

Idiopathic spontaneous pneumoperitoneum

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INTRODUCTION

Pneumoperitoneum is caused by perforation of hollow viscera, with perforated peptic ulcer occurring more frequently. In rare cases, pneumoperitoneum is not caused by visceral perforation, the cause may be extra-abdominal and sometimes it cannot be determined. Our goal is to present a case of pneumoperitoneum of undetermined origin and discuss the possible non-perforating etiologies.

CASE REPORT

M.J.S., a female aged 63 years, married, Catholic, born in Bauru, complaining of pain in the stomach, which had began 1 hour earlier with a stabbing sensation of moderate to severe intensity in the epigastrium and radiating to the back. The patient had a history of chest TB surgery performed 39 years ago.

On physical examination, the patient was ruddy, eupneic, oriented, afebrile, and conscious. The abdomen was flat, rigid, and diffusely painful to palpation, with doubtful DB, AHR +, and tympanic to percussion.

Simple chest X-ray and phrenic cupola showed a large pneumoperitoneum (Figures 1 and 2).

Laparotomy was indicated, but no hollow viscus perforation or any other change that would justify the pneumoperitoneum was found.

DISCUSSION

Pneumoperitoneum is the most common result of visceral perforation, which is usually presented with signs of peritonitis and requires immediate surgery.

The pneumoperitoneum without perforation of hollow viscera, also called spontaneous or idiopathic, may be related to intrathoracic, abdominal, gynecologic, iatrogenic and other causes.

Spontaneous or idiopathic pneumoperitoneum may be attributed to barotrauma, pneumothorax, bronchopulmonary fistula, pneumomediastinum, and pulmonary sepsis. It also may be caused by intestinal cystic pneumatosis (most common cause of spontaneous or idiopathic pneumoperitoneum). Other causes are abdominal emphysematous cholecystitis, spontaneous bacterial peritonitis, liver abscess, and rupture of pyometra in women. Endoscopic procedures such as colonoscopy may also cause pneumoperitoneum spontaneous or idiopathic.

In our patient, the most likely cause may have been the history of tuberculosis and thoracic surgery for treatment.

Because pneumoperitoneum without perforation of a hollow viscus is rare and has a difficult diagnosis, we recommend that all cases of pneumoperitoneum should be referred for emergency surgery.

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Figure 1 – Chest X-ray shows pneumoperitoneum in the right and left subdiaphragmatic region.



Figure 2 – Chest X-ray shows pneumoperitoneum in the right and left subdiaphragmatic region.