



Paul D. Sponseller, M.D.

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RESEARCH GOALS:

1. Define natural history of skeletal features of Marfan syndrome
2. Understand basic science of Marfan skeletal phenotype
3. Improve skeletal treatment in Osteogenesis Imperfecta
4. Advance treatment of pediatric spinal deformity
5. Improve care of pediatric skeletal trauma

RESEARCH SUMMARY AND SIGNIFICANCE: My research is primarily clinical and focuses on genetic disorders, spinal deformity and trauma. My goal is to put clinical decision making on a scientific footing.

CURRENT PROJECTS:

Outcomes of spinal deformity care in CP, Loeys-Dietz and Marfan syndrome
Understanding Skeletal development and degeneration in Mouse model of Marfan syndrome.
Prevention of infection in spinal deformity
Improving pelvic fixation

RECENT PUBLICATIONS:

1. Dobbs MB, Lenke LG, Szymanski DA, Morcuende JA, Weinstein SL, Bridwell KH, Sponseller PD: Prevalence of neural axis abnormalities in patients with infantile idiopathic scoliosis. *J Bone Joint Surg Am* 2002; 84-A: 2230-4
2. Sponseller PD: Sizing Up Scoliosis. Editorial, *J Am Med Assoc* 2003. 289(5): 608-9.
3. Foran JRH, Pyeritz RE, Dietz HCIII, **Sponseller PD**: Characterization of the symptoms associated with dural ectasia in the Marfan patient. *Am J Med Genet A*. 2005 Apr 1;134(1):58-65.
4. O'Neill PJ, Karol LA, Shindle MK, Elerson EE, BrintzenhofeSzoc KM, Katz DE, Farmer KW, Sponseller PD. Decreased orthotic effectiveness in overweight patients with adolescent idiopathic scoliosis. *J Bone Joint Surg Am*. 2005 May;87(5):1069-74.
5. Jones KB, Myers L, Judge DP, Kirby PA, Dietz HC, **Sponseller PD**. Toward an understanding of dural ectasia: a light microscopy study in a murine model of Marfan syndrome. *Spine*. 2005 Feb 1;30(3):291-3.
6. Register BC, Hansel DE, Hutchins GM, Levey EB, **Sponseller PD**, Leet AI. Postoperative gastric rupture in children with cerebral palsy. *J Pediatr Orthop*. 2005 May-Jun;25(3):280-2.
7. Launay F, Leet AI, **Sponseller PD**. Pediatric spinal cord injury without radiographic abnormality: a meta-analysis. *Clin Orthop Relat Res*. 2005 Apr;(433):166-70.
8. Jones KB, Myers L, Judge DP, Kirby PA, Dietz HC, **Sponseller PD**. Toward an understanding of dural ectasia: a light microscopy study in a murine model of Marfan syndrome. *Spine*. 2005 Feb 1;30(3):291-3.

