

CASE REPORT

A case of neonatal stridor

V Abdullah, S K Ng, S N Chow, F T Yau, C A van Hasselt

Arch Dis Child Fetal Neonatal Ed 2002;**87**:F224–F225

A case is reported of a retropharyngeal abscess in a neonate who presented with increasing stridor since birth. Group B streptococcus was cultured from the abscess contents and the maternal birth tract.

A 13 day old baby girl presented with severe inspiratory stridor and respiratory distress. She was the first child of the family born spontaneously with a birth weight of 3290 g. The antenatal history was uneventful. There was no premature rupture of the membranes and the liquor was clear. The baby received no airway instrumentation other than routine nasal suction with a plastic catheter immediately after delivery. Noisy breathing was present from day 2 of life. On day 5, the noise increased and sucking in of the chest was noticed. The condition then further deteriorated, and she was admitted to hospital on day 13. She was tachypnoeic (respiratory rate of 60/min) and stridorous with severe subcostal recession. Pulse oximetry measured 88–92% at 3 litres/min oxygen through the nasal cannula. She had no fever and her heart rate was 200/minute. Her white cell count was $27.8 \times 10^9/l$ (neutrophils 48.2%), blood gases were pH 7.36, $P_{aO_2} = 4.81$ kPa, $P_{aCO_2} = 10.40$ kPa, $HCO_3^- = 39.9$ mmol/l. Intravenous fluid was given, and antibiotics, including ampicillin, netilmycin, and metronidazole, were started after blood cultures had been taken. The chest radiograph was clear, but the lateral neck radiograph showed an air pocket superimposed on the laryngeal inlet, with loss of cervical lordosis. The retropharyngeal soft tissue shadow was normal.

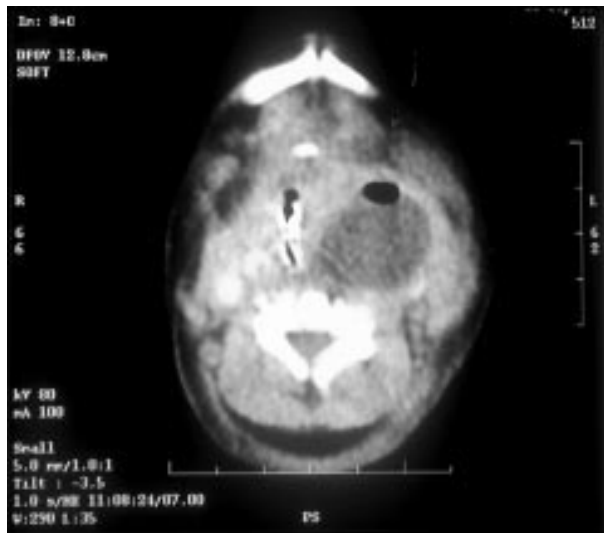


Figure 1 Computed tomographic scan of the neck showing a left sided retropharyngeal abscess with a typical air bubble anteriorly with the baby supine.

A laryngotracheobronchoscopy was performed under general anaesthesia; a left sided retropharyngeal bulge was found. The larynx, trachea, and main bronchi were normal. The child was intubated at the same session. A computed tomographic (CT) scan was then performed, which showed a 3 cm diameter abscess with rim enhancement and a typical air bubble anteriorly with the baby supine (fig 1).

The abscess was drained transorally. Copious pus was aspirated and group B streptococcus (GBS) was cultured. The baby was started on a 14 day course of antibiotics, and she made an uneventful recovery. The mother's high vaginal swab was taken for culture, which also grew GBS.

DISCUSSION

Retropharyngeal abscesses commonly present in infants and young children. In the series of Coulthard and Isaacs,¹ neonates only accounted for 10% of the cases. The dangers of a retropharyngeal abscess are airway obstruction and spread of infection to involve the carotid sheath and/or the mediastinum. Prompt treatment is therefore indicated. The airway, if compromised, should be secured before other diagnostic procedures; this is especially important in neonates. Oral intubation should be carried out with great caution to avoid rupturing the abscess, which could result in aspiration of its contents with fatal consequences. Parenteral antibiotics covering both aerobic and anaerobic flora of the upper aerodigestive tract should be prescribed. A CT scan is mandatory to establish the diagnosis and rule out other rare congenital retropharyngeal masses, such as cystic hygroma, haemangioma, and retropharyngeal goitre.² These exclusions are essential in a neonate because they may not, as illustrated by this case, present with typical signs of sepsis. A CT scan is also useful in delineating the extent of the disease, which helps in planning surgical approaches. A retropharyngeal abscess with a cavity medial to the great vessels is best drained transorally,^{3,4} whereas those abscesses that extend laterally to the parapharyngeal space should be approached by a lateral cervical incision with the placement of surgical drains.⁵

