

REFERENCES

1. Jerriod EA, Armstrong, Henry J Lapointe, Nicolus J.V Hogg, Alvin D. Kwok. Preliminary investigation of the biomechanical of internal fixation of sagittal split osteotomies with miniplate using a Newly designed in vitro testing model. *J Oral Maxillofac Surg* 2001; 59: 191-5.
2. Wittenberg JM, Wittenberg RH, Hipp JA. Biomechanical properties of absorbable poly-L-lactide plates and screws: a comparison with traditional systems. *J Oral Maxillofac Surg* 1991; 49: 512-6.
3. Bos R.R.M, G. Boering F.R, Rozema J.W. Leenlag. A.J. Penning. A.B Verweij. Resorbable poly L-lactide plates and screws for the fixation of zygomatic fractures. *J Oral Maxillofac Surg* 1987; 45: 751-3.
4. Edwards RC, Kiely KD, Eppley BL. The fate of absorbable poly-L-lactic/polyglycolic acid (LactoSorb) bone fixation devices in orthognathic surgery. *J Oral Maxillofac Surg* 2001; 59: 19-25.
5. Barry L. Eppley , Dave Sarver and Bill Pietrzak. Biomechanical testing of Resorbsble screws used for mandibular sagittal split osteotomies. *J Oral Maxillofac Surg* 1999; 57: 1431-5.
6. Schuchardt G. Ein Beitrag zur chirurgischen Kieferorthopadie unter Berucksichtigung ihrer fur dieBehandlung angeborener und erworbener Kiefer deformitaten bie Soldaten. Dtsch Zahn Mund Kieferheilkd 1942; 9: 73-89.
7. Trauner R, Obwegeser H. Operative oral surgery. The surgical correction of mandibular prognathism and retrognathia with consideration of genioplasty. *Oral Surg Oral Med Oral Pathol* 1957; 10: 677-89.
8. Del Pont G. Retromolar osteotomy for correction of prognathism. *J Oral Surg* 1961; 19: 42- 7.
9. Mohnac A. Maxillary osteotomy in the management of occlusal deformities. *J Oral Surg* 1966; 24: 305-7.
10. Hunsuck E. A modified intraoral sagittal splitting technique for correction of mandibular prognathism. *J Oral Surg* 1968; 26: 249-52.
11. White R, Peters P, Costich E, Langley Page H. Evaluation of sagittal split-ramus osteotomy in 17 patients. *J Oral Surg* 1969; 27: 851-5.

12. Guernsey L, DeChamplain R. Sequillae and complications of the intraoral sagittal split osteotomy in the mandibular rami. *Oral Surg Oral Med Oral Pathol* 1971; 32: 176-92.
13. Behrman S. Complications of sagittal osteotomy of the mandibular ramus. *J Oral Surg* 1972; 30: 554-61.
14. Hinds E, Kent J. Surgical treatment of developmental jaw deformities. Saint Louis, C.V. Mosby 1972; 58-78.
15. Bell W, Schendel S. Biological basis for the sagittal ramus split operation. *J Oral Surg* 1977; 35: 362-9.
16. Epker B. Modifications in the sagittal split osteotomy of the mandible. *J Oral Surg* 1977; 35: 157-9.
17. Spiessl B, et al. Results of rigid internal fixation and simulography in sagittal split osteotomy of the ascending ramus. A comparative clinical investigation. In: Spiessl B, ed.: New concepts in maxillofacial bone surgery. Berlin, Heidelberg, New York: Springer-Verlag, 1976; 115-22.
18. Bell W, Profit W, White R. Treatment planning for dentofacial deformities. Volume I. Surgical correction of dentofacial deformities. Philadelphia: W. B. Saunders 1980; 155-99.
19. Bell W, Proffit W, White R. Mandibular excess Part A. Volume II. Surgical correction of dentofacial deformities. Philadelphia: W. B. Saunders 1980; 844-1030.
20. Bell W, Proffit W, White R. Treatment of prosthodontic patient with dentofacial deformities Volume III. Surgical correction of dentofacial deformities. Philadelphia: W. B. Saunders 1985; 1410-501.
21. Leonard M, Ziman P, Bevis R, Cavanaugh G, Speidel M, Worms F. The sagittal split osteotomy of the mandible. *Oral Surg Oral Med Oral Pathol* 1985; 60: 459-66.
22. Rajchel J, Ellis E, Fonseca R. The anatomical location of the mandibular canal: its relationship to the sagittal split ramus osteotomy. *Int J Adult Orthognath Surg* 1986; 1: 37-47.
23. Wolford L, Bennett M, Rafferty C. Modification of the mandibular ramus sagittal split osteotomy. *Oral Surg Oral Med Oral Pathol* 1987; 64: 146-55.
24. Obwegeser H, Hadjianghelou O. Two ways to correct bird-face deformity. *Oral Surg Oral Med Oral Pathol* 1987; 64: 507-18.
25. Wolford L, Davis W. The mandibular inferior border split: a modification in the sagittal split osteotomy. *J Oral Maxillofac Surg* 1990; 48: 92-4.

