

First of all, I would like to thank all the experts for their valuable comments on this manuscript. Based on the above comments, I have carefully revised this article. At the same time, for the linguistic problems of this article, I have asked a specialized language editing company to touch up this article. Below are my specific revisions:

Reviewer 1:

1. **Question 1:** Case presentation: -„so the patient treated again in Baotou Central Hospital. After admission...” – does that mean she was released in the interim (not clear from the text)?

Answer: On the second day abdominal surgery, the patient gradually transitioned her diet and was successfully discharged from the hospital.

2. **Question 2:** "there was the discovery of fluid accumulation in abdominal and pelvic cavity in CT" - Is there any other image with fluid also in the pelvic cavity (or was the fluid only around liver?)

Answer: The case had fluid accumulation in both the abdominal and pelvic cavities, for which I performed additional imaging.

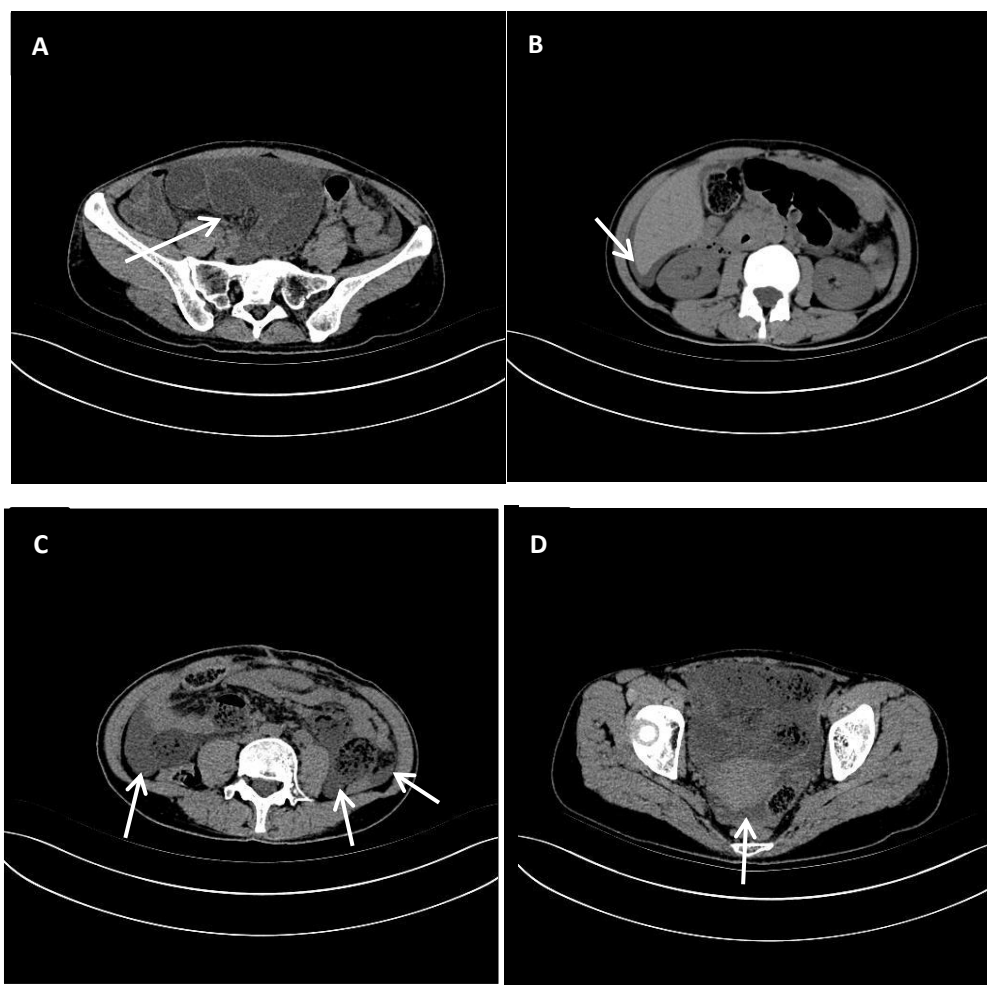


Figure 4 Representative whole-abdominal computed tomography (CT) images. A:Significant dilation and fluid accumulation of the bowel; **B:**An arc-shaped hypodense shadow under the capsule of the liver at the point

indicated by the arrow; C:Fluid accumulation in abdominal cavity by the arrow; D:Fluid accumulation in pelvic cavity by the arrow (D).

3. **Question 3:** was this the first episode of herpes zoster in this patient? -has anyone close to the patient had similar symptoms recently? -how long was the recovery period?

Answer: The patient was vaccinated against varicella during early childhood and experienced varicella for the first time in 2017. The patient underwent laparoscopic appendectomy in Baotou Central Hospital in April 2022 and had close contact with a patient who had herpes zoster after abdominal surgery.

4. **Question 4:** Discussion: -„we considered the factor such as surgery to reactivate the incubating varicella zoster virus to cause herpes zoster, which in turn caused the complication of peripheral neuropathy“ – were there any other factors that might have contributed to the neuropathy (opioids...)? The authors should add more arguments supporting relation between intestinal obstruction and herpes zoster.

Answer: For this question, I have discussed it in the discussion section based on the relevant literature. The additions are as follows:

VZV reactivates from latency in approximately 30% of individuals to give rise to a secondary cutaneous infection, herpes zoster (HZ). Predisposing factors for VZV reactivation from latency are old age, stress, malnutrition, menstruation, and immunosuppression such as malignancy, post-transplant, and chemotherapy.

