

A pneumoperitoneum due to intestinal cystic pneumatosis associated with a tyrosine kinase inhibitor

Key words: Intestinal pneumatosis. Pneumoperitoneum. Molecular therapy. Bowel toxicity. Tyrosine kinase.

Dear Editor,

Pneumatosis cystoides intestinalis is characterized by multiple air-filled cysts in the intestine wall. Recently, antitumor molecular targeted therapies have been associated with bowel perforation and the development of secondary pneumoperitoneum.

Case report

We present the case of a 72-year-old male that had undergone a right nephrectomy due to a renal cell carcinoma in 2010. He was currently receiving chemotherapy for lung metastasis (pazopanib, a tyrosine kinase inhibitor). A computed tomography (CT) scan showed air-filled cysts in the right colon wall, which was suggestive of an intestinal cystic pneumatosis. Furthermore, import free air was also present due to secondary pneumoperitoneum (Fig. 1). The patient presented to the Emergency Department. However, due to the absence of symptoms, clinical peritonitis or analytical impact, an observational control with a liquid diet therapy and intravenous antibiotics was performed. The patients' course was favorable, and a radiologic examination ten days later showed that the condition had been resolved. After medical discharge, treatment with nivolumab was started, as a substitute to pazopanib.

Discussion

Pneumoperitoneum secondary to intestinal pneumatosis is an unusual complication and often has minimal clinical repercussions. Its etiology seems to be multifactorial and is thought to be a sign of bowel toxicity with antitumor therapy. Recently, De la Serna et al. reported the association with cytostatic and molecular targeted therapies (bevacizumab

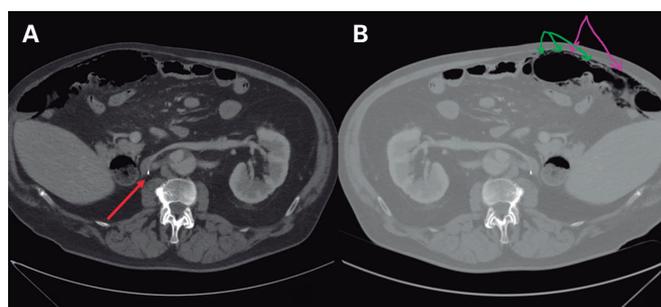


Fig. 1. TC abdominal. A. A clip that corresponds to the complete nephrectomy is seen in the right perirenal space. B. The green arrows indicate the air-filled cysts in the colonic wall that indicate cystic pneumatosis. The pink arrows indicate air secondary to a pneumoperitoneum.

(1). Tyrosine kinase inhibitors are another pharmacological group that are associated with this complication (2,3). In the majority of cases, pneumoperitoneum secondary to cystic pneumatosis does not require surgical treatment at first and can be managed conservatively. The presence of intestinal pneumatosis during treatment for cancer is difficult to interpret. Therefore, it is important to establish any relationship with clinical findings (4). The evolution described in the literature is variable and the effect of these drugs is inexplicable.

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