26. Smith B, Rajchel J, Waite D, Read L. Mandibular ramus anatomy as it relates to the medial osteotomy of the sagittal split osteotomy. *J Oral Maxillofac Surg* 1991; 49: 112-6.
27. Smith B, Rajchel J, Wait D, Read L. Anatomy as it relates to rigid fixation of the sagittal ramus split osteotomy. *J Oral Maxillofac Surg* 1991; 49: 222-6.
28. Trauner R., Obwegeser H. Surgical correction of mandibular prognathism and retrognathia with consideration of genioplasty I: surgical procedure to correct mandibular prognathism and reshaping of the chin. *Oral Surg Oral Med Oral Pathol Oral Radio Oral Endod* 1957; 10: 677-89.
29. Foley W.L, Frost DE, Paulin WB Jr, et al. Internal screw fixation : comparison of placement pattern and rigidity. *J Oral Maxillofac Surg* 1989; 47:720-3 .
30. Van Sickles, J.E Flanary, C.M. Stability association with mandibular advancement treated by rigid osseous fixation. *J Oral Maxillofac Surg* 1985; 338-41.
31. Wolford , LM, Bennett, M.A & Rafferty C.G. Modification of the mandibular sagittal split osteotomy. *J Oral Maxillofac Surg* 1987; 64:146-55.
32. Paulus GW., Stienhanser EW. A comparison study of the wire osteosynthesis versus bone screws in the treatment of mandibular prognathism. *Oral Surg Oral Med Oral Pathol Oral Radio Oral Endod* 1982; 54: 2-6 .
33. Luhr H.G, Schauer, W& Jager, A. Formveranderung des Unterkiefers durch kieferorthopaedisch-chirurgische Massnahmen mit stabiler Fixation der Segmente, Fortschr.Kieferorthop. *J Oral Maxillofac Surg* 1986; 47: 39-47.
34. Rubens BC, Stoelinga PJW, Blijdorp PA, Schoenaers JAN. Politis C. Skeletal stability following sagittal split osteotomy using monocortical miniplate internal fixation. *Int J Oral Maxillofac Surg* 1988; 17: 371-6.
35. Richard C, Edward ,Kevin D., Kiely, Barry L Eppley. Fixation of bimaxillary osteotomies with resorbable plates and screws :Experience in 20 consecutive cases. *J Oral Maxillofac Surg* 2001; 59: 271-6.
36. Kitajima T, Handa V., Naito K. A modification of the sagittal split technique ensuring that the osteotomy split lies immediately medial to the lateral cortex. *J Craniomaxillofac Surg* 1989; 17: 53-7.
37. Thorockmorton GS, Ellis E., Winkler AJ , et al. Bone strain following application of rigid

