Acute torticollis is commonly seen in the pediatric emergency department. The majority of the cases is of spasmodic etiology, as a consequence of a minor trauma and resolves with conservative treatment. But in case of persistent torticollis other causes should be excluded.

Etiologies of acquired torticollis in children

**Musculooskeletal**

- Traumatic
  - Spasmodic torticollis
  - Atlantoaxial subluxation
- Infectious
  - Spondylodiscitis
  - Osteomyelitis
- Inflammatory
  - Juvenile idiopathic arthritis
- Tumoral
  - Bone tumors of cervical spine

**Non-Musculooskeletal**

- Nervous system tumors
  - Posterior fossa tumors
  - Cerebral spinal cord tumors
- Neurological
  - Parasitic benign tumors
  - Cerebral dysplasia
  - Pseudo-tumor cerebri
- Ocular
  - Trichiasis nerve palsy
  - Myasthenia
- Otolaryngological
  - Grisel's syndrome
  - Retropalatine abscess
- Gastroenterological
  - Sandifer's syndrome
  - Lamine's syndrome
  - Upper lobe pneumonia
- Infectious

Case Reports

**Case 1**

An 8 year old boy presented with sudden neck pain and restricted movement. Initial clinical examination including neurological examination was normal, being interpreted as spasmodic torticollis. He returned 9 days later, for persisting symptoms and visual impairment. He had an abnormal neck posture, mydriatic pupils with hippus and papilledema. Cervical spine radiographs were normal. Neuroimaging studies revealed triventricular hydrocephalus and a posterior fossa tumor, with cerebellum origin (fig 1).

**Case 2**

A 3 year old boy presented with fever, occipital headache and restricted neck movement for 4 days. One week before he had tonsillitis. A hyperemic oropharynx was noticed. Empirical antibiotic therapy was initiated. He returned 36 hours later being unable to extend his head. Oropharyngeal examination displayed a posterior pharyngeal wall bulge. Cervical spine radiograph showed an increased prevertebral soft tissue shadow and CT confirmed the diagnosis of retropharyngeal abscess (fig 2).

**Case 3**

An 8 year old girl presented with insidious neck pain, associated with head tilt to the left side and chin deviation to the right (fig 3). She returned after three weeks of nonsteroidal anti-inflammatory and muscle relaxants treatment without clinical improvement. CT revealed an atlantoaxial rotatory displacement (fig 4). A proximal interphalangeal joint arthritis raised the diagnosis of juvenile idiopathic arthritis, confirmed by laboratory tests.

Discussion

A persistent torticollis requires a thorough and methodical workup, because of its broad spectrum of possible diagnosis with some being severe and life threatening, such as posterior fossa tumors.

If a persistent torticollis is accompanied by vomiting or neurological abnormalities a computerized tomography or a magnetic resonance imaging should be performed to exclude nervous system tumors.

A stiff neck with fever suggests an infectious or inflammatory cause. Head, neck, ear or throat infection should be excluded. A careful physical examination should be accomplished, checking for cervical adenopathies, tender points on cervical spine and proceeding to otoscopy and observation of the oropharynx. CT scanning may be performed to determine the presence of a retropharyngeal abscess. If spondylodiscitis is suspected a magnetic resonance may be necessary.

Torticollis is a rare presentation of juvenile idiopathic arthritis. Concomitant atlantoaxial subluxation is common but usually with no neurological repercussions.

Bibliographic references