



## Abdominal Muscle Paralysis in Herpes Zoster

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### Abstract

The authors report a case of segmental zoster paresis in a patient with abdominal pain associated with abdominal wall dehiscence. The lack of recognition of this uncommon complication of herpes zoster, which is easy to diagnose, may lead to the multiplication of complementary studies. The prognosis for this complication is good and usually without sequela. The main characteristics of the syndrome are outlined.

**Keywords:** Abdominal pseudo hernia; Herpes zoster; Segmental zoster paresis

### Introduction

Herpes zoster is caused by the activation of varicella-zoster virus in the dorsal-root ganglia. The sensory abnormality is a predominant symptom of herpes zoster virus infection, whereas, motor neuropathy, although uncommon, can also occur in this infection. Segmental zoster abdominal paresis is one of the rare motor complications, mimicking an abdominal hernia. But unlike from the real abdominal wall hernia, it needs no surgery. Here, we report a case with an abdominal protrusion, with typical skin lesions due to Herpes zoster (Hz).

### Case Presentation

A 50-year-old woman presented with pain on the right side of her lower abdomen for three days, sometimes radiating to the right lumbar fossa. She noticed abnormal swelling on the right side of her abdomen, with hyperesthesia. She had a history of thyroid cancer with surgery in 2020. The patient had no other comorbidities such as diabetes mellitus or hernias. One month earlier, she had received her second injection of SPIKEVAX vaccine against COVID-19. The examination in the supine position (Figure 1) triggered a pain with pressure on the McBurney point. On standing examination, a prominent bulge 10 cm to 15 cm in diameter was present on the right side of the abdomen (Figure 1). The area was hyperesthetic to the touch. Abdominal reflexes were absent on the right side. Skin examination showed a papular, erythematous lesion in the right lumbar region, suggestive of herpes zoster. Treatment with valaciclovir and pregabalin was initiated. Routine laboratory tests were normal, and HIV serology was negative. An abdominal CT scan was performed, which showed no evidence of a Spigelian hernia in the right anterolateral abdominal wall. Thoracic and lumbar MRI showed no lesions in the anterior horn of the spinal cord.

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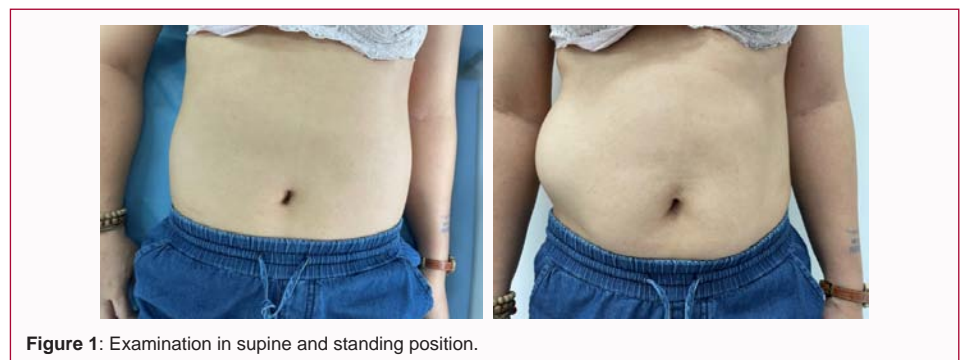


Figure 1: Examination in supine and standing position.

## Discussion/Conclusion

In 1895, Taylor described for the first time a segmental abdominal zoster paresis [1]. Since then, only a few similar cases have been described. Herpes zoster mainly affects the sensory nervous system and motor deficits are uncommon and mainly involve the muscles of the head. Abdominal pseudohernia due to segmental denervation is rare, probably because of overlapping innervation. The pathogenesis is thought to be due to a direct viral infection spreading from the dorsal root ganglion to the cells of the anterior horn. Abdominal wall paralysis can be caused by a variety of conditions affecting the peripheral nerves that innervate the abdominal muscles, including Hz, diabetes, lumbar disc herniation or spinal cord injury [2]. In 1972, Thomas recorded 1,210 patients with a diagnosis of Hz [3]. Of these patients, only 61 had segmental zoster paresis, most of them with cephalic zoster. Weakness of the abdominal muscles was noted in only two patients (0.2%). In a review by Chernev 36 individual cases were identified [4]. Usually, the herpetic rash preceded the development of pseudohernia with a mean delay of 3.5 weeks. Of

the 36 patients, 23 had a complete recovery, with a mean time of 4.9 months and a maximum of one year. It should be kept in mind that this rare complication of herpes zoster has a good prognosis, and usually recovers without sequela; therefore, physicians should reassure the patient, limit further studies, and avoid unnecessary surgery.

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