- bone plate : An in vitro study in human mandibles. *J Oral Maxillofac Surg* 1992; 50: 1066-73.
38. Schwimmer A., Greenberg AM, Kummer F, et al. The effect of screw size and insertion technique on the stability of the mandibular sagittal split osteotomies. *J Oral Maxillofac Surg* 1994; 42: 45-8.
39. Black J. Biological performance of material. *Clin Mater* 1994; 16: 167-73.
40. Jacques Peltier MD, Matthew Ryan. Mandible Fractures, MD UTMB-Dept of Otolaryngology, May 2004.
41. Cutright D.E., E. Hunsack, JD, Beasley. Fracture reduction using A biodegradable material ,poly lactic acid. *J Oral Surg* 1971; 29: 393-7.
42. Suuronen R., Laine P, Sarkiala E, et al. Sagital split osteotomies fixed with biodegradable, self-reinforced poly-L-lactide screws. *Int Oral Maxillofac Surg* 1992; 21: 303-8.
43. Bos RRM, G. Boering F.R, A.J Nijenhuis AJ, Penning A.B Verweij. Bioresorbable plate and screws for internal fixation of mandibular fracture. A study in six dogs. *Int Oral Maxillofac Surg* 1989; 18: 365-9.
44. Gutwald R., R.Schon. Gellrish, ASchramm, R.Schmelzeism, H. Pistner. Bioreserbable implants in maxillofacial osteosynthesis : Experimental and clinical experience. *J Oral Maxillofac Surg* 2002; 33: S-B4-16.
45. Eppley BL, Sadove AM. Comparison of metallic and absorbable mesh fixation of calvarial bone grafts. *Plast Reconstr Surg* 1995; 96: 316-22.
46. Shand JM, Heggie AA. Use of a resorbable fixation system in orthognathic surgery. *Br J Oral Maxillofac Surg* 2000; 38: 335-7.
47. Eppley BL Dave Sarver, Bill Pietrzak. Biomechanical testing of resorbable screws used for mandibular sagittal split osteotomies. *J Oral Maxillofac Surg* 1999; 99: 1431-5 .
48. Kazuhisa Bessho,Tadahiko ii zuka, Ken-ichiro murakami. A bioabsorbable poly-L-lactide miniplate and screws system for osteosynthesis in oral and maxillofacial and surgery. *J Oral Maxillofac Surg* 1997; 55: 941-5.
49. Contantin Aalandes, Susanen Kriener. Resorbable plate osteosynthesis of sagittal split ostotomies with major bone movement. *J Oral Maxillofac Surg* 2003; 116(6): 1828-40.
50. Carlo Ferrti, Johan P., Reyneke. Mandibular sagittal split osteotomies fixed with biodegradable

- or titanium screws: A prospective, comparative study of postoperative stability. *J Oral Maxillofac Surg* 2002; 93: 534-7.
51. Paavolaion P, Karahraju E, Slaltis P, et al. Effect of rigid plate fixation on structure and mineral content of cortical bone. *Clin Orthop* 1987; 136-287.
 52. Tonino KJ, Davidson CL, Kloppen PL, et al. Protection from stress in bone and its effects. *J Bone Joint Surg* 1976; 53B: 107-13.
 53. Haer PE, Sailer HF. Biodegradable poly lactide acid plate and screws in orthognathic bimaxillary surgery: Short term skeletal stability and material related failure. *J Cranio maxillofac Surg* 1998; 26: 363-72.
 54. Bos RR, Rozema FR, Boering G, et al. Degression of and tissue reaction to biodegradable poly-L-lactide for use as internal fixation of fracture : a study in rat. *Biomaterials* 1991; 12: 32-6.
 55. Iizuka T, C.Lindqvist. Rigid internal fixation of mandibular fractures. An analysis of 270 fractures using the AO/ASIF method. *Int J Oral Maxillofac Surg* 1992; 21, 65-9.
 56. Edward RC., Kiely KD. Absorbable fixation of Le Fort I osteotomies. *J Craniofac Surg* 1998; 9, 210-4.
 57. Rosenberg A., KW. Grätz, HF. Sailer. Should titanium miniplates be removed after bone healing is complete. *Int J Oral Maxillofac Surg* 1993; 22: 185-8.
 58. Schliephake, H.Lechmann, H. Kunz, U and Schmelzeisen R. Ultrastructure findings in soft tissue adjacent to titanium plate used in jaw fracture treatment. *Int J Oral Maxillofac Surg* 1993; 22: 20-5.
 59. Jorgenson. DS., Mayer MH, Ellenbogen , RG, et al. Detection of titanium in human tissue after craniofacial surgery. *Plastic Reconstr Surg* 1997; 99: 976-9.
 60. Finnegan MA and Uhthoft HK. Bone changes under plate, the role of rigidity in fracture fixation, An review. *Arch orthop Trauma Surg* 1984; 102: 163-6.
 61. Hollinger JO and Battistone GC. Biodegradable bone repair materials. Synthetic polymers and ceramic. *Clin Orthop* 1986; 207: 290-305.
 62. Viljannen J, Kinnunen.J., Bon destam S.,M ajala,A.Rokkanen P and Tormala P. Bone changes after experimental osteotomies fixed with absorbable self-reinforced poly-L-lactide screws or metallic screws studied by plain radiographs, quantitative computed tomography and magnetic resonance imaging. *Biomaterials* 1995; 16: 1353-5.

