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A case report on "Cystic Hygroma" in a pediatric patient.

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ABSTRACT: Cystic Hygroma (CH) is a birth defect that appears as a sac like structure with a thin wall that most commonly occurs in the head and neck area of an infant but may affect the armpit, mediastinum, limbs and other parts of the body. We report a male child who was 18 months old and had edoema on the lateral part of his neck. The patient was given the diagnosis of CH, and excision was done. Hemostasis has been attained. Ultimately, the patient's condition was stable at the time of release

KEYWORDS: Cystic Hygroma, Lymphatic malformation, Excision.

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I. INTRODUCTION:

The congenital abnormality of the embryonic lymphatic system known as cystic hygroma, also known as a lymphphangioma, has an estimated frequency of 1 in 6000[1,2]. A specific kind of lymphatic abnormality is CH. Up to 75% of cases of this illness are believed to occur in the oral cavity and have a higher propensity to appear in the head and neck[3](fig-1). Most of these lymphatic abnormalities start before the age of two, at birth, or both[4].CH often appears as a lump or swelling that may be transilluminated, is not connected to the skin or mucosa above it, and is frequently painless and poorly defined. Large masses may cause obstructive symptoms including dysphagia and respiratory discomfort[5]. The lymphatic veins in the neck and limbs have significant cystic dilatation as a result of this lymphatic reflux condition[6,7]. CH often affects the head and neck, although it can also affect the armpit, mediastinum, limbs, and other body areas[8,9].The neck of the thoracic and right lymphatic ducts are the sites of systemic lymphatic fluid reflux, which eventually switches back to the venous system. The diagnosis of foetal abnormalities during pregnancy has been simpler thanks to ongoing advances in ultrasound resolution, which have also increased the detection rate of CH.The prognosis for CH, which is impacted by prenatal deformity and chromosomal abnormalities, is still poor[10].In the diagnosis and planning of care for large suspected lymphatic malformations, radiographic imaging is crucial[11]. When it comes to compliance, an ultrasound is frequently adequate and unquestionably the best modality for young children[12]. The best form of therapy for these tumours is still surgery[13]. CH usually occurs in the cervico-facial area, which accounts for around 80% of cases. Hence, in the first differential diagnosis of cystic lesions with onset at birth, CH should always be the primary option. Around 60% of CHs begin before birth, and up to 90% appear before the age of two[14].

Figure 1: showing Cystic Hygroma in pediatric patient[23].

When aspirated with a wide-bored needle, these cysts may release a milky, serous fluid that is straw in colour[15]. Simple drainage, aspirations, radiations, laser excision, radio frequency ablation, and electrocautery are some other therapy techniques that have been used with varying degrees of success[16,17,18].

II. CASE REPORT:

A 18-month-old male child was admitted to department complaining of swelling over the lateral aspect of the neck that has been present for 4

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months, has an insidious onset, initially small in size, and has grown over time to reach its present size. The swelling is aggravated by crying and subsides after resting.The child experienced two episodes of vomiting and intermittent fever. His vital signs are steady when compared to the patient's overall state. There was a 6*2 cm swelling over the side of the neck, globular in shape, soft in substance, with no soreness at the location, no sinuses or scars to be seen, well-defined boundaries, transillumination, and movement.The results of the tests pointed to microcytic hypochromic anaemia with haemoglobin of 7.7 grammes per deciliter. RBC and platelet counts are normal. Electrolytes in the serum were within normal ranges. 100 ml of PRBC (10 ml/kg) blood were transfused.A CH excision was carried out. A 10*5 cm cyst on the left side of the neck that is loaded with cholesterol crystals was discovered during surgery. A horizontal incision is made over the cyst while the patient is under general anaesthesia, and it is deepened till subcutaneous tissue. The dissection is carried out inferiorly up to 2-3 cm above the clavicle, anteriorly up to the digastric muscle, and superiorly up to the inferior border of the mandible. The carotid sheath is tightly connected to the cyst; the cyst is separated from the sheath, the cyst is removed, and the wound is then patched up.Patient status was stable at the time of discharge after hemostasis was achieved. Tonoferon syrup, 1 ml, was recommended for the child and an explanation of an iron-rich diet was given.

III. DISCUSSION:

Although the precise cause of CH in humans is still unknown, chromosomal abnormalities and genetic disorders like the Noonan syndrome have been linked to the disease. [19] In 29% to 60% of instances, an abnormal karyotype was discovered.[20] Contrarily, congenital diseases with a normal karyotype were present in 25% to 53% of cases. [21]In order to establish a reliable diagnosis of paediatric neck masses, clinical and radiographic evidence is sufficient. The best course of action for treating lymphangiomas and avoiding recurring infections is surgical excision. [22]

The article highlights the importance of early detection and diagnosis of CH, which is crucial for effective management of the condition. The use of radiographic imaging, particularly ultrasound, is emphasized as a reliable diagnostic tool for young children. Surgical excision remains the most effective treatment for CH, although other therapy techniques such as drainage, aspirations, radiations, laser excision, radio frequency ablation, and electrocautery have also been used with varying degrees of success. The case report presented in the article describes the surgical excision of a CH cyst from the lateral part of the neck of an 18-month-old male child. The surgery was successful, and the patient's condition was stable at the time of discharge. The article also notes that the patient was prescribed Tonoferon syrup and an iron-rich diet to address microcytic hypochromic anaemia. Overall, this article provides valuable insights into the diagnosis and management of CH, a rare but potentially serious birth defect. Early detection and diagnosis, followed by appropriate treatment, can help improve outcomes for affected children. The case report presented in the article also highlights the importance of careful evaluation and individualized treatment planning for each patient.

IV. CONCLUSION:

In conclusion, cystic hygroma is a rare congenital abnormality of the lymphatic system that commonly presents as a sac-like structures mostly in the head and neck area of infants. Radiographic imaging is crucial for the diagnosis and planning of care, and surgical excision is the best form of therapy for these cyst's. The case report presented a successful excision of an 18-month-old male child's CH, and the patient was stable at the time of discharge after hemostasis was achieved.

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