

Case Report

Post-herpetic abdominal pseudohernia – An uncommon/under-recognized complication of a common disease, herpes zoster – A case report

Rajalakshmi Ramalingam¹, Annie Priya Dharshini Inbamani¹, Gayathri Sundaram¹

¹Department of Dermatology, Srinivasan Medical College and Hospital, Trichy, Tamil Nadu, India.



***Corresponding author:**
Rajalakshmi Ramalingam,
Associate Professor,
Department of Dermatology,
Srinivasan Medical College and
Hospital, Trichy, Tamil Nadu,
India.
rajijipmer1982@gmail.com

Received : 24 August 2022
Accepted : 02 September 2022
Published : 14 September 2022

DOI
10.25259/CSDM_92_2022

Quick Response Code:



ABSTRACT

Acute zoster pain and post-herpetic neuralgia are the most common and nagging complications after herpes zoster. Sometimes, temporary paresis of the segmental nerves follows herpes zoster resulting in zoster paresis or muscle zoster. Here, we report a case of zoster paresis manifesting as post-herpetic abdominal pseudohernia. A 55-year-old male presented to the dermatology outpatient department with the complaints of intense pain, burning sensation, and paresthesia over the left side of his abdomen. He had a history of herpes zoster over the same site 2 weeks back. Then, he noticed a swelling over the left side of his abdomen, associated with bloating, decreased appetite, and easy satiety. Examination revealed hyperpigmented scars of herpes zoster in the T9-T11 dermatome along with an ipsilateral bulge of size 20 × 15 cm over the same site. The skin overlying the bulge was lax. The swelling increased in size following coughing and Valsalva maneuver. An ultrasonogram of the abdomen ruled out a ventral hernia. One should be aware of this entity, when examining patients with abdominal bulge along with herpes zoster scars, to avoid unnecessary surgeries.

Keywords: Herpes zoster, Post-herpetic, Pseudohernia, Abdominal wall, Zoster paresis

INTRODUCTION

Herpes zoster (Shingles) is a viral infection caused by reactivation of the neurotropic varicella zoster virus, remaining latent in the dorsal root ganglia of the spinal cord, after a primary infection, chickenpox. It is characterized by grouped vesicles on an erythematous edematous skin along a dermatome and is associated with pain, pruritus, and paresthesia. Acute zoster pain and post-herpetic neuralgia are the most common and nagging complications of herpes zoster. Sometimes, temporary paresis of the segmental nerves follows herpes zoster resulting in zoster paresis or muscle zoster. Ipsilateral facial nerve palsy, segmental paralysis of limbs, diaphragm, and abdominal musculature can also occur.^[1] Here, we report a case of zoster paresis manifesting as post-herpetic abdominal pseudohernia.

CASE REPORT

A 55-year-old male presented to the dermatology outpatient department with intense pain, burning sensation, and paresthesia over the left side of his abdomen. He gave a history of painful vesicular skin lesions over the same site 2 weeks back, for which he underwent native treatment.

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

©2022 Published by Scientific Scholar on behalf of CosmoDerma

The lesions resolved over a period of 10–14 days, leaving behind hyperpigmented scars, but the pain persisted. Then, he noticed a swelling over the left side of his abdomen. He gave history of bloating, decreased appetite, and easy satiety. He did not have any comorbidities such as diabetes or hypertension or a history of pre-existing hernias. He had undergone an abdominal surgery 30 years back (details of which were not known), which was evident by a midline scar. Examination revealed hyperpigmented scars of herpes zoster in the T9-T11 dermatome. There was a bulge of size 20 × 15 cm over the left side of his abdomen (hypochondrium) [Figures 1 and 2]. The skin overlying the bulge was lax. The swelling increased in size following coughing and Valsalva maneuver. An ultrasonogram of the abdomen revealed multiple prominent fluid-filled bowel loops which may be related to enteritis and ruled out a ventral hernia.



Figure 1: Post-herpetic scars along with pseudohernia – lateral view.



Figure 2: Post-herpetic scars along with pseudohernia – front view.

Electromyography was not done as it was considered unnecessary as there was a clear history of zoster, presence of scars along a dermatome, and sensory symptoms along the involved dermatome. Hence, a diagnosis of post-herpetic abdominal pseudohernia was made.

DISCUSSION

Zoster paresis can be seen in about 5% of all patients with HZ.^[2] The most common somatic manifestation is Ramsay hunt syndrome due to facial nerve palsy.^[3] Segmental paralysis of the limbs, diaphragm, and abdominal musculature can also occur. Visceral manifestations may involve GI tract and urinary bladder. Constipation and false bowel obstruction can occur due to decreased intestinal motility from autonomic neuropathy.^[4] Taylor reported the first case of post-herpetic abdominal pseudohernia (PHAP), in 1896.^[5] PHAP is defined as an ipsilateral dermatome-related paretic protrusion of abdominal wall/musculature in the corresponding myotome without any evidence of the muscular or aponeurotic defect or disruption.^[6] The estimated incidence is 0.17–0.77% of cases.^[7] The pathogenesis is thought to be related to the axonal loss and demyelination because of the spread of the viral infection from the dorsal root ganglion to the adjacent anterior horn cells or the motor nerve.^[8] In a systematic review conducted in October 2020 by MEDLINE search, which identified 72 published articles describing 83 cases, PHAP was more common in the elderly and among the men.^[7] The paresis usually involves one or two segments, and T11 was the most commonly affected segment. The temporal association of the vesicular rash and appearance of abdominal bulge vary. Although in majority of patients PHAP followed herpes zoster (77%–88.9%), PHAP with concurrent motor paralysis was seen in 7.2% of patients, PHAP precedes herpes zoster (8.4%). However, the mean time of onset between pseudohernia and HZ is 3–5 weeks, ranging from 1 to 8 weeks.^[7,8]

