

“Huge Retropharyngeal Lipoma causing Dysphagia and Dyspnea in a child - A Case Report.”

Rajlakshmi Yadav¹, Neha Singh¹, Gaurav Agarwal¹, and Subhash Rajput¹

¹RMLIMS

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Abstract- Lipoma is most common mesenchymal benign tumor in the body. Lipoma at retropharyngeal location is rare and clinical presentation in a pediatric age group is even rarer. We are presenting a case of huge retropharyngeal lipoma with mediastinal extension in an 11 year old boy who presented with progressive dysphagia and dyspnea. Diagnosis of lipoma was made on computed tomography, and it was surgically managed with complete resolution of symptoms on post operative follow up.

Key words- Retropharyngeal lipoma, computed tomography, dysphagia, dyspnea, case report.

Introduction- Lipoma is the most common mesenchymal benign tumor in the body and only 15% of them are located in head and neck region(1). Head and neck lipomas are usually located in posterior triangle region and incidence in retropharyngeal region is rare(2). Other masses in this region, especially in paediatric age group are mostly infectious in nature- pyogenic or tuberculous(3). Retropharyngeal lipomas are slow growing benign tumour, which becomes symptomatic after achieving a large size(4). Clinical presentation is usually abnormal sensation in the throat, noisy breathing, hoarseness, dyspnea, dysphagia, obstructive sleep apnoea, excessive day time sleepiness (5). In this report we present a rare case of huge retropharyngeal lipoma with mediastinal extension in an 11 year old boy who presented with progressive dysphagia and dyspnea for last 5 years. Diagnosis was made on computed tomography and disease was managed with complete surgical excision.

Case Presentation- An 11 year old boy with history of progressive dysphagia and dyspnea for 5 years with significant weight loss. Dysphagia was more for solids. Patient used to push the food bolus in mouth with his fingers to ease the deglutition. On general examination, patient was cachexic. Respiratory rate was increased with nasal flaring and retraction of chest wall muscles with breathing. On inspection a bulge was noted in posterior pharyngeal wall with normal overlying mucosa which was seen in approximation with uvula. On chest x ray AP view a homogenous right upper mediastinal radiopacity was present with well defined lateral margin. Both lung fields were unremarkable. On lateral view of chest X ray a cervical soft tissue density with well-defined anterior border was noted anterior to vertebrae(Figure 1). Cross sectional imaging was performed for characterization of cervicothoracic mass. Contrast enhanced CT cervical and thoracic region showed a homogenous fat attenuating retropharyngeal mass measuring 15 x 5 x 3 cm with mediastinal extension with caudo- cranial extent from C1 to D5 vertebral level(Figure 2A). The mass was seen effacing oro-hypopharynx, compressing inlet of larynx and trachea. On axial section of neck, mass was extending to lateral aspect of pharynx and larynx on both sides and displacing bilateral carotid vessels laterally (Figure 2B). The mass was displacing trachea and oesophagus anteriorly and upper mediastinal vessels laterally (Figure 2C). Diagnosis of lipoma was made. There was no evidence of enhancing soft tissue component within mass or invasion of adjacent organs, suggestive of its benign nature.

Under general anaesthesia complete surgical excision of mass was done through lateral cervical approach. A vertical incision done on left side of neck, skin was retracted and lipoma was exposed. The mass was separated from surrounding tissue like carotid vessels, internal jugular veins, thyroid, trachea and oesophagus. Mass

was resected intact and wound was closed with sutures. Macroscopically it was yellowish with shiny surface and encapsulated appearance (Figure 3). Microscopically tumour composed of mature adipocytes, typical of lipoma with no evidence of malignant changes. Patient's dyspnea was alleviated on same day. Post operative course was unremarkable and patient was discharged on fourth post operative day. On 2 months follow up, patients' symptoms were completely alleviated. CT scan was performed to confirm complete removal of mass, which revealed no residual lesion at follow up scan. On 6 months follow up, patient had no complain of dysphagia/dyspnea to suggest recurrence and patient started to regain weight.

