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Pneumology

Boerhave Syndrom Revealed by Pneumediastinum and Subcutaneous Emphysema: About One Case

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Abstract **Case Report**

The Boerhaave syndrom or spontaneous rupture of the esophagus is a rare pathology that represents 15% of all esophagus ruptures, caused by a sudden increase pressure in intraluminale due to the vomiting efforts. The pronostic depends of the early instauration of the adapted treatment. We report the case of a 35 years old patient who showed a provoked repetitive vomiting since one month. He consulted at the pneumology service because of brutal thoracic pain since 4 days associated to a violent epigastralgical, complicated three hours after a respiratory distress. The clinical exam oriented us to the esophagus ruptur hyposthesis (Boerhaave syndrom) confirmed by the imagery that showed the presence of an pneumomediastinum, an hydropneumothorax, an important emphysema dissecting soft tissue, and a clear distension of the lower border of the thoracical esophagus. In front the aggravation of the respiratory difficulty, the patient was transfered to the intensive care service.

Keywords: Pneumomediastinum; boerhave syndrome; emphysema.

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INTRODUCTION

The Boerhaave syndrom or the spontaneous rupture of the esophagus is a rare clinical entity caused by the intraluminal pressure rising following the vomiting efforts. In the absence of typical symptoms, the diagnosis is difficult. The pronostic depends on the early stage of medical support [1]. We report a case of o pneumomediastinum associated to an hydropneumothorax and a subcutaneous emphysema happened to a young man due to a vomiting effort and we discuss the diagnosis difficulties, medical support modalities and the pronostic of this pathology.

CASE REPORT

MR. H.S, 35 years old, without particular pathologies antecedents in particular no recent trauma, he reported repetitive provoked vomiting since one month in a psychological context (bulimia probably). He consulted at the pneumology service due to brutal thoracic pain since 4 days and dyspnea at any effort associated to a epigastric pain complicated three hours later by a respiratory distress which need hospital care.

The clinical exam showed a dispneic patient, tachycardic, 88% saturation at air ambiant. The pulmonary exam showed a mixte effusion syndrom. We found at the neck exam a subcutaneous cervical emphysema extended to the superior members and to the left eye. The abdominal exam showed a contracted abdomen, painful at the epigastrium.

The initial biological exams showed an increased leukocyte count of 29 000 leukocytes/mm3 at PNN predominance, a CRP at 348 mg/l, a renal failure stage 3A with a DFG at 56 ml/min/17,3.

The esophagus rupture hypothesis after vomiting efforts (or Boerhaave syndrom) brought us to radiological exams without delay. The standard chest X-ray confirmed the existence of a pneumomediastinum associated to a subcutaneous cervical and thoracical emphysema and an homogenal dense opacity at the inferior base (Figure 1). The abdomen without preparation didn't show periotoenal pneumonia. The Thoracic computed tomography showed right hydropneumothorax with a large pneumomediastinum extending along the cervical thoracical region realising an important emphysema dissecting, infiltration of mediastinal fat, we note a frank distanciation of the thoracical esophagus at heterogeneous content lower border (Figure 2) orienting, with the absence of any

other ethiology, to the syndrom of Boerhaave. The ingestion of the hydrosoluble couldn't be possible in front of the aggravation of the respiratory distress.

The patient was immediatly transfered to the intensive unit care where he did a thoracical drainage. After being stabilized, he was sent for emergency abdominal surgery, during which he died.

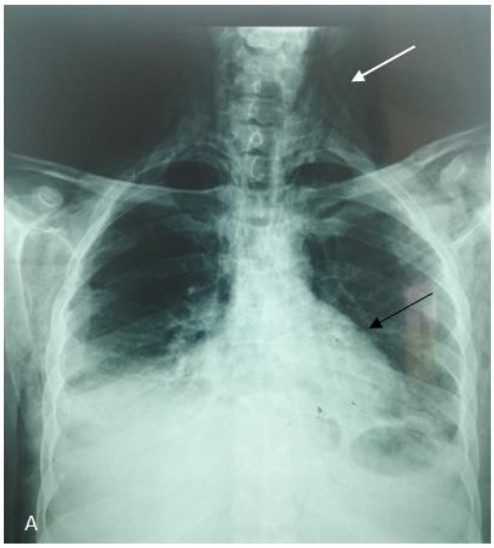

Figure 1: Chest x-ray face (A): pneumomediastinum (black arrow) and subcutaneous cervical and thoracical emphysema (white arrow)

