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Transverse process fractures: a clinical series and coronal injury of the spine

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Transverse process fractures (TPFs) in trauma patients frequently are diagnosed using computed tomography and result in severe pain and limitation of motion. However, there is no accepted standard of care. Thus, these fractures can be treated with excessive measures or inadequately treated. In this study, diagnosis and treatment of transverse process fractures are examined and concluded that;

Transverse process fractures can be treated quickly and effectively with nonsteroidal anti-inflammatory drugs, muscle relaxants, flexible support corsets, and early mobilization after excluding any accompanying organ injuries or other spinal injuries.

TPFs most often occur during backward falls or blows to the back, commonly low-energy injuries. This trauma mechanism can be described as a "coronal injury of the spine".

When TPF is detected by the emergency medical team without any other spinal injury in a trauma patient, abdominal, urogenital, and thoracic organ injury examinations should be carried out, especially in cases of 4 or more Transverse TPFs. Because Transverse Processes are junction points, these systems are connected via muscles and fascia. In cases in which TPFs are detected on CT imaging without another spinal injury, MRI is unnecessary.

TPFs occur after coronal injury of the spine, commonly in Low Energy Injuries or during blunt abdominal trauma in High Energy Injuries. Both mechanisms cause fascia and muscle injury around the Transverse Processes and result in inflammation, edema, and hemorrhage. These injuries can be treated effectively with NSAIDs, muscle relaxants, and a mucosal protective agent for 1 week; flexible support corset with steel stays for 2-6 weeks; early patient mobilization; and sick notes for 2-6 weeks to promote rest. The flexible support corset is used for muscle immobilization. The case should be treated as a stabilized spinal injury, and its management should be the same as a myofascial injury rather than a spinal injury.

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Biography

Güliz D. Gültekin is currently working in İstanbul Medeniyet University, Göztepe State Hospital neurosurgery department as a neurosurgeon. She complemented Istanbul University İstanbul medikal faculty in 1990 and completed neurosurgical education in 2012. She has been working since then as a neurosurgeon.

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