This is the first report of GBS infection presenting as neonatal stridor as a result of a retropharyngeal abscess. In addition to the well described early and late onset GBS infection, it seems possible for the organism to localise in the retropharyngeal space. The maternal genitourinary tract is the usual location of the organism, which was probably the source of the early infection in this child. We can only speculate on how the organism becomes inoculated and localised in the retropharyngeal space. Universal antenatal screening for GBS is not practised in Hong Kong. Most gynaecologists would screen for GBS in women who are symptomatic, and give antibiotics accordingly. Intrapartum chemoprophylaxis is definitely indicated for subsequent deliveries in this mother. GBS infection is one of the most common causes of neonatal sepsis, and it has presented uniquely in this case as a retropharyngeal abscess.

Authors' affiliations

V Abdullah, S K Ng, Department of ENT, Alice Ho Miu Ling Nethersole Hospital, Hong Kong

S N Chow, F T Yau, Department of Pediatrics, Alice Ho Miu Ling Nethersole Hospital

C A van Hasselt, Division of Otolaryngology, Department of Surgery, Prince of Wales Hospital, The Chinese University of Hong Kong, Hong Kong

Correspondence to: Professor van Hasselt, Division of Otolaryngology, Department of Surgery, Prince of Wales Hospital, The Chinese University of Hong Kong, Hong Kong; andrewvan@cuhk.edu.hk

Accepted 28 May 2002

REFERENCES

- 1 **Coulthard M**, Issacs D. Retropharyngeal abscess. *Arch Dis Child* 1991;**66**:1227-30.
- 2 **Strife JL**, Emery KH. Imaging of airway obstruction in infants and children. In: Myers CM, Cotton RT, Shott SR, eds. *The pediatric airway. An interdisciplinary approach*. Philadelphia: JB Lippincott Company, 1995:53-6.
- 3 **Ungkanont K**, Yellon RF, Weissman JL, et al. Head and neck space infections in infants and children. *Otolaryngol Head Neck Surg* 1995;**112**:375-82.
- 4 **Choi SS**, Vezina LG, Grundfast KM. Relative incidence and alternative approaches for surgical drainage of different types of deep neck abscesses in children. *Arch Otolaryngol Head Neck Surg* 1997;**123**:1271-5.
- 5 **Duncan**, III NO, Sprecher RC. Infections of the airway. In: Cummings CW, Fredrickson JM, Harker LA, et al, eds. *Otolaryngology: head & neck surgery: volume 5 pediatric otolaryngology*. Chicago: Mosby, 1998:388-400.



Want to know more?

Data supplements

Limited space in printed journals means that interesting data and other material are often edited out of articles; however, limitless cyberspace means that we can include this information online.

Look out for additional tables, references, illustrations.

www.archdischild.com



A case of neonatal stridor

V Abdullah, S K Ng, S N Chow, et al.

Arch Dis Child Fetal Neonatal Ed 2002 87: F224-F225
doi: 10.1136/fn.87.3.F224

Updated information and services can be found at:
<http://fn.bmj.com/content/87/3/F224.full.html>

These include:

References

This article cites 3 articles, 3 of which can be accessed free at:
<http://fn.bmj.com/content/87/3/F224.full.html#ref-list-1>

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections

Articles on similar topics can be found in the following collections
[Ear, nose and throat/otolaryngology](#) (34 articles)

Notes

To request permissions go to:
<http://group.bmj.com/group/rights-licensing/permissions>

To order reprints go to:
<http://journals.bmj.com/cgi/reprintform>

To subscribe to BMJ go to:
<http://group.bmj.com/subscribe/>