spinal accessory nerve was seen over the cystic lesion and common carotid artery and internal jugular vein were carefully preserved (fig.7) and the cystic lesion was excised (fig.6.) and drainage placed, and suture done. Post operatively the patient recovered uneventfully, with minimal drain the output which was removed on the 5^{th} day; on 9^{th} day suture removal done. No recurrence found up to 2 years of surgery and patient was asymptomatic.

Fig. 1. An 8-year-old female presenting with a large left-sided neck swelling.

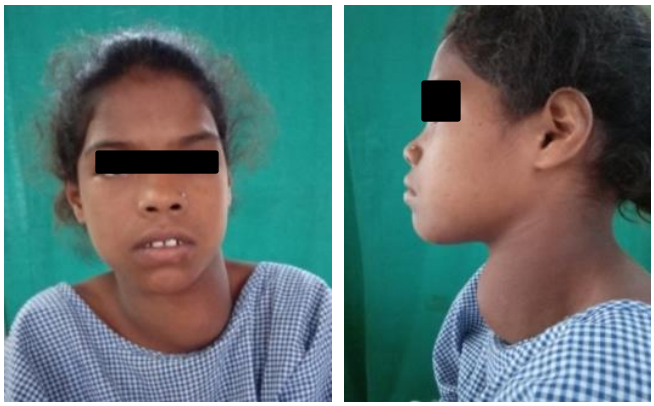


Fig.2.1. At the level of hyoid bone

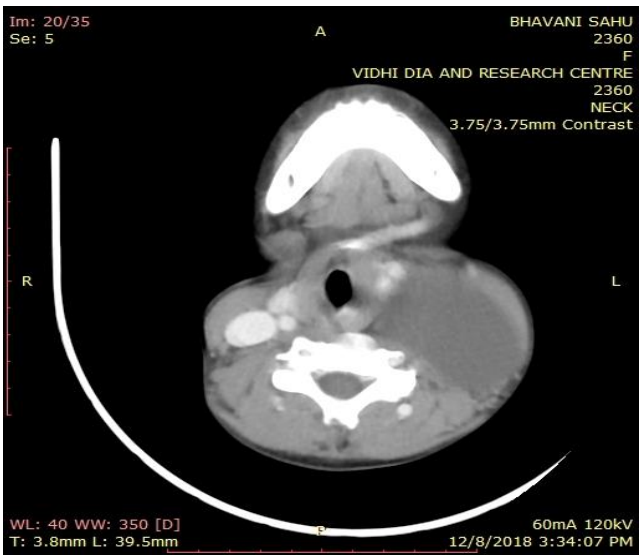


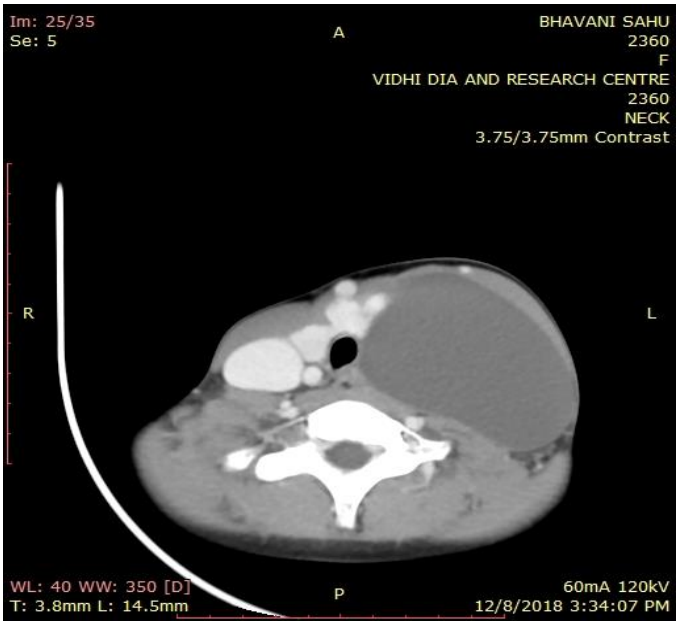
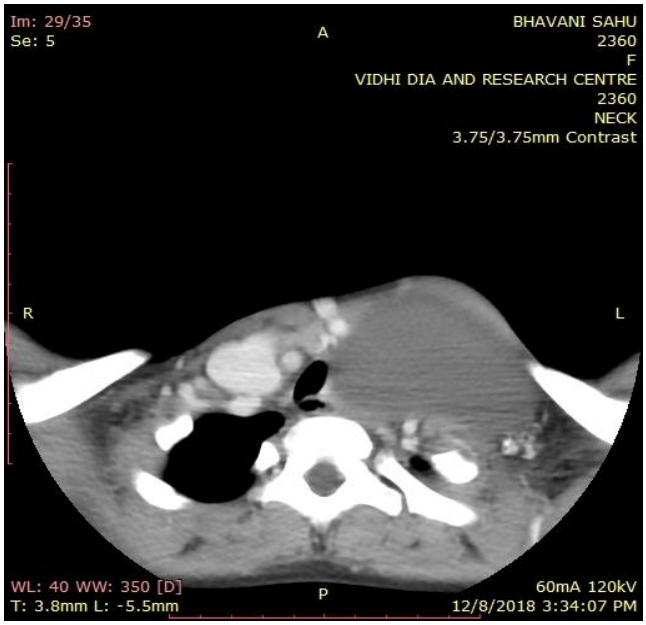
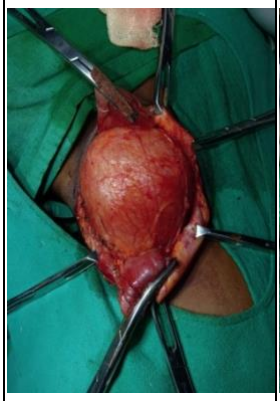
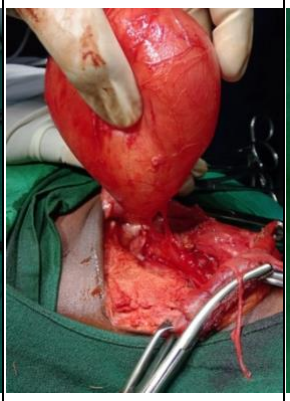
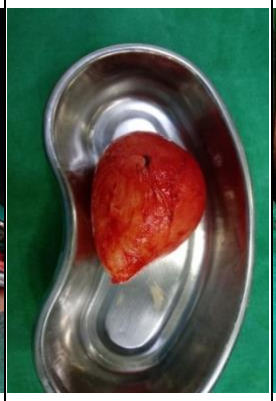
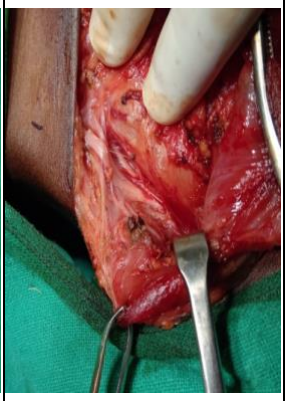
Fig.2.2. At the level of carotid artery	Fig.2.3. At the level of clavicle
	

Fig.3. MacFee incision	**Fig.4.** Sternocledomastoid muscle separated.	**Fig.5.**Cyst was completely detached from its base	**Fig.6.** Cystic Lesion	**Fig.7.** Spinal accessory nerve and brachial plexus carefully preserved
				

DISCUSSION

It is believed that Cystic hygroma arises from a congenital malformation of the lymphatic system in which a failure of communication between the venous pathways and lymphatic leads to fluid accumulation.[4] Cystic hygroma can occurs in any region of the body, the cervico-facial region (75-80%) is the common location followed by axilla, mediastinum and groin.[3,5] For investigations of cystic hygroma ultrasonography (USG) and CECT scan and MRI can be used. Contrast enhanced computed tomography (CECT) scan can be describe the extent of the lesion in three dimensional view, relation to adjacent structures and helpful in surgical treatment planning.