

A case of cystic hygroma of the chest

This report describes the case of a male infant who presented with a mass on the chest wall. The mass was soft, non-tender and transilluminating. An ultrasound scan revealed a multiseptate, thin-walled cystic mass, consistent with a diagnosis of cystic hygroma.

Raj Lodh

MChB, BMedSci
ST8 Paediatric Neurodisability, Great North Children's Hospital, Newcastle upon Tyne
r.lodh@ncl.ac.uk

Nakul Gupta

MChB
ST6 Paediatrics, Addenbrooke's Hospital, Cambridge

A baby of 37 weeks' gestation was born by normal delivery to a primigravida mother with no significant medical history. The antenatal screening had revealed no abnormalities. On delivery he was noted to have a cystic mass on the left lateral chest wall measuring 9x9x6cm (FIGURE 1). The mass was noted to be soft, non-tender and transilluminating (FIGURE 2). There was no bruit heard on auscultation. The rest of the physical examination was normal. Ultrasound showed a multiseptate, thin-walled cystic mass, consistent with a diagnosis of cystic hygroma. Chromosomal karyotyping revealed a normal 46XY appearance.

The child went on to have uncomplicated surgical removal of the mass at one year of age.

Discussion

Cystic hygromas (also known as cystic lymphangiomas) are benign, painless loculated lymphatic proliferations, which occur due to lack of development of the



FIGURE 2 Transillumination can help to differentiate cystic hygromas from other types of solid mass.

normal connections between venous and lymphatic drainage¹. The Greek word hygroma means 'moist tumour'. The majority are congenital, being evident at birth (50-65%) or within the first two years of life (90%)², however rare adult-onset cases have been described in the literature³.

The incidence of congenital cystic hygroma is said to be 1/6000 live births⁴. Hygromas diagnosed on antenatal scan have historically been associated with poorer prognosis (usually due to development of hydrops), although a recent study suggested that up 42% of these may resolve spontaneously by birth⁵. A significant proportion of patients will have a chromosomal disorder, with up to 60% having a diagnosis of Turner syndrome⁶.

Cystic hygromas may theoretically develop at any site during embryonic lymphatic development, however the most common sites include the posterior neck (75%) and axilla (20%)⁷. Less frequently reported areas include the mediastinum, retroperitoneum, abdominal viscera, groin, bones and scrotum⁷.

Complications of cystic hygromas include bleeding into the cyst, infections (usually due to seeding from respiratory or other infections) and abscess formation. In these situations, transillumination may be lost and the hygroma will become tense



FIGURE 1 A cystic mass on the left lateral chest wall.

Keywords

cystic hygroma; cystic lymphangioma; dysmorphism

Key points

Lodh R., Gupta N. A case of cystic hygroma of the chest. *Infant* 2013; 9(4): 130-31.

1. Cystic hygroma is a relatively benign condition that can cause considerable anxiety to parents and professionals, especially where antenatal scans have been reported as normal.
2. Examination and ultrasound findings are characteristic and should lead to a prompt diagnosis and appropriate management.
3. Thought should be given to a possible underlying chromosomal disorder and any potential complications that may arise due to the site and size of the mass.

and often tender⁸. Mechanical obstruction of the airway and dysphagia may occur for those sited in the neck^{4,8}.

Surgical excision remains the mainstay of treatment for cystic hygromas. Surgery is electively conducted (with CT scan or MRI), except if life-threatening complications are present. It is not without risk as nerves, arteries, veins and pleura (depending on site) are often found in close proximity. Recurrences can occur despite presumed total excision. Alternatives to surgery include injecting sclerosing agents, such as bleomycin, directly into the mass and the use of laser therapy^{9,10}.

References

1. Kane K.S., Ryder J., Johnson R. et al. *Colour Atlas and Synopsis of Paediatric Dermatology*. 1st ed. McGraw-Hill Professional;2002.p212.
2. McIntosh N., Helms P.J., Smyth R.L. *Forfar and Arneil's Textbook of Paediatrics*. 6th ed. Churchill Livingstone; 2003.
3. Sherman B.E., Kendall K. A unique case of the rapid onset of a large cystic hygroma in the adult. *Am J Otolaryngol* 2001;22:206-10.
4. Sannoh S., Quezada E., Merer D. et al. Cystic hygroma and potential airway obstruction in a newborn: a case report and review of the literature. *Cases J* 2009;2:48.
5. Budd J.L., Craft E., Draper E.S. Outcomes following prenatal diagnosis of cystic hygroma: East Midlands & South Yorkshire Congenital Anomalies Register

- (EMSYCAR) 2000-2009. *Arch Dis Child Fetal Neonatal Ed* 2011;96:Fa73-Fa74.
6. Alpmann A., Cogulu O., Akgul M. et al. Prenatally diagnosed Turner syndrome and cystic hygroma: incidence and reasons for referrals. *Fetal Diagn Ther* 2008;25:58-61.
7. Singh S., Baboo M.L., Pathak L.C. Cystic lymphangioma in children: report of 32 cases including lesions at rare sites. *Surgery* 1971;69:947-51.
8. Mirza B., Ijaz L., Saleem M. et al. Cystic hygroma: an overview. *J Cutan Aesthet Surg* 2010;3:139-44.
9. Manikoth P., Mangalore G.P., Megha V. Axillary cystic hygroma. *J Postgrad Med* 2004;50:215-16.
10. Bozkaca S., Uğar D., Karaca I. et al. The treatment of lymphangioma in the buccal mucosa by radio-frequency ablation: a case report. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2006;102: 28-31.

Check out the *Infant* website at www.infantgrapevine.co.uk

For all the latest jobs, conferences and articles

Full text of all the **articles** published in *Infant* during 2005-2010 is accessible free-of-charge on the website. For more recent articles, abstracts are freely available and access to the full text can be purchased online.

You'll find a comprehensive listing of neonatal and paediatric **conferences** on the website. If you've got a conference or study day to publicise you can add brief details online free-of-charge. Email us the details at journal@infantgrapevine.co.uk as well for them to be included in the printed version – space permitting.

Search our **jobs** page for up-to-date advertisements of neonatal and paediatric vacancies and sign up for a free copy of *Grapevine* to be sent to you every two months. Email tricia@infantgrapevine.co.uk with your address and contact details.

**Finally – your feedback is always welcome.
Email us on journal@infantgrapevine.co.uk**

