Sir,

Tracheoesophageal fistula (TEF) is a complication of prolonged mechanical ventilation,[1-4] and the diagnosis is not always performed before tracheostomy.

Therefore, TEF predisposes to appearance of recurrent respiratory infections, respiratory failure, and increased risk of death.[5] The size of the lesion and its location determine the clinical severity, urgency, choice of treatment, and prognosis.[6,7,8]

We evaluate retrospectively in a cross-sectional study carried out for a period of 1 year the incidence and management of TEF diagnosed during the tracheotomy of patients, indicated by prolonged mechanical ventilation in two secondary public hospitals in São Paulo State, Brazil. The diagnosis of TEF was based on identification during the realization of open tracheotomy in patients with no signs or symptoms of fistula.

A total of 393 tracheotomies were held during the periods March 2015 to March 2016 [Table 1].

TEF was identified as a complication in three (0.76%) patients [Table 2]. Once the diagnosis of TEF was held during the open tracheostomy procedure without previous signs or symptoms, we opted for conservative conduct in
Table 1: Profile of patients undergoing tracheotomy

| Sex | Total (%) | Age (average years) | Otrachral tube time (average days) |
|-----|-----------|---------------------|-----------------------------------|
| Male | 181 (46.05) | 48.8 (minimum 16, maximum 85) | 16 (minimum), 3 maximum 20 |
| Female | 212 (53.95) | 60.9 (minimum 15, maximum 98) | 2 maximum 19 |

Table 2: Patients with tracheoesophageal fistula as a complication

| Patient | Age | Disease | Causes of ICU | Outcome |
|---------|-----|---------|---------------|---------|
| Patient 1 | 16 | DM | Indeterminate focus sepsis | Spontaneous resolution |
| Patient 2 | 59 | DM/SAH | Cardiovascular | Death |
| Patient 3 | 78 | DM/SAH | Cardiovascular | Death |

DM: Diabetes mellitus, SAH: Systemic arterial hypertension, ICU: Intensive Care Unit

all cases due to the associated amenities at the time of diagnosis. One of them had spontaneous resolution, and two of them died of causes not related to TEF.

The incidence of this complication in patients with long-term mechanical ventilation revolves around 0.3%–3%;[5] in this study it was 0.76%. The clinical manifestations differ depending on the patient’s respiratory status; individuals in mechanical ventilation may present signs of air leakage, despite the hyperinflation of the cuff, until abdominal distension associated with hydrofoil noises at the same time of rhythmic ventilation, tracheobronchial contamination with food and digestive secretions, and bronchopulmonary suppuration.[9]

If a TEF is suspected, we proceed with a bronchoscopy. In case of doubts, a blue methylene solution can be instilled through a nasoesophageal probe.[9]

However, because some associated symptoms are nonspecific, weak, or even nonexistent,[3,10] it is possible that a TEF can be identified only during a tracheotomy, as happened with our patients. Open tracheostomy can make diagnosis in surgical time, without any previous signs or symptoms, not as easy as the percutaneous puncture tracheostomy.

The risk of installing the cannula in “false path” during the procedure exists, and cannot be considered despicable, because the less attentive surgeon may not think of this diagnosis at the time of the procedure by placing the patient at risk.

TEF without diagnosis in prolonged oro(tracheal tube) patients increases the risk of false route during the introduction of the tracheostomy cannula. If the surgical team is prepared and makes quickly the fistula diagnosis at the surgical time, routine endoscopies or bronchoscopies preoperatively may not be performed, because the low incidence does not justify, but we would need more studies for that statement.

Although the spontaneous TEF healing has already been reported, conservative management is seldom used.[8,11,12] Therefore, once diagnosed, we should proceed to programming surgical correction as the treatment of choice.[13,14] However, we must consider the patient’s prognosis. If unfavorable, surgery should be contraindicated.

The ideal time for the surgery is established when the patient no longer requires mechanical ventilation and when the comorbidities of TEF are tracked[15,16] because of the high risk of complications from poor wound healing and recurrence of fistula until the occurrence of mediastinitis and postoperative death.[17-19]

In conclusion, we suggest attention at the surgery moment; fistula diagnosis at the surgical time occurred in 0.76% of tracheotomies – all in DM patients – and the conservative conduct was the most appropriate.

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