The onset is abrupt and it presents as an abdominal bulge or protrusion in the region of classically affected dermatomes. Relaxation of the abdominal wall will cause it to bulge with any increase in intra-abdominal pressure, giving rise to the term “pseudohernia.”^[6] Physical examination shows abdominal wall asymmetry, reducible protrusion of the abdominal wall, decreased or absent segmental reflexes, and hypoesthesia of the overlying skin. The pseudohernia usually becomes more prominent with standing or Valsalva maneuver.^[8]

Differential diagnosis includes true abdominal hernia such as a lumbar hernia, myelitis, spinal cord injury, iatrogenic or traumatic injury to the intercostal nerves, or other central causes of acute paralysis such as diabetes or radiculopathy from a prolapsed intervertebral disk.^[7]

Diagnosis is mainly clinical but complementary studies may be used in doubtful situations. Ultrasonography is useful to

rule out visceral involvement in relation to the abdominal wall compromise. Magnetic resonance imaging (MRI) could be helpful to define the extent of inflammation, as well as to exclude other causes of motor paresis such as tumors and radiculoneuropathies. Although abdominal computed tomography (CT) and MRI may show no abnormality, an electromyography may show denervation damage, which is confirmatory. It is generally not done in many patients as a routine procedure, as it is an invasive and expensive procedure, which may even yield variable and confusing findings.^[9]

The condition is thought to be self-limiting and expectant management is usually the only recommended treatment. Prognosis of PHAP is good, with a spontaneous recovery in about 80% of patients. Constipation is the most common complication of PHAP. Treatment includes conservative measures, such as mechanical support with a corset, adequate analgesia, and physical therapy to offer the patients symptomatic improvement.^[6-10] One should be aware of the entity of the benign and self-limiting PHAP when examining patients with abdominal bulge so that we can avoid unnecessary surgical intervention.

Our patient, who is a 55-year-old immunocompetent male with no comorbidities presented with an ipsilateral abdominal bulge, after 2–3 weeks of herpes zoster in the same dermatome with pain, paresthesia, bloating, and easy satiety after taking small feeds, was diagnosed clinically as PHAP. However, surgeon's opinion was obtained and ultrasonogram was done to rule out any muscular defects. The patient is still under regular follow-up, with minimal resolution of his symptoms at the end of 3-month follow-up.

CONCLUSION

PHAP has rarely been reported in the dermatology literature. Neurological complications such as abdominal muscle paresis may be more common than actually thought and are a poorly recognized entity. Most of the patients will present to the surgeons and the general practitioners with the GI complaints. Hence, it is important for all of us to recognize this rare complication of HZ to avoid unnecessary diagnostic studies and procedures.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Oliveira PD, dos Santos Filho PV, de Menezes Ettinger JE, Oliveira IC. Abdominal-wall postherpeticpseudohermia. *Hernia* 2006;10:364-6.
- Zaladonis AG, Applebaum D, Hsu S. Painful abdominal outpouching in an adult male. *Cureus* 2021;13:e12416.
- Wagner G, Klinge H, Sache MM. Ramsay hunt syndrome. *J Dtsch Dermatol Ges* 2012;10:238-44.
- Nakagawa H, Miyata Y. Ipsilateral abdominal bulge caused by postherpetic pseudohermia. *Am J Gastroenterol* 2021;116:1116.
- Taylor F, Mamsel RE. A case of shingles followed by paralysis of the abdominal muscle. *Guys Hosp Rep* 1896;52:37-43.
- Chrungoo RK, Chrungoo I, Abrol S, Bhardawaj R, Bali HS. Post herpetic abdominal pseudohermia. *J Indian Med Assoc* 2021;119:47-9.
- Yeap E, Hodgkins B, Suhardja TS. Abdominal pseudohermia secondary to herpes zoster: A systematic review. *Indian J Surg* 2021;84:623-33.
- Chernev I, Dado D. Segmental zoster abdominal paresis (zoster pseudohermia): A review of the literature. *PM R* 2013;5:786-90.
- Tirelli LL, Luna PC, Larralde M. Postherpetic abdominal pseudohermia. Presentation of a clinical case and literature review. *Int J Dermatol* 2019;58:497-9.
- Yoo J, Koo T, Park E, Jo M, Kim MS, Jue MS. Abdominal pseudohermia caused by herpes zoster: 3 Case reports and a review of the literature. *JAAD Case Rep* 2019;5:729-32.

How to cite this article: Ramalingam R, Inbamani AP, Sundaram G. Post-herpetic abdominal pseudohermia – An uncommon/under-recognized complication of a common disease, herpes zoster – A case report. *CosmoDerma* 2022;2:83.