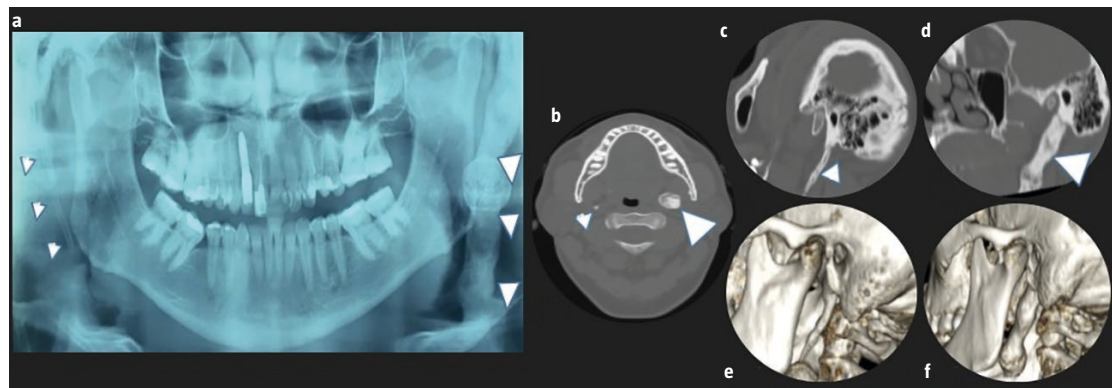


## Giant Eagle syndrome with pseudoarthrosis and peripheral facial palsy

Leonardo Furtado-Freitas, Isabela Alves, Lívia Dourado-Yoshioka-Toldo, Otávio A. Curioni, Fabiana Amaral-Carlotti, Silvio Fontana-Velludo, Márcio L. Duarte

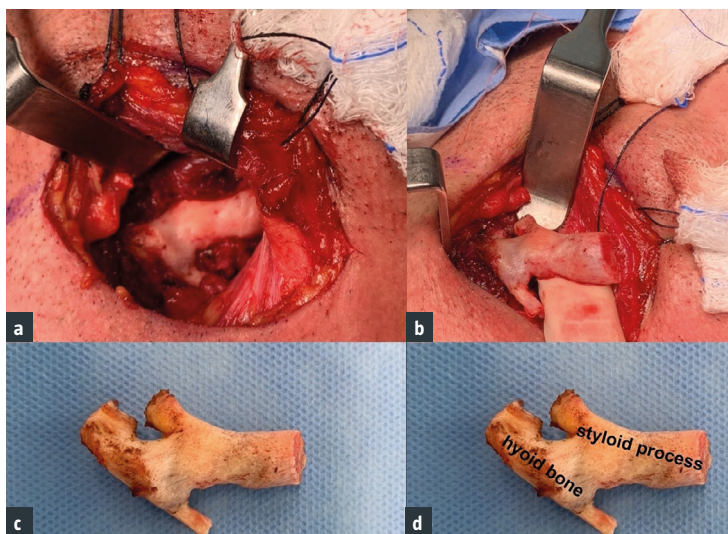


**Figure 1.** Panoramic pain radiograph showing enlarged styloid processes (arrowheads), with coarse appearance and pseudoarthrosis on the left (a). Computed tomography in axial (b) and oblique sagittal planes (c and d) and 3D volume rendering reconstructions (e and f). Enlarged styloid processes (arrowheads), with coarse appearance and pseudoarthrosis on the left.

A 55-year-old man presenting with headache, difficulty to opening the mouth and pain on palpation of the left masseter muscle for six months, and left peripheral facial palsy in the last month. Radiography and computed tomography (Fig. 1) showed enlarged styloid processes, compatible with Eagle's syndrome. After excision of the left styloid process (Fig. 2) the patient was cured.

Eagle syndrome represents a constellation of symptoms, primarily facial pain, believed to be related to a prolongation of the styloid process or calcification of the stylohyoid and stylo-mandibular ligament [1,2]. It is a rare entity that is not commonly suspected in clinical practice [3]. The reported incidence of an elongated styloid process, defined as greater than 25 mm, ranges from 1-7% of the population, but only 4-7% of these patients experience related symptoms [1,4].

