Medical Science Journal for Advance Research

Vol. 6, No. 4, December 2025
e-ISSN: 2774-4892

Case of Unusual Symptoms After L1 Compression Fracture Relieved by Muscle Energy Techniques (MET) and Tender Point Acupressure

Kwi Suk Ju[1*], Yun Gyong Kim[1], Mok Ran Ri[1], Un Mi Kim[1]

[1] *Institute of Chiropractic and Developmental Disorders of Children, Pyongyang University of Medical Sciences, DPRK.*

*** Corresponding author Email:** yj.ri1998@star-co.net.kp

ABSTRACT

Background: *This case had a 4 years long lasting story of unusual symptoms of penile cold paresthesia and pain, perianal tinglingin addition to severe back pain and physical examination showed Sacroiliac joint dysfunction after L1 compression fracture. Vertebral compression fracture may usually result low back pain, limited movement, kyphosis, lower extremity pain, and weakness, urinary dysfunction or urinary incontinence. But the symptoms of the cold paresthesia and pain of penis as well as perianal tingling are uncommon after L1 compression fracture, it is why we report this case.* ***Conclusion:*** *MET to the sacral torsion combined with tender point acupressure along by the nerve may benefit unusual symptoms after L1 compression fracture.*

Keywords: Vertebral compression fracture, Penile cold paresthesia and pain, Low back pain, Muscle energy technique, Acupressure.

Article Information

Received: October 29, 2025; Revised: November 20, 2025; Online: December, 2025

INTRODUCTION

VCF is often well-defined in the thoracolumbar transition zone, SIJ disorder after compressed fractures of the thoracolumbar area is not rare. It is considered that the gravity line shifts more forward, and the burden on the SIJ increases following the progress of thoracic kyphosis and therefore, it is important to examine a patient not only with the intent to take care of the fracture site but with a recognition that SIJ disorder may emerge after compressed fractures of the thoracolumbar area[1].

MET is a form of osteopathic manipulative diagnosis and treatment in which the patient's muscles are actively used on request, from a precisely controlled position, in a specific direction, and against a distinctly executed physician counterforce. MET is a direct technique used to mobilize a restricted joint [2].

Anatomy

The perineum, penis and anus are all innervated by the branches of the pudendal nerve. The pudendal nerve forms anteriorly to the lower part of the piriformis muscle from ventral divisions of S2 to S4. It leaves the pelvic cavity through the greater sciatic foramen, inferior to the piriformis muscle, and enters the gluteal region.

It courses into the perineum by immediately passing around the sacrospinous ligament, where the ligament joins the ischial spine, and through the lesser sciatic foramen (this course takes the nerve out of the pelvic cavity, around the peripheral attachment of the pelvic

https://doi.org/10.46966/msjar.v6i4.326

Published by: READ INSTITUTE

floor, and into the perineum). It innervates skin and skeletal muscles of the perineum, including the external anal and external urethral sphincters[3].

Case Report

It was a 53–year old male who had serious injury to the lumbar region after traffic accident in November 2018. At that time he was diagnosed as having L1 compression and had a rehabilitation program for low back pain, urination disorder and constipation with some relief but recurrence. Since November 2021, penile cold paresthesia and pain had developed as well as those symptoms. In June 2024, the patient presented with worse penile cold paresthesia and pain, perianal tinting in addition to severe back pain and stiffness.

Examination revealed the following:

-Spinal motion test

Standing flexion test: Positive right Seated flexion test: Positive right

Right sacral sulcus: Anterior(ventral) deep, Leg length test(prone position)-Right leg is longer.

Right ASIS: Caudad (down), Th12 left TP Protrusion, L2-L4 right TP Protrusion.

-Severe tenderness(8/10 points with NRS) during deep palpation around the ischial spine attachment of the right
sacrospinal ligament.

Back pain; Severe(8/10 points with NRS), penile pain (7/10 points with NRS).

-Radiologic findings

·**MRI** showed compression fracture of L1 vertebral body.

·**X-ray** showed L1 compression fractures, osteophyte formation, left rotation of L3, L4 spinous process, right rotation of L5 spinous process on AP view.

Diagnosis

SIJ dysfunction(right) after L1 compressive fracture Ilium-Right anterior iliac rotation Sacrum-Forward torsion about a left oblique axis (Left-on-Left), Th12 left rotation, L2-L4 right rotation

Differential Diagnosis: Cauda equina syndrome

Treatment

-Sacral region: Left-on-Left MET(forward torsion about a left oblique axis)

-Iliac region: the right anterior rotation MET(the right anterior innominate dysfunction)

-Lumbar region: L2-4 right rotation MET

-Thoracic region: T12 left rotation MET

With this, the tender point acupressure and deep massage along by the pudendal nerve navigation (the area of attachment of the right sacrospinous ligament to the ischial spine) were applied for 15 minutes. Treatment was given every other day, 7 sessions in all.

Outcome

-Mild low back pain (3/10 with NRS), no penile pain (0/10 with NRS), no tenderness (0/10 with NRS) during deep palpation around the ischial spine attachment of the right sacrospinaous ligament.

-No penile cold paresthesia.

-No perianal tingling.

DISCUSSION

In this case, the patient had right rotation of L2-L4 vertebrae, anterior rotation of right ilium and left rotation of sacrum leading to “locking” of right sacroiliac joint, as a result of mechanical compensation after L1 compression after L1 compression.fracture. The perineal, penile and anal nerves are branches of the pudendal nerve, which may cause various symptoms when the sacrum rotates and affects its course, hence, may lead to penile cold paresthesia and pain and perianal tingling.

Recovery of normal muscle-nerve relationship by mobilization of the “locked” right SIJ by applying MET on the lumbar and iliac regions with tender point acupressure

along by the pudendal nerve relieved the penile par-aesthesia and pain, as well as perianal tingling.

CONCLUSION

MET to the sacral torsion combined with tender point acupressure along by the nerve may benefit unusual symptoms after L1 compression fracture.

ACKNOWLEDGMENT

None.

REFERENCES

1. Eiichi Murakami, Sacroiliac Joint Disorder Accurately Diagnosing Low Back Pain, Springer Nature Singapore Pte Ltd. 2019.

2. Alexander S. Nicholas, Evan A.Nicholas. Atlas of osteopathic techniques. 2012.

3. Richard Drake, A Wayne Vogl, Adam W M Mitchell. Gray's Anatomy For Students, 2020.