63. Simon BR, Woo SL-Y, McCarty, *et al.* Parametric study of bone remodeling beneath internal fixation plate of varying stiffness. *J Bioeng* 1978; 2: 543-56.
64. Eppley BL, Prervel CD, Sadove AM, *et al.* Resorbable bone fixation : its potential role in craniomaxillofacial surgery. *J Cranifacial Trauma* 1996; 2: 56-60.
65. Törmälä P., Rokkanen P.Laiho J., Tam-minmaki M, Vainion Pää. Inventors, material for osteosynthesis device. US Pat. 4743257, 10 May 1988.
66. Haer PE and Sailer HF. Biodegradable self-reinforced poly-L/DL lactide screws and plate in bimaxillary orthognathic surgery : Short term skeletal stability and material related failures. *J Craniomaxillofac Surg* 1998; 26: 363-72.
67. Schwimmer A., Greenberg AM, Kummer F, Kuynan A. The Effect of screws size and insertion technique on the stabiliy of the mandibular sagittal split osteotomy. *J Oral Maxillofac Surg* 1994; 52: 45-8.
68. Anncl B, Waite PD, Lemons JE. In vitro strength analysis of sagittal split osteotomy fixation: Noncompression monocortical plate versus bicortical position screws. *J Oral Maxillofac Surg* 1992; 50: 1295-9.
69. Kohn DH, Richmond EM., Dootz ER, *et al.* In vitro comparison of parameter affecting the fixation strength of sagittal split osteotomy . *J Oral Maxillofac Surg* 1995; 53: 1374-83.
70. Kikuta T,Hara I,Sero T. Evaluation of masticatory function after sagittal split osteotomy for patient with mandibular prognathism. *Int J Oral Maxillofac Surg* 1994; 9: 9-17.
71. Ellis E, Throckrnorton GS, Sinn DP. Bite forces before and after surgical correction of mandibular prognathism. *J Oral Maxillofac Surg* 1996; 54: 176-81.
72. Marsh JR. The use of the Würzburg system to facilitate fixation in facial osteotomies. *Clin Plast Surg* 1989; 16: 49-53.
73. Bessho K,T. Iizuka, K. Murakami. A bioresorbable poly-L-lactide miniplate screws system for osteosynthesis in oral and maxillofacial surgery. *J Oral Maxillofac Surg* 1997; 55: 941-5.
74. Bessho K., Fujimura K., Iizuka T. Experimental long term study of titanium ions eluted from pure titanium miniplate. *J Biomed Mater Res* 1995 ; 29: 901-4.
75. Bessho K., Hirano Y, Ishihama N., *et al.* A study of metallic implant for jaw reconstruction : changes and damaging action of Champy miniature screwed plate in the body.

