Case 419

2. B,C

【Progress】

She came home after taking CT. The surgeon called her to go back to hospital and asked her to be admitted immediately to our hospital for possible life-threatening. However, no abnormal symptoms appeared. She discharged three days after.

【Discussion】

The ruptured pneumatosis intestinalis of the colon occurred in our case. Free air in the lower abdomen ascended to posterior pararenal space, perirenal space and anterior pararenal space. It is documented in Reter book that three spaces of anterior pararenal space, perirenal space and posterior pararenal space unite together below renal inferior margin (1-3). But it did not document where it is. This case indicates indirectly that retroperitoneal space below inferior renal margin is present and communicates with each retroperitoneal space of upper abdomen. The anterior surface of cecum, ascending colon and descending colon is embraced by peritoneum, while the posterior surfaces of cecum, ascending colon, and descending colon are fixed with posterior peritoneum.

However, it is virtually difficult to outline the retroperitoneal space below inferior renal margin (lower retroperitoneal space) on CT. We come to know the existence of the lower retroperitoneal space only when air bubbles or fluids shift to space. In our case, air bubbles arise from the rupture of pneumatosis of cecum, namely, and they did not enter peritoneal space but lower retroperitoneal space. Air bubbles enter the fascia that did not imply the adhesion of muscles, but loose connective tissues or membranes present embracing nerve and lipid tissues without moving muscles together (4). These spaces originally collapsed. When air bubbles or infectious fluids enter these spaces, they swollen, inflated. Other retroperitoneal spaces are listed as peri-large vessels such as aorta, inferior vena cava or iliac arteries and veins, and para-psoas muscles (5, 6).

In the past in Case 395, we experienced the case with purulent discharge that ascends to anterior pararenal space and posterior pararenal space, and intrapleural space, while descends to retroperitoneal space, finally to para-urinary bladder space and anterior bladder space called space of Retzius (6), then, required to insert a drainage catheter. In this case, only air bubbles ascend and accumulate to the upper retroperitoneal spaces. The inflammatory symptoms did not come out, indicative of no treatment but under watchful observation.

The etiology of pneumatosis cecum of this case is unknown. Five months before endoscopically resection of sigmoid colon cancer, pneumatosis cecum was not found on abdomen CT. Somehow intraluminal pressure induces air in cecum lumen enter cecum wall and traverse to retroperitoneum adhered to posterior abdominal wall. She was given anticancer drugs periodically that might have induced cecum wall fragile.

【Summary】
We presented a seventy-two-year-old female presented with a few days-diarrhea. Free air in anterior pararenal space, posterior pararenal space and perirenal space, arisen from rupture pneumatosis cecum. The patient was admitted for life threatening risk, but no further worsening symptoms appeared, discharged under watchful observation. It is borne in mind that this case indicates that three retroperitoneal three spaces in upper abdomen communicate together with lower retroperitoneal spaces that are composed of sparce connective tissue or membrane.

【References】
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