[5] Treatment options consist of surgery, laser excision, cauterization, sclerotherapy, simple drainage, radiation and radio-frequency ablation.[9] However, surgery remains the preferred modality of treatment.[6] The postoperative complications usually observed after surgical removal of the cystic lesion, they are wound hemorrhage or lymphatic discharge, numbness of the neck and shoulder, infection, hypertrophied scar from the wound.[5] In cystic hygroma recurrence rate is high due to incomplete excision of lesion.

Painless swelling present since birth with transillumination test positive may give clue to the diagnosis of cystic hygroma. In laboratory finding the cystic lesion consist of dilated cystic space lined by endothelial cells. In the present case the swelling present since childhood and which is also painless. Tran illumination test reveals positive. Sometimes, overlying skin may be blue, whether in the present case the colour of the swelling was normal to the adjacent anatomic site.

In old literature, V Ramchandra et al.[7] (2001) reported recurrent cystic hygroma. And P Saxena et al.[8] (2009) reported a case report on cystic hygroma of neck in an adult female. Furthermore L. Gow et al. (2011)[4] describe adult onset cystic hygroma: a case report and review of management. Rohit shrivastava et al.[9] (2014) reported a difficult case of cystic hygroma. Paulo Rocha Pereira et al.[2] (2015) reported cystic hygroma – a rare appearance in adulthood.

CONCLUSION

The etiology of cystic hygroma is unknown, although it is believed that it is associated with chromosomal anomalies in 60-75% of the cases. Cervical lymphangiomas may be isolated or can associate with syndromes; they are the Turner syndrome, the Klippel-Trenauny syndrome, the congenital glaucoma.[10]

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