

## **Uncommon presentation of a common disease: Herpes Zoster manifesting as acute constipation**

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### **Abstract**

*Herpes Zoster is primarily a dermatologic condition, and its gastrointestinal complication is rarely reported. Acute constipation is a very unusual complication of Herpes Zoster. In this case report, we describe a 59-year old male who was admitted with complaints of abdominal distension and severe constipation for five days, accompanied by multiple itchy vesicular eruptions in the area of T7-T12 dermatomes for four days. The patient was diagnosed with visceral neuropathy leading to acute constipation due to Herpes Zoster. He was managed conservatively with antiviral medication and laxatives and showed dramatic improvement in his symptoms. Early recognition of this complication of Herpes Zoster is very important because timely diagnosis can result in preferable outcome with conservative treatment only, thus avoiding unnecessary surgical intervention.*

### **Introduction**

Herpes Zoster is caused by the reactivation of Varicella zoster virus and is characterized by a unilateral painful blistering skin rash distributed in a specific dermatome. Visceral neuropathy is an extremely rare complication of Herpes zoster and can result in acute constipation, which is again a rarer manifestation of the disease.[1]

Visceral neuropathy due to herpes zoster can result in constipation, pseudo-obstruction of colon, urinary retention, cystitis.[2-6]

In a retrospective analysis of 423 in patients with Herpes zoster, Chen PH et al. reported that 34.8% had sacral lesions, of whom, 41% had bladder dysfunction. Constipation occurred in 50% of the patients with urinary voiding dysfunction.[7] Most of these cases were managed supportively, and bowel function returned to normal within days to weeks.

Similarly, a study from Korea reported a case of motor neuropathy due to Herpes zoster resulting in abdominal distention and constipation. [8]

Many hypotheses regarding the pathophysiology of Herpes zoster causing acute constipation has been formulated, however, the exact mechanism by which Herpes zoster causes acute constipation is poorly understood. According to a study by Tribble et al., direct involvement of intestinal epithelium can cause a local inflammatory reaction, resulting in acute constipation.[1] Some researchers had postulated that vesicular eruption of the overlying dermatome can cause localized parietal and visceral peritoneal inflammation, which can result in constipation.[6] According to one report propagation of the virus to peripheral nerves result in peripheral neuritis causing bowel or bladder dysfunction.[9]

Here, we report a patient who presented with acute constipation and abdominal distention caused by herpes zoster and managed accordingly.

### **Case Report**

A 59-year-old male was admitted with presenting complaints of abdominal distention, discomfort and severe constipation for five days. He noticed erythema over his right abdomen, one day after the onset of constipation, which was then followed by the appearance of multiple vesicular eruptions in the area of T7-T12 dermatomes. Initially these vesicles were itchy, which

then became tender and painful. He denied any history of diabetes, hypertension or similar complaints in past. Family history was unremarkable. On examination, he was found to be conscious, cooperative and oriented. Physical examination revealed erythema with multiple painful vesicles involving the area of distribution of T7-T12 dermatomes over the right abdominal wall. On admission, his vital signs were: blood pressure 110/70 mm Hg, pulse rate 76 beats/min, temperature 98.4°F, and respiratory rate 16 cycles/min.

Abdominal examination showed diminished bowel sounds, abdominal distension with increased tympanic note all over the abdomen. He had no significant medical or surgical history, and he took no regular medication. Respiratory system examination was unremarkable except mild difficulty in breathing. Cardiovascular and neurologic examination did not show any abnormality.

Abdominal X-ray showed colonic dilatation with no definite obstructive cause. Laboratory investigations did not reveal any abnormality.

The patient was kept nil orally and started on IV fluids (0.9%, Normal saline), lactulose syrup, 15 ml twice daily, Tablet Domperidone 10 mg twice daily. However, he only had a mild passage of flatus, with no relief in abdominal distention and constipation. The dose of lactulose was increased to 15ml thrice daily, without any relief. In view of above symptoms, not explained by common differential diagnosis, and not responding to laxatives, a possibility of visceral colonic neuropathy secondary to herpes zoster infection was made. He was administered with Famciclovir 500 mg thrice daily, pregabalin 75 mg twice daily and Vitamin B12 750 micrograms twice daily.

For initial five days, he did not show any significant improvement. However after five days, he started improving with the passage of poorly formed stool and gradual relief in abdominal distension.

After ten days of treatment, the erythema disappeared, and the vesicles dried up, changed to scabs and dropped off, leaving anomalous pigmentation of the skin. Famciclovir and pregabalin were stopped, and Vitamin B12 was continued for four weeks. On follow-up one month later, the patient was fine and passing normal stool. Pain intensity was also reduced with only mild residual burning sensation over the affected area.

## **Discussion**

The presented case illustrated some hidden and less known facts of medicine. Initially looking like a simple case of constipation, it turned out to be an uncommon presentation of a common disease.

The association of Herpes zoster and constipation is not frequently reported in the literature, and there is only handful of reports that had established this relationship.[3,4,8] The exact mechanism by which Herpes zoster causes constipation is poorly understood, however, there are few reports in the literature that had thrown some light on the issue. Herpes zoster can propagate from sensory neurons to peripheral nerves resulting in neuritis, which can cause bowel dysfunction.[9] Other possible mechanisms are direct involvement of visceral epithelium by the virus and localized peritoneal inflammation, which have already been mentioned in the introduction part. In our case the most likely mechanism for constipation was peripheral neuritis, as direct involvement of the epithelium or intestinal inflammation usually causes abdominal pain or blood in stool, which did not happen in our patient.

Our patient was managed conservatively with antiviral medication and laxatives and improved considerably. Our result was similar to the older studies, where most of the cases responded very well to supportive measures and bowel function returned within days to weeks.

This case teaches us, how to correlate two different symptoms to reach an appropriate diagnosis, and prevent any delay in treatment. If recognized early, it has a good prognosis. The

management is entirely conservative using antiviral and laxatives. An abdominal X-ray should be performed to look for any mechanical obstruction. If X-ray is inconclusive, colonoscopy should be performed. Patient with abdominal Herpes zoster should be warned about the symptoms of constipation, abdominal distension, and urinary retention.

## Conclusion

It is important to know that the manifestations of Herpes zoster are not always limited to the skin eruption. Herpes zoster is a reversible cause of bowel dysfunction and should be considered in a patient that presents with acute constipation. Herpes zoster commonly presents with typical clinical signs and symptoms. However, sometimes its unusual manifestations are encountered, which can cause potentially life-threatening complications. Clinicians should have a cautious eye and must be aware of these complications, as early diagnosis and conservative management can result in complete resolution of symptoms.

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