- J Oral maxillofac Surg** 1988; 34: 1406-10.
76. Hamada K, Watanabe M., Ohkura K, et al. Measure of bite force and occlusal contact area before and after bilateral sagittal split osteotomy of the mandible using a new pressure-sensitive device: A preliminary report. **J Oral Maxillofac Surg** 2002; 58: 370-3.
77. Bago-Granell J, Aguirre-Canyadell M, Nardi J, Tallada N. Malignant fibrous histiocytoma of bone at the site of a total hip arthroplasty. **J Bone Joint Surg** 1984; 66-B : 38-40 .
78. Eppley B, Reilly M. Degradation characteristics of PLLA-PGAbone fixation devices. **J Craniofac Surg** 1997; 8: 116-20.
79. Kellela I, Laine P, Suuronen R, Lizuka T, Pirinen S, Lindgrvist C. Skeletal stability following mandibular advancement and rigid fixation with polylactide biodegradation screws. **Int J Oral Maxillofac Surg** 1998; 27: 3-8.
80. W. M. Wyatt. Sagittal ramus split osteotomy: literature review and suggested modification technique. **Br J Oral Maxillofac Surg** 1997; 35: 137-41 .
81. Crofts CE, Trowbridge A, Aung TM. A comparative in vitro study of fixation of mandibular fractures with pariskeletal clamps or screw plates. **J Oral Maxillofac Surg** 1990; 48: 461-7.
82. Haug RH. The effects of screw number and length on two methods of tension band plating. **J Oral Maxillofac Surg** 1993; 51:159-162., **J Oral Maxillofac Surg** 2003; 61: 1471-6.
83. Ellis III E, Graham J. Use of a 2.0-mm locking plate/screw system for mandibular fracture surgery. **J Oral Maxillofac Surg** 2002; 60: 642-5 (discussion 645-6).
84. Ko R. The tention test upon compact substance of the long bones of human extremities. **J Kyoto Pref Med Univ** 1953; 53: 503-6.
85. Hazama H. Study on the torsional strength of the compact substance of human beings. **J.Kyoto Pref Med Univ** 1956 ; 60:167-70.
86. Vivek Shetty. Discussion, an in vitro Comparison of the Mechanical Characteristics of Three Sagittal Ramus Osteotomy Fixation Techniques. **J Oral Maxillofac Surg** 1997; 55: 494-5.
87. William L. Foley. Discussion in-Vitro, comparison of Parameters, affecting the Fixation Strength of Sagittal Split Osteotomies. **J Oral Maxillofac Surg** 1995; 53: 1383-5.
88. Crofts CE, Trowbridge A, Aung TM. A comparative in vitro study of fixation of mandibular fractures with pariskeletal clamps or screw plates. **J Oral Maxillofac Surg** 1990; 48: 461-7.

89. Haug RH. The effects of screw number and length on two methods of tension band plating. *J Oral Maxillofac Surg* 1993; 51: 159-62.
90. Leenlag JW, Pennings AJ, Bos RM, Rozema FR, Boering G. Resorbable materials of poly-L-lactide. VI. plates and screws for internal fracture fixation. *Biomaterials* 1987; 8: 70-5.
91. Reed AM, Gilding DK. Biodegradable polymers for use in surgery poly (glycolic)/poly (lactic acid) homo and copolymer. 2. in vitro degradation. *Polymer* 1981; 22: 494-8.
92. Montag ME, Morales Jr L, Danne S. Bioresorbables: their use in pediatric craniofacial surgery. *J Craniofac Surg* 1997; 8: 100-2.
93. Edwards RC, Kiely KD. Resorbable fixation of LeFort I osteotomies. *J Craniofac Surg* 1998; 210-4.
94. Epply BL, Reilly M. Degradation characteristics of PLLA-PGA bone fixation devices. *J Craniofac Surg* 1997; 2: 116-20.
95. R. Leggon, R.W. Lindsey, B.J. Doherty, J. Alexander, and P. Noble.J. The Holding Strength of Cannulated Screws Compared with Solid Core Screws in Cortical and Cancellous Bone. *Orthop Trauma*. 1993; 7: 450-7.
96. Vangsness CT Jr, Carter DR, Frankel VH. In vitro evaluation of the loosening characteristics of self-tapped and non-self-tapped cortical bone screws. *Clin Orthop Relat Res* 1981; 157: 279-86.