VZV carried by peripheral T-lymphocytes and retrograde axonal transport from dorsal-root ganglion neurons infected through their epidermal projections are regarded as the two potential ways that allow VZV to reach the ENS. Whatever prompts VZV reactivation is likely to result in the same effect in the ENS neurons. Various theories on the pathogenesis of zoster-related gut obstruction are as follows:(1) parietal and visceral peritoneal inflammation; (2) extrinsic autonomic nervous system viral involvement; (3) direct VZV injury of both the enteric submucosal and myenteric plexus, as well as the muscularis propria; (4) possible hemorrhagic infarction of the abdominal sympathetic ganglia; (5) viral interruption of afferent C-fibers that cause intestinal hypomotility and subsequent pseudo-obstruction; and (6) viral injury of the thoracolumbar or sacral lateral columns resulting in disruption of parasympathetic nerves and subsequent intestinal hypomotility.

5. **Question 5:** Since the patient is younger than common group of patients with pseudoobstruction and also the small bowel localisation is rather atypical, some other potential causes for the intestinal obstruction should be mentioned (for example adhesions, other postoperative complication) and commented.

Answer: In response to this question, the changes are as follows: In addition, the patient in this case is a middle-aged woman, who is younger

than the common patient with pseudo-obstruction and has an atypical location of the small bowel, so there may be a number of other underlying causes for the intestinal obstruction. Postoperative small bowel obstruction is a common complication of appendectomy. Following appendectomy, adhesions subsequently may cause a small bowel obstruction. Moreover, women have a higher risk of small bowel obstruction after appendectomy. Additionally, occult etiology causing small bowel obstruction such as subclinical pelvic inflammatory disease, endometriosis, or inflammation of adnexa may also be misdiagnosed as adhesive small bowel obstruction.

Reviewer 2:

1. **Question 1:** In the Introduction it is necessary to include some references concerning similar cases.

Answer: Based on the above suggestions, I have revised the content in the introduction: When herpes zoster is complicated with pseudo-intestinal obstruction, the main manifestation is acute colonic obstruction (known as the Ogilvie syndrome). Herpes zoster may induce the more rare pseudo-obstruction of the small intestine in addition to pseudo-obstruction of the colon. It was reported that herpes zoster induced acute pseudo-colonic obstruction in a patient who had undergone abdominal surgery and had bowel obstruction as the first manifestation. In most cases, pseudo-intestinal obstruction begins days to weeks before the rash appears.

2. **Question 2:** It is necessary to give a correct definition of the Ogilvie's syndrome, that was defined by the Authors: "a special type of visceral herpes zoster, which is a motor dysfunction..." or "pseudo-obstruction of the intestinal tract caused by herpes-zoster", as indicated in the second paragraph of the "Discussion".

Answer: When herpes zoster is complicated with pseudo-intestinal obstruction, the main manifestation is acute colonic obstruction (known as the Ogilvie syndrome). Ogilvie syndrome is a special type of visceral herpes zoster, which is a motor dysfunction caused by intestinal muscle neuropathy. The mechanism of Ogilvie syndrome may be that the visceral nerve fibers of sympathetic nerve and parasympathetic nerve are invaded by activated varicella zoster virus when immunity is low, resulting in edema and inflammation of motor nerve fibers.

3. **Question 3:** In the case presentation the Authors mention "obstruction of the intestine" with "scattered fluid levels of the abdominal intestine". It seems that the small intestine is involved and not the colon. The Ogilvie's syndrome is an "acute pseudo-obstruction of the colon", which must be distinguished from the "pseudo-obstruction of the small intestine"

Answer: When herpes zoster is complicated with pseudo-intestinal obstruction, the main manifestation is acute colonic obstruction (known as

the Ogilvie syndrome). Herpes zoster may induce the more rare pseudo-obstruction of the small intestine in addition to pseudo-obstruction of the colon. Small bowel pseudo-obstruction caused by herpes zoster, which is thought to have the same mechanism as that of colonic pseudo-obstruction. Herpes zoster virus stimulates sympathetic nerves, inhibits small intestinal peristalsis, and damages the myenteric plexus and muscularis propria.

4. **Question 4:** The pathophysiology of the Ogilvie's syndrome has been described in a disarrayed, inexact and confused manner. The pathophysiologic mechanism of the syndrome is more complex than the one described by the Authors, who did not take into account that there are many hypotheses (I suggest to consult the ref. 7 for documentation).

Answer: VZV carried by peripheral T-lymphocytes and retrograde axonal transport from dorsal-root ganglion neurons infected through their epidermal projections are regarded as the two potential ways that allow VZV to reach the ENS. Whatever prompts VZV reactivation is likely to result in the same effect in the ENS neurons. Various theories on the pathogenesis of zoster-related gut obstruction are as follows: (1) parietal and visceral peritoneal inflammation; (2) extrinsic autonomic nervous system viral involvement; (3) direct VZV injury of both the enteric submucosal and myenteric plexus, as well as the muscularis propria; (4) possible hemorrhagic infarction of the abdominal sympathetic ganglia; (5) viral interruption of afferent C-fibers that cause intestinal hypomotility and subsequent pseudo-obstruction; and (6) viral injury of the thoracolumbar or sacral lateral columns resulting in disruption of parasympathetic nerves and subsequent intestinal hypomotility.

5. **Question 5:** In the Conclusions the clinical and scientific relevance of the case is not clearly pointed out and the sentences are rather confused and disarrayed.

Answer: In conclusion, herpes zoster complicating pseudointestinal obstruction after abdominal surgery is exceptionally rare. The clinical presentation of pseudo-intestinal obstruction secondary to herpes zoster infection is difficult to distinguish from mechanical intestinal obstruction due to other causes. For some unexplicable intestinal obstruction, the presence of viral infection should also be considered, so as to minimize misdiagnosis and missed diagnosis.