



EVERY STRIDOR IN INFANCY IS NOT LARYNGOMALACIA

Dr Nusrat Rahim Inamdar*	Assistant Professor (Paediatric Department) at HBTMC & DR R N Cooper Hospital. Mumbai *Corresponding Author
Dr Kannupriya	Secondary DNB Student (Paediatric Department) at HBTMC & DR R N Cooper Hospital. Mumbai
Dr Anupama Mauskar	Head & Professor. (Paediatric Department) at HBTMC & DR R N Cooper Hospital. Mumbai

ABSTRACT Stridor in infancy is not uncommon and it has varied etiologies. Laryngomalacia is the common diagnosis for stridor in infancy. Here we describe a case of neonate who presented with stridor and difficulty in breathing. Initially symptoms were attributed to viral infection with laryngomalacia but over a period of 3 weeks baby showed signs of septicemia in the form of fever, irritability, poor feeding, respiratory distress, decreased neck movement on one side & neck swelling lastly. These alarming signs and further investigations lead to diagnosis of retropharyngeal abscess. Baby was managed with surgical drainage and antibiotics. She was discharged without any complications. Incidence of retropharyngeal abscesses in children is decreasing due to availability and usage of broad spectrum antibiotics in recent years. It's a life-threatening emergency condition because, it can result in airway compromise or posterior mediastinitis, thus making timely diagnosis very important. This case is unique because of atypical age of presentation (first case), occurring in exclusive breast feed newborn with no preexisting cause i.e. immunodeficiency/ local trauma.

KEYWORDS : Stridor, Neonate, Retropharyngeal abscess

INTRODUCTION:

Retropharyngeal abscess occurs most commonly in younger children of 3-4 years of age. As the retropharyngeal nodes involute after 5 years of age, infection in older children and adults is much less common (1). Infection of the nodes usually occurs as a result of extension from a localized infection of the oropharynx or sometimes results from penetrating trauma to the oropharynx, dental infection and vertebral osteomyelitis. As the retropharyngeal space communicates with the para-pharyngeal space and the posterior mediastinum, any infection within the retropharyngeal space can spread to these areas (2). Infection of retropharyngeal spaces can result in airway compromise or posterior mediastinitis, making timely diagnosis important.

Here we report a first case of Retropharyngeal abscess in a neonate presenting with Stridor and breathing difficulties. This case is unique because of atypical age of presentation, occurring in exclusive breast feed newborn with no preexisting cause i.e. immunodeficiency/ local trauma.

CASE DETAILS

27 days old Female baby was admitted with complaints of noisy breathing and increased respiratory activity for 2 days. There was no history of fever/ ear discharge/ swallowing difficulties/ trauma at birth or later. She was born full term by normal vaginal delivery, was on exclusive breast feeds, birth weight being 2.7 kg. Baby had received all birth vaccines.

On examination baby was alert but irritable, eutermic with weight on admission being 3.7 kg. She had inspiratory stridor, tachypnea and tachycardia. Blood pressure was normal and peripheral pulses were well felt. Baby had suprasternal, Subcostal and intercostal retractions. On auscultation, bilateral air entry was reduced with bilateral wheezing/crepitations present. A clinical diagnosis of bronchiolitis with laryngomalacia was made.

Saturation on room air was 85%, which increased to 94% on oxygen administration with nasal prongs. Further investigations including full blood count and tests for BUN, serum creatinine, electrolytes, C-reactive protein and chest X-ray, all were normal.

Child was managed with antibiotics, oxygen and nebulization. She improved within 7 days. As baby was accepting breast feeds well, maintaining saturation on room air and had no respiratory distress, she

was discharged on full oral feeds with diagnosis of Bronchiolitis with laryngomalacia. Though stridor was still present at time of discharge, but it was not associated with feeding or breathing difficulties. Five days later she again presented with fever and difficulty in breathing for 1 day. During this admission baby was febrile and sick looking. Baby had inspiratory stridor, which had increased compared to previous admission. There was tachycardia, tachypnea with suprasternal and subcostal retractions but blood pressure was normal and peripheral pulses were well felt.

Saturation on room air was 82%, which increased to 95% on Continuous Positive Airway Pressure (CPAP). Baby was admitted in Pediatric Intensive Care Unit.

Full blood count showed raised white blood count with polymorpho-leukocytosis and C-reactive protein was positive in sepsis screen. Blood culture was sent. After initial blood sampling intravenous antibiotic was started.

On day two of admission, she also developed a swelling in right supraclavicular region of neck that was 2*3 cm in dimension, fluctuant, non mobile, non translucent, non tender with no signs of inflammation. The size of swelling did not change with respiration. Baby's head was slightly tilted to left side, though passive neck movement to right side was possible.

X-ray of the neck and chest showed enlarged retropharyngeal and posterior tracheal spaces with haziness in right upper zone of lung (Figure 1), while ultrasonography of the swelling, suggested fluid collection in supraclavicular area. USG guided diagnostic aspiration of swelling showed pus, approximately 15 ml of pus was aspirated. Urgent High Resolution CT scan of the neck done suggestive 13*46*56 mm thick walled multiseptate retropharyngeal abscess, predominantly on right side & causing mass effect and narrowing of hypopharynx. (Fig.2, 3). Her antibiotics were upgraded to Vancomycin and Piperacillin+Tazobactam.



