

DIAGNOSTICS

# AOSpine Thoracolumbar Spine Injury Classification System

## Fracture Description, Neurological Status, and Key Modifiers

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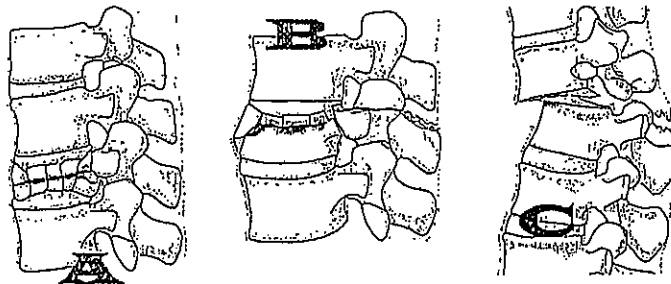
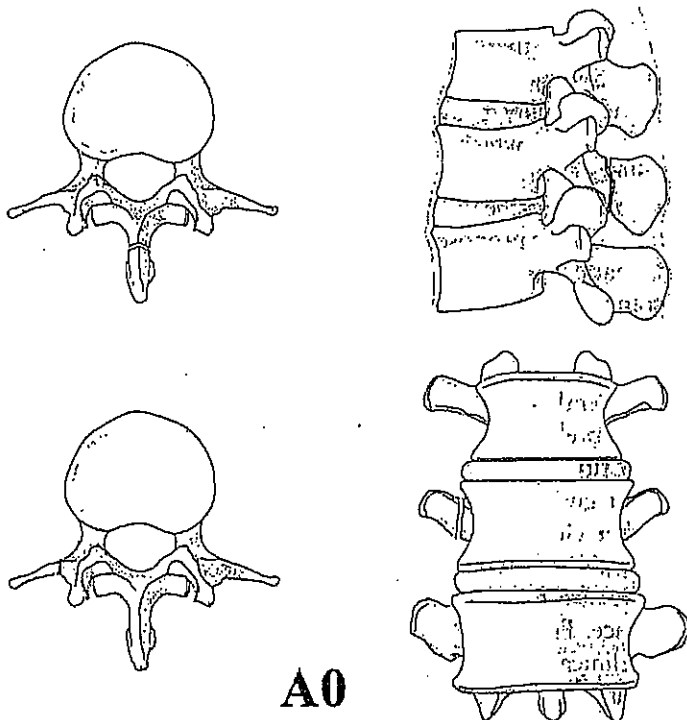
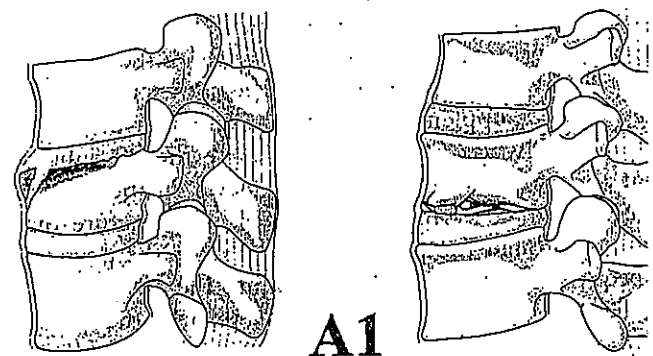


Figure 1. The 3 basic types—Type A: Compression injuries. Failure of anterior structures under compression with intact tension band. Type B: Failure of the posterior or anterior tension band. Type C: Failure of all elements leading to dislocation or displacement.



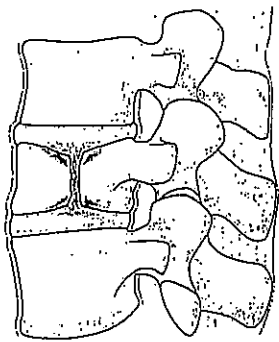
**A0**

Figure 3. Subtype A0—Minor injuries: Injuries such as transverse process or spinous process fractures, which do not compromise the mechanical integrity of the spinal column. Figure 3 demonstrates schematic drawing of this injury while Figure 3.2 available at Supplemental Digital Content <http://links.lww.com/BRS/A813> shows a CT scan of a patient with this injury. CT indicates computed tomography.



**A1**

Figure 4. Subtype A1—Wedge Compression: Fracture of a single plate without involvement of the posterior wall of the vertebral. Vertebral canal is intact. Figure 4 demonstrates schematic drawing this injury while Figure 4.2 available at Supplemental Digital Content <http://links.lww.com/BRS/A814> shows a CT scan of a patient with injury. CT indicates computed tomography.