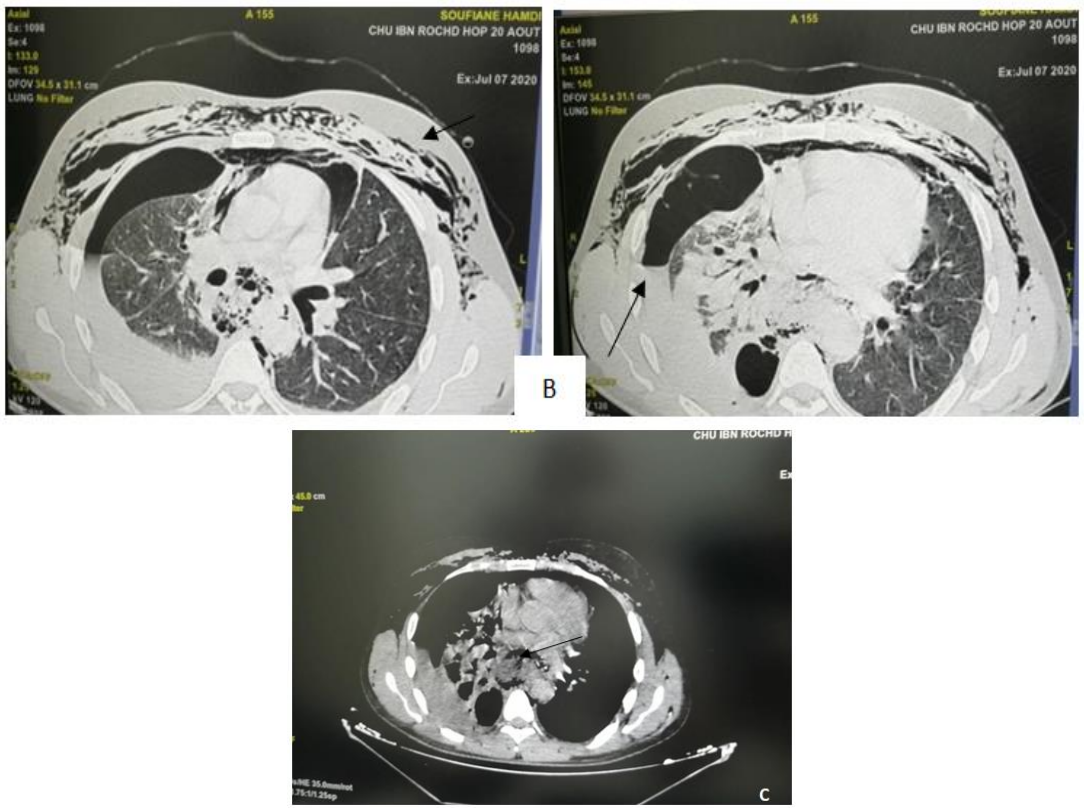

Figure 2: Thoracic computed tomography in parenchymal window (B) confirmed right hydropneumothorax with pneumomediastinum and subcutaneous emphysema Mediastinal window (C) distanciation of the thoracical esophagus

DISCUSSION

Boerhaave syndrome consists of spontaneous longitudinal transmural rupture of the esophagus, usually in its distal part. It generally develops during or after persistent vomiting as a consequence of a sudden increase in intraluminal pressure in the esophagus [2]. It's a rare pathology that reprents 15% of all esophagus ruptures [3]. It affects mainly people between 40 and 70 years with a man majority [4]. Our patient was a 35 years old.

The clinical manifestations of an Boerhaave syndrome are variables and make the diagnosis difficult. In 50% of the cases, it is manifested by Mackler's triad: vomiting, lower thoracic pain and subcutaneous emphysema [5]. Signs of acute respiratory distress will dominate the clinical board testifyng a pleural envasion [5].

Some other symptoms such as dyspnea, fiever are usual and may be confused with other diseases such as myocardial ischemia, aortic dissection, pericarditis, spontaneous pneumothorax, pneumonia, perforated peptic ulcer and pancreatitis [6]. In our patient case, good anamnesis and clinical exam, allowed to guide our diagnosis to the spontaneous esophagus rupture, so the realisation of non invasive other complementary exams that allowed to eliminate the differentiels diagnosis.

The standard chest x-ray lead the diagnosis showing pneumomédiastinum or hydropneumothorax and subcutaneous emphysema.

The Thoracic computed tomography confirmed the presence of air in the médiastinum and subcutaneous tissue were not visible at the radiography and show sometimes a pneumothorax, a pneumoperitoneum, or a pneumopericardium, [7, 8]. Esophagography (before the 48 th hour) is an important imaging examination for confirming the diagnosis and the location of perforation because it shows extravasation of contrast into the pleural space [9].

The pronostic depend of the early stage of care support. Every delay of diagnosis rise the mortality wich may reach 100% [10].

The treatment for Boerhaave syndrome is both conservative, endoscopic, and surgical. The choice between theses treatments depending on the time that has elapsed since development of the rupture and its recognition and treatment, clinical stability and the scope the thoracical contamination [10]. The chirugical treatment is prefered when septicemia is installed, while the endoscopical approache is prefered when there is no sign of septicemia and/ or a minimal contamination of the pleural cavity and médiastinum. A conservative support consistent on an antibiotic treatment and a drainage of abscesses [11].

CONCLUSION

Spontaneous rupture of the esophagus is a rare clinical entity with a high mortality rate. Early clinical suspicion will lead to timely diagnosis and maximize the survival chances for the patient.

Conflict of interest: No conflict of interest.

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