

Bertolotti's Syndrome: Lumbosacral Transitional Vertebrae (LSTV): Case Report and Article Review

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Abstract

Background: Bertolotti's syndrome is an anatomical variant occurring at the lumbosacral junction between the 5th lumbar vertebrae (L5) and the 1st sacral vertebrae (S1). Bertolotti's syndrome, as well as lumbosacral transitional vertebrae (LSTV), is a frequently encountered source of low back pain for physicians in rheumatology practice.

Case Description: A 28-year-old single female presented to the rheumatology clinic in December 2022 with complaints of lower back pain. The pain was continuous but increased with daily activities. Plain radiographic studies demonstrate elongation of the L5 transverse process and sacralization of L5 vertebrae. Magnetic resonance imaging (MRI) was performed, which revealed a fusion of the transverse process of L5 to the sacrum with uncomplicated two-sided pseudoarticulations, which confirmed a diagnosis of Bertolotti's Syndrome. She was treated with a short course of NAIDS and with ideal benefit. In June 2024, she suffered again from low back pain with the same character, but she added left lower limb paresthesia. Magnetic imaging study of the lumbosacral spine now shows symmetrical central posterior disc at the level of L4 & L5, causing indentation of the ventral aspect of thecal sac and mild bilateral neural foraminal narrowing and nerve root compression. A conservative approach with analgesia and home physiotherapy was advised. Pregabalin was administered in escalating doses was in progress.

Conclusion: Bertolotti's Syndrome is not precisely linked to the patient's complaints, making it a diagnostic and therapeutic challenge.

Keywords: Bertolotti syndrome, Low back pain, Lumbarization, Sacralization, Lumbosacral transitional vertebra

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Introduction

Lumbosacral transitional vertebrae (LSTV), which are common anatomical variations occurring at the lumbosacral junction between the 5th lumbar vertebrae (L5) and the 1st sacral vertebrae (S1), share the structural features of both sacral and lumbar vertebrae and encompass both lumbarization of the uppermost sacrum and sacralization of the lowermost lumbar vertebrae.

Lumbarization of the 1st sacral vertebrae consists of an anomalous joint that has fully established facet joints similar to lumbar spine type, but with more square-shaped vertebrae, and with an established, normally appearing and functioning disk. Again, when the 5th lumbar vertebrae sacralized, depicted by expanded lengthened transverse processes that completely fused to the bones of the sacral area, nevertheless, more commonly, lumbosacral transitional vertebrae (LSTV) are partial or one-sided. (1)

Bertolotti's syndrome, as it is considered part of lumbosacral transitional vertebrae (LSTV), is frequently