

# A rare cause of dysphagia in children: Squamous cell carcinoma of the esophagus: A case report and review of literature

## Abstract

Globally, an estimated 572 000 cases occurred in 2018 of malignant tumors of the esophagus but in children and adolescents, this cancer is a rare disease. Through this case report, we tried to analyze the clinical, paraclinical, therapeutic and prognostic profile of squamous cell carcinoma of the esophagus in children. This was a 13 and half-year-old patient at the time of onset of solids dysphagia. Symptoms worsened with the onset of fluid dysphagia, complicated by deterioration of general condition, with anemia and asthenia. The eso-gastro-duodenal fibroscopy found a budding tumor 30cm from the dental arches partially obstructing the lumen of the esophagus. An anatomopathological study of the lesion found a well differentiated and infiltrating epidermoid esophageal carcinoma. The extension assessment came back negative.

Therapeutically, the patient underwent preoperative radio chemotherapy, which was shown to resolve the dysphagia. Surgical resection of the esogastric lesion was performed, followed by gastrostomy. Currently, she benefits from retrograde esophageal dilation sessions. From an evolutionary standpoint, clinical improvement was observed, without signs of tumor recurrence, two years after the start of treatment. Malignant esophageal tumors in children and adolescents are extremely rare conditions. The ingestion of caustic products and smoking are currently the most well-known risk factors for this disease, factors not found in our patient. Dysphagia is the main clinical sign of squamous cell carcinoma of the esophagus. Thus, in the event of dysphagia in children or adolescents, a mediastinal process should be considered, and a paraclinical assessment should be carried out. Since squamous cell carcinoma of the esophagus is a rare malignant tumor in children, the interest of this case report is to underline the importance of evoking a malignant esophageal process in children who present a notion of dysphagia to solids then to liquids, associated with an alteration of the general condition and anemia.

**Keywords:** esophagus, squamous cell carcinoma, rare children cancer, dysphagia

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## Introduction

Malignant tumors of the esophagus are the 6th cause of cancer death in the world.<sup>1</sup> Globally, an estimated 572 000 cases occurred in 2018.<sup>2</sup> It is essentially an adult disease, with a peak prevalence between 35 and 64years. Therefore, esophageal cancer in children and adolescents is a rare disease.<sup>1</sup> Through this clinical case, we tried to analyze the clinical, paraclinical, therapeutic and prognostic profile of squamous cell carcinoma of the esophagus in children.

## Material and methods

We report the observation of a patient with squamous cell carcinoma of the esophagus, followed since 2019 at the Ibn Rochd university hospital.

## Results

### Case presentation

This was a 13 and half-year-old patient at the time of the installation of solids dysphagia. The anamnesis does not find any particular pathological history, in particular no similar case in the family, or a notion of chronic vomiting, ingestion of caustics or passive smoking. Symptoms worsened with the onset of fluid dysphagia, complicated

by weight loss of 19kg in 7months, anemia and generalized asthenia. Clinical examination did not find signs of infection or associated tumor syndrome.

Para clinically, the eso-gastro-duodenal fibroscopy found a budding tumor 30cm from the dental arches, partially obstructing the lumen of the esophagus, arriving at the cardia, which is 35 cm away and invading the upper part of the lesser curvature. Pathologic study of the lesion found a well differentiated and infiltrating esophageal squamous cell carcinoma. An extension assessment, in particular a PETSCAN, was carried out, which revealed a hyper metabolic tissue process in the lower third of the esophagus with right paraesophageal lymphadenopathy.

As treatment, the patient underwent a feeding jejunostomy, and several blood transfusions, for hematemesis of great abundance, complicated with intolerated acute anemia. Subsequently, preoperative radio chemotherapy was performed combining radiotherapy at a dose of 50.4Gy in 28 sessions of 1.8Gy, associated with 5 fluro-uracil and cisplatin, as a weekly treatment. Surgical resection of the esogastric lesion was performed, by a transthoracic esophagectomy, with lymph node dissection. Currently, the patient is receiving retrograde esophageal dilation sessions, an she is regularly followed in consultation, without signs of tumor recurrence, two years after

the start of treatment. The patient is also followed in the oncogenetic consultation, for the identification of a possible genetic predisposition to cancer's syndrome.

## Discussion

Malignant tumors of the esophagus in children and adolescents are extremely rare conditions. A total of 23 cases of esophageal squamous cell carcinoma have been reported in the literature.<sup>3-9</sup> The ingestion of caustic products and smoking are currently the known risk factors, factors not identified in this case report. Esophageal cancer in adults is a tumor with a poor prognosis, with a median survival of 13 to 19 months.<sup>11</sup> In this case report, clinical improvement is observed 2 years after the beginning of the treatment. Dysphagia is the main clinical sign of squamous cell carcinoma of the esophagus. It may be isolated at first, and limited to solids dysphagia. Later, fluid dysphagia, weight loss and anemia secondary to hematemesis set in. These hematemesis can be very abundant, and engage the immediately vital prognosis, in the absence of urgent treatment.

Thus, in the event of dysphagia in children or adolescents, a mediastinal process should be considered, and a paraclinical assessment should be carried out. It must include in particular an eso-gastro-duodenal fibroscopy, which makes it possible to visualize a possible esophageal lesion, and to perform biopsies. TEPSCAN can be used to search for the hypermetabolic nature of a suspicious lesion, and for possible metastatic locations. Due to the rarity of esophageal cancer in children, treatment is based on the principles used in adults. Complete surgical resection with wide margins and extensive lymph node dissection are indicated, in combination with radio chemotherapy. However, no common treatment strategy has been established in children.

## Conclusion

Since squamous cell carcinoma of the esophagus is a rare malignant tumor in children, the interest of this case report is to underline the importance of evoking a malignant esophageal process in children who present a notion of dysphagia to solids then to liquids, associated with altered general condition and anemia.

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## Conflicts of interest

The authors declare that they have no conflicts of interest to disclose.

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