What is a "posttraumatic deformity"?

Posttraumatic deformity is the term used to describe the unsatisfactory results of the therapeutic treatment in a vertebral fracture.

What are the possible causes of the development of a posttraumatic deformity?

· Following conservative treatment
  A deformity may result if the fracture type was not correctly diagnosed (stable/unstable fracture) or if a fracture is overlooked.
· Deformities may remain after surgical treatment if
  · the fracture type was not correctly diagnosed
  · the surgical method used was not suited to the specific fracture type
  · a postoperative local infection occurs that prevents stable bony healing of the fracture
  · a posttraumatic osteonecrosis occurs involving the death of bony tissue as a result of local circulatory dysfunctions in the fracture region, preventing bony healing.

How can complications leading to posttraumatic deformity be avoided?

· By understanding the pathomechanical principles essential to the functioning of the mobile segment (tension band system/load-sharing principle).
· Attention must be paid to these biomechanical principles when treating the fracture.

What aspects are important for the correction of posttraumatic deformities?

Corrective procedures used in treatment of posttraumatic deformities, called "salvaging methods," present considerable technical difficulties, especially in cases of vertebral traumas that have already been operated on, and involve a high rate of neurological complications. For this reason, such operations should only be undertaken in specially equipped clinics.
The restoration of the sagittal spinal column profile is of particular importance in such procedures. The following surgical methods can be used to correct posttraumatic deformities:

· Corpectomy and dorsal spondylodesis
· Dorsal straightening spondylodesis
· Pedicle subtraction osteotomy with dorsal lumbar spondylodesis