

## REFERENCES

- [1] H. Wang *et al.*, “Epidemiology of traumatic spinal fractures: Experience from medical university-affiliated hospitals in Chongqing, China, 2001-2010: Clinical article,” *J. Neurosurg. Spine*, vol. 17, no. 5, pp. 459–468, 2012, doi: 10.3171/2012.8.SPINE111003.
- [2] W. P. Shuman, J. V. Rogers, and M. E. Sickler, “Thoracolumbar burst fractures: CT dimensions of the spinal canal relative to postsurgical improvement,” *Am. J. Neuroradiol.*, vol. 6, no. 3, pp. 337–341, 1985, doi: 10.2214/ajr.145.2.337.
- [3] S. Rajasekaran, R. M. Kanna, and A. P. Shetty, “Management of thoracolumbar spine trauma An overview,” *Indian J. Orthop.*, vol. 49, no. 1, pp. 72–82, 2015, doi: 10.4103/0019-5413.143914.
- [4] K. Alpantaki *et al.*, “Thoracolumbar burst fractures: A systematic review of management,” *Orthopedics*, vol. 33, no. 6, pp. 422–429, 2010, doi: 10.3928/01477447-20100429-24.
- [5] T. Okamoto, M. Neo, S. Fujibayashi, H. Ito, M. Takemoto, and T. Nakamura, “Mechanical implant failure in posterior cervical spine fusion,” *Eur. Spine J.*, vol. 21, no. 2, pp. 328–334, 2012, doi: 10.1007/s00586-011-2043-8.
- [6] A. Soroceanu *et al.*, “Radiographical and Implant-Related Complications in Adult Spinal Deformity Surgery: Incidence, Patient Risk Factors, and Impact on Health-Related Quality of Life,” *Spine (Phila. Pa. 1976)*, vol. 40, no. 18, pp. 1414–1421, Sep. 2015, doi: 10.1097/BRS.0000000000001020.
- [7] A. Gupta, K. Das, K. Bansal, H. Singh Chhabra, and M. Arora, “Should Implant Breakage Be Always Considered as Implant ‘Failure’ in Spine Surgery: Analysis of Two Cases and Literature Review,” *Cureus*, vol. 13, no. 5, pp. 1–11, 2021, doi: 10.7759/cureus.15233.
- [8] Y.-H. Kang, “Anatomy and Physiology of Lumbar Spine,” *J. Korean Soc. Spine Surg.*, vol. 8, no. 3, p. 264, 2001, doi: 10.4184/jkss.2001.8.3.264.
- [9] B. M. Boszczyk, A. A. Boszczyk, and R. Putz, “Comparative and functional anatomy of the mammalian lumbar spine,” *Anat. Rec.*, vol. 264,

- no. 2, pp. 157–168, Oct. 2001, doi: 10.1002/ar.1156.
- [10] N. Bogduk, “Clinical Anatomy of the Lumbar Spine and Sacrum,” 1997. [Online]. Available: <https://api.semanticscholar.org/CorpusID:70636323>
- [11] A. M. R. Agur, M. J. Lee, and J. C. B. Grant, *Grant’s atlas of anatomy*, 10th ed. Philadelphia SE - xvi, 760 pages : color illustrations ; 28 cm: Lippincott Williams & Wilkins Philadelphia, 1999. doi: LK - <https://worldcat.org/title/41049668>.
- [12] S. J. Edmondston and K. P. Singer, “Thoracic spine: anatomical and biomechanical considerations for manual therapy,” *Man. Ther.*, vol. 2, no. 3, pp. 132–143, Aug. 1997, doi: 10.1054/math.1997.0293.
- [13] A. A. 3rd White, “Analysis of the mechanics of the thoracic spine in man. An experimental study of autopsy specimens.,” *Acta Orthop. Scand. Suppl.*, vol. 127, pp. 1–105, 1969, doi: 10.3109/ort.1969.40.suppl-127.01.
- [14] S. Goh *et al.*, “Influence of age and gender on thoracic vertebral body shape and disc degeneration: an MR investigation of 169 cases.,” *J. Anat.*, vol. 197 Pt 4, no. Pt 4, pp. 647–657, Nov. 2000, doi: 10.1046/j.1469-7580.2000.19740647.x.
- [15] C. Liebsch and H.-J. Wilke, “Chapter 3 - Basic Biomechanics of the Thoracic Spine and Rib Cage,” in *Biomechanics of the Spine*, F. Galbusera and H.-J. Wilke, Eds., Academic Press, 2018, pp. 35–50. doi: <https://doi.org/10.1016/B978-0-12-812851-0.00003-3>.
- [16] R. M. Kanna, D. C. Raja, A. P. Shetty, and S. Rajasekaran, “Thoracolumbar Fracture Dislocations Without Spinal Cord Injury: Classification and Principles of Management,” *Glob. Spine J.*, vol. 11, no. 1, pp. 63–70, Nov. 2019, doi: 10.1177/2192568219890568.
- [17] M. Q. Azam and M. Sadat-Ali, “The Concept of Evolution of Thoracolumbar Fracture Classifications Helps in Surgical Decisions.,” *Asian Spine J.*, vol. 9, no. 6, pp. 984–994, Dec. 2015, doi: 10.4184/asj.2015.9.6.984.
- [18] R. WATSON-JONES, “THE RESULTS OF POSTURAL REDUCTION OF FRACTURES OF THE SPINE,” *JBJS*, vol. 20, no. 3, 1938, [Online]. Available:

[https://journals.lww.com/jbjsjournal/fulltext/1938/20030/the\\_results\\_of\\_postural\\_reduction\\_of\\_fractures\\_of.2.aspx](https://journals.lww.com/jbjsjournal/fulltext/1938/20030/the_results_of_postural_reduction_of_fractures_of.2.aspx)

