Torticollis is a pathological clinical sign that includes involuntary flexion of the neck to the affected side and rotation to the opposite direction, resulting in the ear tilting toward the shoulder and the chin turning in the opposite direction. There is a wide spectrum of underlying causes either congenital or acquired pathologies.

Torticollis, most often of muscular origin and congenital, is caused by the fibrous scar formation in the sternocleidomastoid muscle due to the abnormal intrauterine foetus position, birth trauma, or cervical spine abnormalities. Otherwise, the acquired torticollis has a multiplicity of possible causes. Torticollis may result from any disturbance of the muscles or bones of the skull and cervical spine, any abnormalities in the brain or spinal cord areas related to head and neck posture, or any ocular disturbance producing diplopia. In addition, psychiatric and pharmacologic causes of torticollis exist.

Hence, the non-muscular torticollis necessitates a multidisciplinary approach to establish the diagnosis, which may present as similar symptom as in retropharyngeal abscess (RPA) [1].

**Case Report**

A 5-year-old boy, with no known medical illness completed the vaccination as scheduled, presented with sudden onset of stiffening and rotated neck upon waking up from sleep preceded by sore throat, odynophagia and fever for 3 days. Otherwise, no history of neck trauma, fall, foreign body ingestion or shortness of breath. Clinically there was no stridor and vital signs were stable.

Neck examination revealed an extended and left rotated neck as well as flexion of the head (Figure 1). Oropharyngeal examination revealed upward bulging at left posterolateral posterior pharyngeal wall at level just below the oropharyngeal isthmus. Lateral neck radiograph showed prevertebral widening at level C6-C7.

**Keywords:** Torticollis, retropharyngeal abscess, incision and drainage, respiratory distress

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**Abstract**

Torticollis is a clinical manifestation of musculoskeletal pathologies and it is often underestimated as the first symptom of an infection of the retropharyngeal space. It accounts for about one-fourth of retropharyngeal abscess (RPA) presentations in children. Early imaging studies may help to get the diagnosis of RPA and to offer prompt surgical intervention to avoid complications such as upper airway obstruction. Thus, torticollis should not be only treated symptomatically without the exclusion of serious retropharyngeal abscess because a delay in the definitive diagnosis and implementation of adequate therapy may be fatal.
Table 1. Blood parameters with raised total white blood cells.

<table>
<thead>
<tr>
<th>Hemoglobin</th>
<th>White blood cells</th>
<th>Platelet</th>
<th>C-reactive protein</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.6g/dL</td>
<td>21.7 x 10^7</td>
<td>280 x 10^7</td>
<td>40mg/dL</td>
</tr>
<tr>
<td></td>
<td>Predominantly neutrophils</td>
<td>73%</td>
<td></td>
</tr>
</tbody>
</table>

The patient was started on intravenous cefuroxime and metronidazole. Intraoral incision and drainage successfully drained out 5 cc of thick pus (Figure 3) and the sample was sent for culture. The growth was *Streptococcus pyogenes*. The patient was kept intubated and nursed in Paediatric Intensive Care Unit (PICU) for one day with nasogastric tube feeding until day 5 post-operative. Repeated FNPLS showed slough and healed incision site. On Day 7, the patient regained a normal oral diet, the torticollis resolved markedly and discharged well with an oral antibiotic for another 1 week. Upon follow-up after 6 weeks, torticollis completely resolved with a repeat lateral neck radiograph showing normal findings.

Discussion
Torticollis was originally derived from the Latin words ‘tortus’ meaning twisted and ‘collum’ meaning neck [2]. It has various aetiology either congenital or acquired type which can be benign or serious causes such as airway obstruction. A report showed 20-40% of RPA in children presented with limitation of neck movement followed by other symptoms such as sore throat, fever, neck mass, or respiratory distress [3].
We present a rare case of torticollis secondary to RPA. Although the incidence is quite uncommon, a clinician needs to be alerted that one of the causes of torticollis is RPA. It occurs due to the accumulation of pus in the retropharyngeal region leading to spasms and contraction of the sternocleidomastoid muscle. Any torticollis that is preceded by fever or upper respiratory tract infection should be suspected of an infective cause like RPA.

Retropharyngeal space (RPS) is a deep neck space consisting of loose connective tissue between the buccopharyngeal and prevertebral fascia. The RPS is divided by the alar prevertebral fascia divided into two parts called the “true” RPS anteriorly whereas the posterior part is called the “danger space”. The RPS extends from the base of the skull to between the T1-T6 vertebrae whereas the “danger space” courses more inferiorly into the posterior mediastinum until the level of the diaphragm [4].

Inflammatory torticollis is generally caused by infection of lymph nodes due to external injuries or colds, but the cause remains unclear in many cases. Infection of retropharyngeal nodes in children causing lymphadenitis which are not cured by antibiotic may progress to abscess leading to RPA [5].

The common microorganism involved in RPA were β-lactamase-producing bacteria. The predominant bacteria were Streptococcus pyogenes, Staphylococcus aureus, Klebsiella pneumoniae and Hemophilus influenza. In our case, the combination of antibiotics of cefuroxime and metronidazole were used; as the new generation of cephalosporin being the main choice nowadays. The intraoperative culture was suggestive of Streptococcus pyogenes. The sensitivity recommended the choice of antibiotic should be cefuroxime, gentamicin and penicillin to cover the infection. [6]

Therefore, RPA should be considered as one of the possible underlying causes of acute torticollis in children. Despite the relevant history and thorough head-neck examination, lateral neck radiograph is helpful in showing prevertebral widening which is suggestive of RPA. CT scan with contrast is the best to detect the site and extension of abscess in RPA prior to surgical intervention, distinguish between drainable abscess or cellulitis, identify complications and also monitor infection progression[7].

Conclusion
Early diagnosis and prompt intervention can reduce morbidity and mortality such as PICU referral as impending airway could compromise. Any attempt of intubation is challenging and liaison with paediatric and anaesthetist team preferably in an operation theatre under control setting prior to surgical intervention is the best option. Surgical drainage of RPA can be via intraoral or external approach with or without tracheostomy. Postoperatively, the patient should be monitored in PICU for the continuation of intravenous antibiotics and close monitoring. Patients may require a repeat CT scan to look for the progress of the disease.

References