Fig.1 X-ray Neck Lateral View Showing increased increased retropharyngeal space

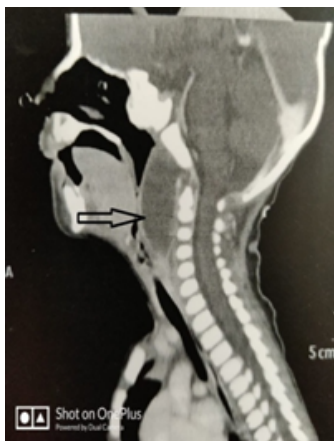


Fig 2. CT scan Saggital section showing retropharyngeal abscess with significant luminal narrowing of supraglottis /hypopharynx



FIG 3. CT scan Coronal section showing abscess extension on right Side into parapharyngeal abscess.

Emergency incision and drainage of retropharyngeal abscess was done via oro-pharyngeal route, by ENT surgeons under general anesthesia, 25 ml of pus was drained. We observed that post surgery suprasternal and subcostal retractions disappeared.

Pus culture suggestive of staphylococcus aureus infection, with sensitivity to ceftriaxone, cloxacillin and vancomycin.

Over next 72 hours her neck movements gradually improved, stridor disappeared completely after 7days.

After 2weeks, repeat CT scan showed resolution of abscess along with clinical improvement, so baby was discharged on breast feed.

DISCUSSION

We describe an unusual case in which retropharyngeal abscess was diagnosed in a new born baby, symptomatic at 27 days of life, with no underlying etiology. To our knowledge, there are no other reported case of retropharyngeal abscess in a neonate. Youngest age reported is 4 months(6).

In most reported cases the presenting symptoms especially in infants was noisy breathing (stridor), reduced oral intake and difficulty breathing(3,5). One case reported had gradually enlarging left sided neck mass, along with fever and breathing difficulty(3). These findings are similar to our case.

Retropharyngeal abscess can present as torticollis in 67% of cases due to spasm of the neck muscles (7). A published report described a rare case of retropharyngeal abscess complicated by torticollis in a 4-yearold girl(8). In our case baby had swelling in right supraclavicular region with head slightly tilted to left side. It can be easily missed in younger kids.

Retropharyngeal abscesses can also severely obstruct the airway; Zafereo and Pereira describe a child who presented with severe obstructive sleep apnea due to oropharyngeal narrowing caused by a retropharyngeal abscess (9). Our patient too showed clinical signs of airway obstruction in the form of stridor and respiratory distress.

When establishing a diagnosis of retropharyngeal abscess, the lateral X-ray neck is helpful, but the CT scan has enormous value as a diagnostic tool that can detect an abscess and help to establish a treatment regimen(10). In our case also CT neck made the correct diagnosis.

The pathology in our case could not be explained as the baby had uneventful birth, adequate weight gain and was exclusive breast fed. In cases reported earlier source of infection were purulent nasal discharge(3) and mastoiditis (4) leading to retropharyngeal abscess. In our case retropharyngeal abscess seems to be the primary infection.

CONCLUSION

Every stridor cannot be laryngomalacia, and reporting diagnosis late can be fatal. Early suspicion and management is of vital importance.

ABBREVIATIONS

CT, computed tomography; ENT, Ear Nose and Throat

CONSENT

Written informed consent was obtained from the parents of the patient for publication of this case report and accompanying images.

COMPETING INTERESTS

The authors declare that they have no competing interests.

ACKNOWLEDGEMENTS

We are thankful to our Dean and Head of the department for permitting to publish our case findings. We wish to thank the patient's parents and family for kindly agreeing to share the clinical information and radiological images. Our thanks also go to the Department of ENT at our Hospital for helping in the surgical management of the baby.

REFERENCES

1. R.M.Kliegman, Nelson Textbook of Pediatrics ; chapter 382 Retropharyngeal abscess ,page 2021-2023; 20/e, 2015.
2. Retropharyngeal abscess [http://www.bhj.org/journal/2001_4303_july01/review_371.htm].
3. Grace AmmoeQuaye, Peter Appiah- Thompson ,Nana Andoh Hanson, Ryan Bjorn Meier, Jonathan LeGrand Curtis , Daniel Cox and Jeremy D. Meier: Paediatric Retropharyngeal Abscess: Case Report With A Ghanaian Experience.
4. JanardhanMydam and PrakashThiagarajan . A nine month old child with retropharyngeal abscess secondary to mastoid abscess presenting as torticollis :a case report : Case Journal 2009 Dec ; 2(1):6460.
5. Lo RenHui ,MazlinaSelamat, Zubaidah Hamid , AzreenZaira , Abu Bakar , and Tristan Hilary Thomas ; Retropharyngeal Abscess in Child – Dilemma in Airway Management. Balasubramanian A, Shah JR, GazaliN ,Rajan P . Life threatening parapharyngeal and Rajan P. Life- threatening parapharyngeal and retropharyngeal abscess in infant. BMJ case reports. 2017 Oct 9 ; 2017 :bcr-2017.
7. Dawes LC, Bova R, Carter P: Retropharyngeal abscess in children. ANZ J Surg 2002, 72:417-420
8. Hasegawa J, Tateda M, Hidaka H, Sagai S, Nakanome A, Katagiri K, Seki M, Katori Y, Kobayashi T: Retropharyngeal abscess complicated with torticollis: case report and review of the literature. Tohoku J Exp Med 2007, 213:99-104.
9. Zafereo ME Jr, Pereira KD: Chronic retropharyngeal abscess presenting as obstructive sleep apnea. Pediatr Emerg Care 2008, 24:382-384.
10. Oh JH, Kim Y, Kim CH: Parapharyngeal abscess: comprehensive management protocol. ORL J Otorhinolaryngol Relat Spec 2007, 69:37-42