Discussion- The retropharyngeal space is an anatomical region that spans from the base of the skull to the mediastinum. Its location is anterior to the prevertebral muscles and posterior to the pharynx and oesophagus. It is bounded anteriorly by the buccopharyngeal fascia, laterally by the carotid sheath, and posteriorly by the prevertebral fascia(6). Cerebral palsy, acquired/traumatic brain injury, neuromuscular disorders, craniofacial malformations and airway malformations are various causes of dysphagia in paediatric age group(7). Retropharyngeal tumours are rare cause of dysphagia. Common causes of retropharyngeal mass in paediatric group are infective (abscess, oedema, lymphadenopathy). Other causes are lymphoma and to a lesser extent hematoma(3).

Haddad et al reported a case of retropharyngeal lipoma in 2005 and they collected total 52 cases of retropharyngeal lipoma after review of worldwide literature till date(3). After an extensive search of worldwide literature, we could find additional 26 case reports including our case. Total 78 cases of retropharyngeal lipoma are reported till date including our case and out of these only 9 cases were reported previously in paediatric age group. Our case is likely to be 10th case report of retropharyngeal lipoma in paediatric age group. A huge retropharyngeal lipoma in paediatric age group was previously reported in a single case report by Kurilin, with tumour size 14 cm(8). Our case is second case report of huge retropharyngeal lipoma in paediatric age group with tumour size 15 cm. This benign tumour at retropharyngeal location can be potentially life threatening due to severe compression on aerodigestive tract(3). Diagnosis is usually made on imaging, either computed tomography or magnetic resonance imaging. Role of imaging is also in evaluation of extent of tumour and in differentiation from liposarcoma.

Transoral approach is preferred surgical approach for retropharyngeal lipoma due to its less post operative morbidity and lack of scar(1), however lateral cervical approach should be considered in large tumours extending in mediastinum.

Conclusion - Lipoma at retropharyngeal location is rare, and It should be suspected if clinical presentation is slowly progressive dysphagia and dyspnea with a bulge in posterior pharyngeal wall on oral examination. Diagnosis is based on imaging and complete surgical excision is treatment of choice.

Abbreviation-

CT- Computed tomography

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References-

1. Aydin U, Karakoc O, Binar M, Arslan F, Gerek M. Intraoral excision of a huge retropharyngeal lipoma causing dysphagia and obstructive sleep apnea. *Braz J Otorhinolaryngol Engl Ed*. 2020 Dec 1;86:8–10.
2. Gong W, Wang E, Zhang B, Da J. A retropharyngeal lipoma causing obstructive sleep apnea in a child. *J Clin Sleep Med JCSM Off Publ Am Acad Sleep Med*. 2006 Jul 15;2(3):328–9.
3. Haddad FS, Zaytoun G, Haddad FF. Retropharyngeal Lipoma, A Benign Yet Potentially Lethal Condition: Case Presentation and Review of the Literature. *Neurosurg Q*. 2005 Sep;15(3):145–54.
4. Ghammam M, Houas J, Bellakhdher M, Abdelkefi M. A huge retropharyngeal lipoma: a rare cause of dysphagia: a case report and literature review. *Pan Afr Med J*. 2019 May 7;33:12.

5. Namysłowski G, Ścierański W, Misiołek M, Urbaniec N, Lange D. Huge retropharyngeal lipoma causing obstructive sleep apnea: a case report. *Eur Arch Oto-Rhino-Laryngol Head Neck*. 2006;
6. Mnatsakanian A, Minutello K, Bordoni B. Anatomy, Head and Neck, Retropharyngeal Space. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2022 [cited 2022 Feb 4]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK537044/>
7. Dodrill P, Gosa MM. Pediatric Dysphagia: Physiology, Assessment, and Management. *Ann Nutr Metab*. 2015;66(Suppl. 5):24–31.
8. Kurilin OV. [Retropharyngeal lipoma]. *Zhurnal Ushnykh Nos Gorl Bolezn J Otol Rhinol Laryngol Sic*. 1976 Feb;(1):111–3.

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