Patients with Eagle syndrome may present with sore throat, ear pain, or



**Figure 2.** Demonstration of enlarged left styloid processes excision.

even a foreign body sensation in the pharynx secondary to interactions of the pharyngeal and cervical nerves [3]. A medial minor deviation of the

styloid process can lead to symptoms of severe atypical facial pain [3]. The syndrome is usually seen in patients after pharyngeal trauma or tonsillectomy.

Division of Neuroradiology, Department of Radiology, McGill University, Montreal, Canada (L. Furtado-Freitas). Department of Radiology. (I. Alves, S. Fontana-Velludo). Head and Neck Surgery Department. Prevent Senior. UNIFESP. São Paulo (L. Dourado-Yoshioka-Toldo, O.A. Curioni, F. Amaral-Carlotti). Department of Radiology, UNAERP. Campus Guarujá. Gurujá, São Paulo, Brazil (M.L. Duarte).

#### Correspondence:

Dr. Márcio Luís Duarte.  
Departamento de Radiologia.  
Universidade de Ribeirão Preto (UNAERP) – Campus Guarujá.  
Av. D. Pedro I, 3.300. Enseada,  
Guarujá-SP, Brasil. Endereço  
postal: 11440-003.

#### E-mail:

marcioluisduarte@gmail.com

#### ORCID:

0000-0001-6944-4978 (L.F.F.).  
0000-0001-6324-5441 (I.A.).  
0000-0002-0324-4225 (L.D.Y.T.).  
0000-0002-2674-4441 (O.A.C.).  
0000-0002-1433-0655 (F.A.C.).  
0000-0003-0695-1088 (S.F.V.).  
0000-0002-7874-9332 (M.L.D.).

#### Accepted:

15.09.23.

#### Conflict of interest:

There is no conflict of interest to declare.

#### How to cite this article:

Furtado-Freitas L, Alves I, Dourado-Yoshioka-Toldo L, Curioni OA, Amaral-Carlotti FA, Fontana-Velludo S, et al. Giant Eagle syndrome with pseudoarthrosis and peripheral facial palsy. *Rev Neurol* 2023; 77: 203-4. doi: 10.33588/rn.7708.2023209.

Versión española disponible en [www.neurologia.com](http://www.neurologia.com)

© 2023 Revista de Neurología



tomy [3]. As the symptoms are variable and non-specific, patients seek treatment in several different clinics, such as otolaryngology, family practice, neurology, neurosurgery, dentistry and psychiatry.

The treatment can be conservative or surgical. The conservative treatment contains nonsteroidal anti-inflammatory medications or injection of a steroid with an anesthetic solution into the tonsillar fossa [5]. Surgical therapy

is performed by removing the styloid process which can be done by intraoral or extraoral approach [5]. The treatment option is based on the harshness of the clinical symptoms and reaction to conservative treatment [5].

#### References

1. Kersin B, Tekin AM. Bilateral giant styloid process: case report. *J Surg Med* 2018; 2: 389-90.
2. Beegle RD, Schmalzfuss IM. Eagle syndrome complicated by posttraumatic styloid pseudoarthrosis and facial nerve paralysis. *Neurographics* 2017; 7: 126-8.
3. Warriar SA, Nanthini KC, Subadra K, Harini DM. Eagle's syndrome: a case report of a unilateral elongated styloid process. *Cureus* 2019; 11: e4430.
4. Al-Hashim M, Al-Jazan N, Abdulqader A, Al-Ghamdi M. Eagle's syndrome with facial palsy. *J Family Community Med* 2017; 24: 128-30.
5. Beegle RD, Schmalzfuss IM. Eagle syndrome complicated by posttraumatic styloid pseudoarthrosis and facial nerve paralysis. *Neurographics* 2017; 7: 126-8.