- [19] E. A. Nicoll, "Fractures of the dorso-lumbar spine," *J. Bone Joint Surg. Br.*, vol. 31, no. 3, pp. 376–394, 1949.
- [20] S. D. Gertzbein, "Scoliosis Research Society. Multicenter spine fracture study.," *Spine (Phila. Pa. 1976)*, vol. 17, no. 5, pp. 528–540, 1992.
- [21] K. Omran, H. A. Ali, A. Saleh, A. Omar, I. Elhawery, and A. Z. A. Alkhooly, "One Stage Anterior Reconstruction and Posterior Instrumentation in Surgical Management of Thoracolumbar Spine Fractures," *Open J. Orthop.*, vol. 05, pp. 6–15, 2015, [Online]. Available: <https://api.semanticscholar.org/CorpusID:6036818>
- [22] A. Warburton, S. J. Girdler, C. M. Mikhail, A. Ahn, and S. K. Cho, "Biomaterials in spinal implants: A review," *Neurospine*, vol. 17, no. 1, pp. 101–110, 2020, doi: 10.14245/ns.1938296.148.
- [23] V. K. Meena, P. Kumar, P. Kalra, and R. K. Sinha, "Additive manufacturing for metallic spinal implants: A systematic review," *Ann. 3D Print. Med.*, vol. 3, p. 100021, 2021, doi: 10.1016/j.stlm.2021.100021.
- [24] W. Davis *et al.*, "Modern spinal instrumentation . Part 1 : Normal spinal implants," *Clin. Radiol.*, vol. 68, no. 1, pp. 64–74, 2013, doi: 10.1016/j.crad.2012.05.001.
- [25] P. J. Rao, M. H. Pelletier, W. R. Walsh, and R. J. Mobbs, "Spine Interbody Implants: Material Selection and Modification, Functionalization and Bioactivation of Surfaces to Improve Osseointegration," *Orthop. Surg.*, vol. 6, no. 2, pp. 81–89, 2014, doi: 10.1111/os.12098.
- [26] B. A. Kornah, F. H. Zayed, and A. K. A. Elkomy, "Review of Spinal Pedicle Screws," *Egypt. J. Hosp. Med.*, vol. 76, no. 6, pp. 4307–4311, 2019, doi: 10.21608/ejhm.2019.43812.
- [27] W. Cho, S. K. Cho, and C. Wu, "The biomechanics of pedicle screw-based instrumentation," *J. Bone Jt. Surg. Br. Vol.*, vol. 92, no. 8, pp. 1061–1065, 2010.
- [28] D. King, "Internal fixation for lumbosacral fusion," *JBJS*, vol. 30, no. 3, pp. 560–578, 1948.

- [29] H. PR, "Reduction of severe spondylolisthesis in children," *South Med J*, vol. 62, pp. 1–7, 1969.
- [30] H. H. Boucher, "A method of spinal fusion," *J. Bone Joint Surg. Br.*, vol. 41, no. 2, pp. 248–259, 1959.
- [31] R. W. Gaines, "Current Concepts Review The Use of Pedicle-Screw Internal Fixation for the Operative Treatment of Spinal Disorders \*," *JBJS-Am*, vol. 82-A, no. 10, pp. 1458–1476, 1984.
- [32] H. Yoshihara, "Rods in spinal surgery: A review of the literature," *Spine J.*, vol. 13, no. 10, pp. 1350–1358, 2013, doi: 10.1016/j.spinee.2013.04.022.
- [33] T. B. Hunter, M. T. Yoshino, R. B. Dzioba, R. A. Light, and W. G. Berger, "Medical devices of the head, neck, and spine," *Radiographics*, vol. 24, no. 1, pp. 257–285, 2004.
- [34] W. Lehmann, D. Briem, M. Blauth, and U. Schmidt, "Biomechanical comparison of anterior cervical spine locked and unlocked plate-fixation systems," *Eur. Spine J.*, vol. 14, no. 3, pp. 243–249, 2005, doi: 10.1007/s00586-004-0746-9.
- [35] T.Y. Yang, *Finite element Structural Analysis*. Prentice-Hall, 1986.
- [36] A. K. Roth *et al.*, "Validation of a finite element model of the thoracolumbar spine to study instrumentation level variations in early onset scoliosis correction," *J. Mech. Behav. Biomed. Mater.*, vol. 117, no. February, p. 104360, 2021, doi: 10.1016/j.jmbbm.2021.104360.
- [37] J. P. Wang *et al.*, "Finite element analysis of the spondylolysis in lumbar spine," *Biomed. Mater. Eng.*, vol. 16, no. 5, pp. 301–308, 2006.
- [38] C. Veiga, J. P. Davim, and A. Loureiro, "Properties and applications of titanium alloys : A brief review PROPERTIES AND APPLICATIONS OF TITANIUM ALLOYS : A BRIEF REVIEW," no. July 2016, 2012.
- [39] W. Schmoelz, K. D. Schaser, C. Knop, M. Blauth, and A. C. Disch, "Extent of corpectomy determines primary stability following isolated anterior reconstruction in a thoracolumbar fracture model.," *Clin. Biomech. (Bristol, Avon)*, vol. 25, no. 1, pp. 16–20, Jan. 2010, doi: 10.1016/j.clinbiomech.2009.09.010.
- [40] H. Lu, Q. Zhang, F. Ding, Q. Wu, and R. Liu, "Establishment and

validation of a T12-L2 3D finite element model for thoracolumbar segments.,” *Am. J. Transl. Res.*, vol. 14, no. 3, pp. 1606–1615, 2022.