**A2**

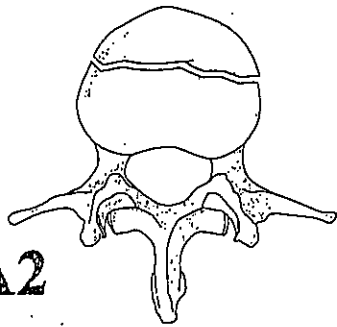
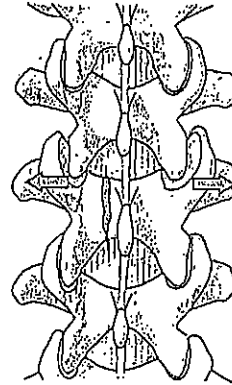
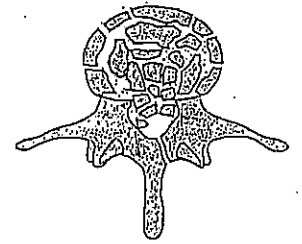
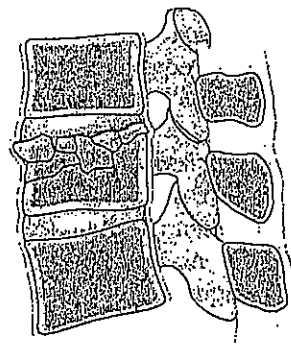


Figure 5. Subtype A2—Split or pincer-type: Fracture of both endplates without involvement of the posterior wall of the vertebral body. Figure 5 demonstrates schematic drawing of this injury while Figure 5.2 available at Supplemental Digital Content <http://links.lww.com/BRS/A815> shows a CT scan of a patient with this injury. CT indicates computed tomography.



**A3**

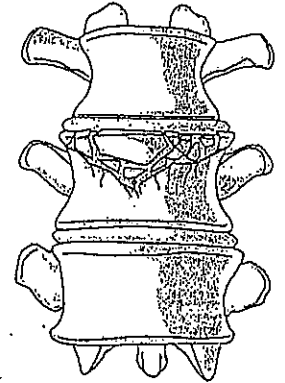
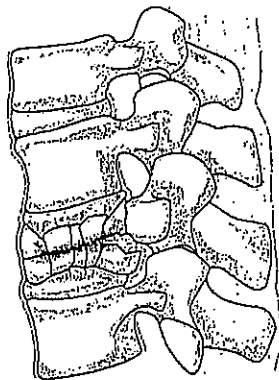
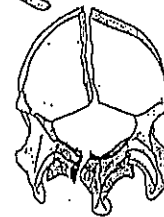
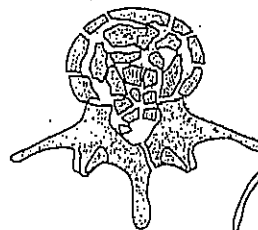
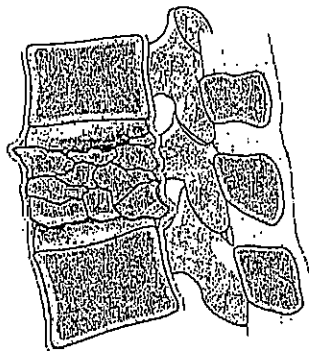


Figure 6. Subtype A3—Incomplete burst: Fracture with any involvement of the posterior wall of the vertebral body. Only a single endplate fractured. Vertical fracture of the lamina is usually present and does not indicate a tension band failure. Figure 6 demonstrates schematic drawing of this injury while Figure 6.2 available at Supplemental Digital Content <http://links.lww.com/BRS/A816> shows a CT scan of a patient with this injury. CT indicates computed tomography.



**A4**

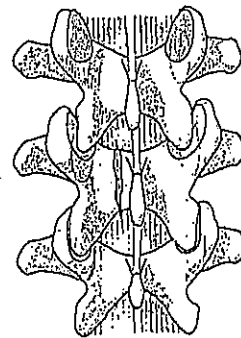
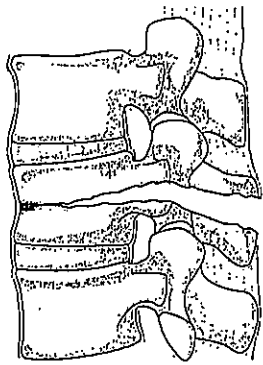
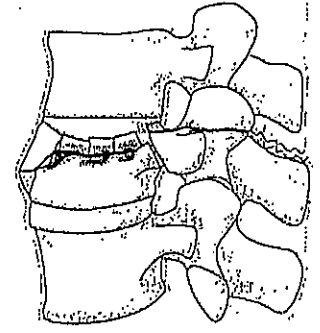
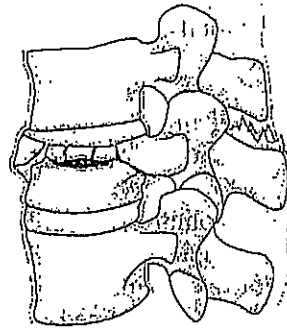
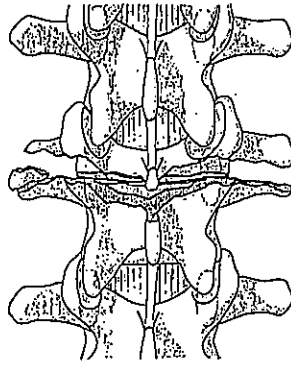


Figure 7. Subtype A4—Complete burst: Fracture with any involvement of the posterior wall of the vertebral body and both endplates. Vertical fracture of the lamina is usually present and does not indicate a tension band failure. Figure 7 demonstrates schematic drawing of this injury while Figure 7.2 available at Supplemental Digital Content <http://links.lww.com/BRS/A817> shows a CT scan of a patient with this injury. CT indicates computed tomography.



