We present a case report of a thyroid fracture after a sneezing episode, with odynophagia, dysphonia, and neck pain. The examination showed oedema at the right vocal cord and haematoma at the right false vocal cord. An anterior thyroid fracture without displacement, and a subcutaneous emphysema could be seen on the CT.

Thyroid fracture because of this aetiology is most exceptional; only 1 similar case report has been described in the literature.

Key words: Thyroid fracture. Sneezing episode. Laryngeal oedema.

CLINICAL CASE

Male patient, 41 years old, admitted to the emergency room for dysphonia, odynophagia and cervical pain after severe sneezing; he did not present dyspnoea or dysphagia.

On physical examination, his oropharynx was normal and, in the indirect laryngoscopy and fibroscopy, oedema of the right vocal cord and bruising of the right band were observed; mobility of the vocal cords was normal and there was a good passage of air. On cervical palpation, a small subcutaneous emphysema was noted.

A cervical computerized tomography (CT scan) (Figure 1) showed a small fracture of the thyroid cartilage along the midline, without displacement, oedema of the right vocal cord and band, and subcutaneous emphysema in the anterior region of the neck, on either side of the thyroid cartilage and surrounding the gland.

The patient was admitted for treatment and observation. Antibiotic and corticosteroid therapy was administered intravenously along with a gastric protector for 7 days, and the patient was order to follow a special diet with saline solution therapy and to rest his voice absolutely.

A follow-up cervical CT scan was performed 3 days after admission (Figure 2) and showed a considerable reduction in the subcutaneous emphysema and the glottal oedema, although the vertical fracture of the thyroid without displacement of the cartilage could still be seen.
After 7 days, his clinical symptoms had disappeared completely and the otorhinolaryngological examination was normal. The patient was sent home with oral treatment during one more week. Subsequent follow-ups were made at the out-patients’ clinic and his progress was optimal, leading to his definitive discharge.

DISCUSSION

Fracture of the laryngeal cartilages is not an infrequent occurrence and its most common cause is an external closed traumatism. On the contrary, fracture following an episode of sneezing is virtually exceptional. Such a condition should be suspected when facing clinical symptoms of dyspnoea, dysphonia, odynophagia, cough and dysphagia. An exhaustive physical examination needs to be carried out with inspection and cervical palpation, laryngeal fibroscopy and imaging tests, with the most specific being cervical CT scan.

The classification of fractures, after Schaeffer, is:

- E.I: endolaryngeal haematoma without detectable fracture
- E.II: non-displaced fracture
- E.III: stable displaced fracture
- E.IV: unstable displaced fracture
- E.V: laryngotracheal disinsertion

In the case of E.I-E.II, admission is required for intravenous corticosteroid and antibiotic treatment and pulsoxymetric monitoring. In the case of E.II-E.V, an urgent tracheotomy must be performed and the patient must be examined endoscopically and surgically under general anaesthesia.

Reviewing the scientific literature, we have only found one other case with similar characteristics so, even though it is a rare aetiology, it must always be kept in mind.

REFERENCES


Figure 2. Reduction in the oedema of the vocal cord and the cervical emphysema.