9. **Sponseller PD**, Jones KB, Ahn NU, Erkula G, Dietz HC III: Protrusio Acetabuli in Marfan Syndrome: Age-Related Prevalence and Associated Hip Function. *J. Bone Joint Surg.* 2006; 88-A. p. 486-495
10. Vitale MG, Vitale MA, Lehman CL, Hyman JA, Skaggs DA, Roye D, **Sponseller PD**, Flynn JM: Towards a National Pediatric Musculoskeletal Trauma Outcomes Registry: the Pediatric Orthopaedic Trauma Outcomes Research Group (POTORG) experience. *J Pediatr Orthop.* 2006 Mar-Apr;26(2):151-6.
11. Moroz L, Launay F, Frick S, Kocher MM, Newton PO, **Sponseller PD**, Flynn JM: Titanium elastic nailing of fractures of the femur in children. Predictors of complications and poor outcome. *J Bone Joint Surg Br.* 2006 Oct;88(10):1361-6.
12. Buchowski J, Bhatnagar R, Skaggs D, **Sponseller PD**: Temporary Internal Distraction as an aid to correction of severe scoliosis. *J Bone Joint Surg* 2006; 88A: 2035-2041.
13. Srikumaran U, Woodard EJ, Leet AI, Rigamonti D, **Sponseller PD**, Ain MC: Pedicle and spinal canal parameters of the lower thoracic and lumbar vertebrae in the achondroplast population. *Spine*, in press, 2007.
14. **Sponseller PD**, Yazici M, Demetroacopoulos C, Emans JB: Evidence basis for management of spine and chest wall deformities in children. *Spine.* 2007 Sep 1;32(19 Suppl):S81-90.
15. Lonner BS, Newton PO, Betz RR, Scharf C, O'Brien M, **Sponseller PD**, Lenke LG, Crawford A, Lowe T, Letko L, Harms J, Shufflebarger H: Operative Management of Scheuermann's Kyphosis in 78 Patients. *SPINE* 2007; 32(24): 2644-2652.
16. Danielsson AJ, Gartonek A, Levey E, McHale K, **Sponseller P**, Saraste H: Associations between Orthopaedic findings, Ambulation and health-related quality of life in children with myelomeningocele. *J Child. Orthop* 2008 2(1): 45-54.
17. **Sponseller PD**, Takanaga RK, Newton P, Boachie O, Flynn J, Letko L, Betz R, Bridwell K, Gupta M, Marks M, Bastrom T. The Use of Traction in Treatment of Severe Spine Deformities. *Spine.* 2008 Oct 1;33(21):2305-9
18. Roach J, Skaggs DL, **Sponseller PD**, MacLeod LM: Is Research Presented at the Scoliosis Research Society Annual Meeting Influenced by Industry Funding? *Spine.* 2008 Sep 15;33(20):2208-12.
19. Schaeffer AJ, Purves JT, King JA, **Sponseller PD**, Jeffs RD, Gearhart JP. Complications of Primary Closure of Bladder exstrophy. *J Urol.* 2008 Oct;180(4 Suppl):1671-4; discussion 1674.
20. Bahk MS, Srikumaran U, Ain MC, Erkula G, Leet AI, Sargent MC, **Sponseller PD**. Patterns of Supracondylar Humerus Fracture. *J Pediatr Orthop.* 2008 Jul-Aug;28(5):493-9.
21. Hinton RY, Rivera VR, Pautz MJ, **Sponseller PD**. Ligamentous Laxity of the Knee During Childhood and Adolescence. *J Pediatr Orthop.* 2008 Mar;28(2):184-7.
22. Yang JS, **Sponseller PD**. Severe cervical kyphosis complicating traction in a patient with Marfan Syndrome. *Spine.* 2009 Jan 1;34(1):E66-9
23. Yang JS, **Sponseller PD**, Yazici M, Johnston CE 2d. Vascular complications from Anterior spine surgery in three patients with Ehlers-Danlos syndrome. *Spine.* 2009 Feb 15;34(4):E153-7.
24. Chang TL, Sargent MC, **Sponseller PD**. Postoperative neurovascular monitoring in the Pediatric Orthopaedic Population. *J Pediatr Orthop.* 2009 Jan-Feb;29(1):80-4.
25. Chang TL, **Sponseller PD**, Kebaish KM, Fishman EK. Low profile pelvic fixation. anatomic parameters for sacral alar-iliac fixation versus traditional iliac fixation. *Spine.* 2009;34(5):436-440.
26. **Sponseller PD**, Shah SA, Abel MF, Sucato D, Newton PO, Shufflebarger H, Lenke LG, Letko L, Betz R, Marks M, Bastrom T, The Harms Study Group: Scoliosis surgery in cerebral palsy. Differences between unit rod and custom rods. *Spine* 34(8):840-844, 2009.
27. **Sponseller PD**, Betz R, Newton PO, Lenke LG, Lowe T, Crawford A, Sucato D, Lonner B, Marks M, Bastrom T, The Harms Study Group: Differences in curve behavior after fusion in adolescent idiopathic scoliosis patients with open triradiate cartilages. *Spine* 34(8):827-831, 2009.