**B1**



**B2**

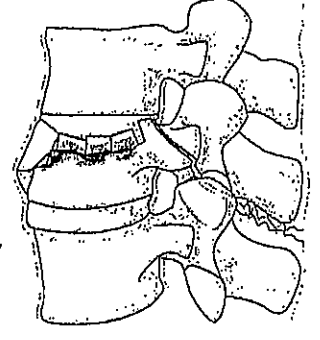
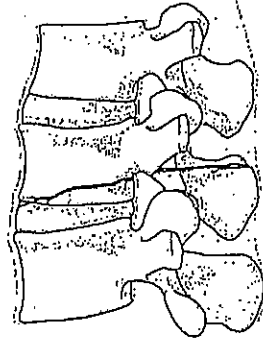
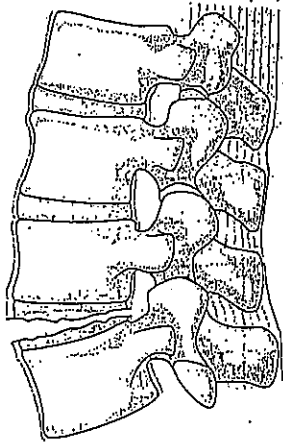


Figure 9. Subtype B2—Posterior tension band disruption: Bony and/or ligamentary failure of the posterior tension band together with a type A fracture. type A fracture should be classified separately. This example should be classified as: T12-L1 "type B2" with T12 "A4" according to the combination rules. Figure 9 demonstrates schematic drawing of this injury while Figure 9.2 available at Supplemental Digital Content <http://links.lww.com/BRS/A819> shows a CT scan of a patient with this injury. CT indicates computed tomography.



**B3**

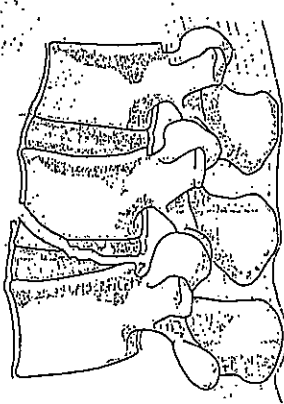
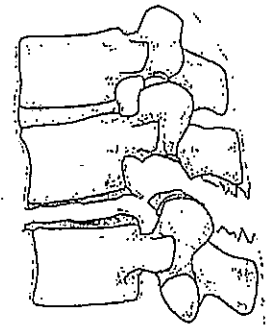
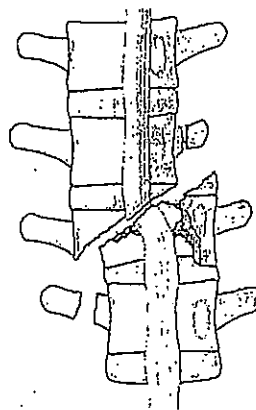


Figure 10. Subtype B3—Hyperextension injury: Injury through the disc or vertebral body leading to a hyperextended position of the spinal column, which is commonly seen in ankylotic disorders. Anterior tension band, notably the ALL is ruptured but there is a posterior hinge preventing further displacement. Figure 10 demonstrates schematic drawing of this injury while Figure 10.2 available at Supplemental Digital Content <http://links.lww.com/BRS/A820> shows a CT scan of a patient with this injury. CT indicates computed tomography. CT indicates computed tomography.



**C**

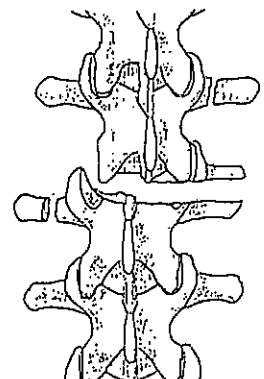
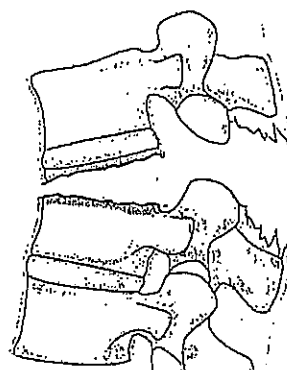


Figure 11. Type C—Translation/displacement: There are no subtypes as because of the dissociation between cranial and caudal segments various configurations are possible in different images, which are not relevant. Is combined with subtypes of A to denote the associated vertebral body fractures if necessary. Figure 11 demonstrates schematic drawing of this injury while Figure 11.2 available at Supplemental Digital Content <http://links.lww.com/BRS/A821> shows a CT scan of a patient with this injury. CT indicates