

11:30-12:00

Title: Simultaneous closure of hard palate and cleft lip

Cleft lip is often operated in advance to cleft palate closure in most of cases. Longer time required to provide simultaneous operation for cleft lip and cleft hard palate closure, which may give an additional burden on the cleft babies. If hard palatal cleft can be closed at the same time in cleft lip operation, it gives some advantages to the patients and surgeons altogether: simplified soft palatal closure in later operation, no need extensive dissection of palatal flaps, less chance of flap necrosis, and less chance of oro-antral fistula formation. These factors contribute less morbidity to growth deterioration. The only shortcoming is more time required for simultaneous closure of cleft lip and cleft hard palate.

In this presentation, we would like to report some cases for simultaneous closure of unilateral and bilateral cleft lip and palate.

구순열 수술시 경구개열 동시 폐쇄술의 적용

구순구개열이 동시에 존재하는 환자에게 구순열의 수술과 구개열의 수술은 별도의 시기에 시행하는 경향이 있다. 구순열과 구개열을 동시에 시행하기에 환자의 상태가 장시간의 수술을 견딜 수 있는냐하는 문제와 합병증의 병발 가능성이 있어 개별적인 수술을 시행하는 것이 보편적이다. 그러나 구순열수술 시 경구개열의 폐쇄를 동시에 시행하게 되면 추후 연구개의 수술이 훨씬 경미한 수술로 바뀔 수 있는 가능성이 높아 추후 구개열의 수술이 편하게 된다. 또한 구개열수술이 간단해지므로 광범위한 조직 박리로 인한 조직판의 괴사나 비강-구강 누공의 발생빈도도 낮아지게 된다. 이는 추후 성장의 왜곡도 적게될 수 있는 장점을 가지고 있다. 그러나 구순열수술시 함께 시행하는 경구개열 폐쇄수술로 수술시간이 늘어나게 된다는 단점이 있다.

본 보고에서는 편측성 및 양측성 구순구개열 환자에게 적용된 구순열 및 경구개열 동시 폐쇄수술을 서골피판을 이용하여 시행한 결과를 보고하고자 한다.

Curriculum Vitae

Byoung Moo Seo

Professor and Chairman

Department of Oral and Maxillofacial Surgery

School of Dentistry

Seoul National University

101 Daehak-ro, Jongno-Gu, 110-768

Seoul, Korea

Tel) +82-2-2072-3369

Fax) +82-2-766-4948

e-mail: seobm@snu.ac.kr

Educational Background

Feb. 1988. Seoul National University, Seoul, Korea (*D.D.S.*)

Feb. 1991. Seoul National University, Seoul, Korea (*M.S.D.*)

Feb. 1999. Seoul National University, Seoul, Korea (*Ph.D.*)

Training

Mar. 1988-Feb. 1989. Internship in Seoul National University Hospital

Mar. 1989-Feb. 1992. Resident course in Department of Oral and Maxillofacial Surgery,
Seoul National University Hospital

Work Experiences

May 1992-Apr. 1995: Captain in Dental Surgery in Military Service

May 1995-Feb. 1998: Staff Surgeon of Oral and Maxillofacial Surgery
Nowon Eulji General Hospital

Mar.1998- Aug. 1999: Clinical Fellow
Department of Oral and Maxillofacial Surgery
Seoul National University Hospital, Seoul, Korea

Sep.1999-Sep.2001: Instructor
Department of Oral and Maxillofacial Surgery
Seoul National University School of Dentistry, Seoul, Korea

- Oct. 2001- Sep. 2006: Assistant Professor
 Department of Oral and Maxillofacial Surgery
 Seoul National University School of Dentistry, Seoul, Korea
- Jun. 2003-May 2005: Special Volunteer and Research Fellow in NIH, (CSDB) USA
- Oct. 2006-Aug. 2011: Associate Professor
 Department of Oral and Maxillofacial Surgery
 Seoul National University School of Dentistry, Seoul, Korea
- Sep. 2011-present: Professor
 Department of Oral and Maxillofacial Surgery
 Seoul National University School of Dentistry, Seoul, Korea
- Aug. 2013 – present: Chairman
 Department of Oral and Maxillofacial Surgery
 Seoul National University School of Dentistry,
 Seoul National University Dental Hospital, Seoul, Korea

Publications

1. Myoung H, Hong SP, Hong SD, Lee JI, Lim CY, Choung PH, Lee JH, Choi JY, **Seo BM**, Kim MJ. Odontogenic keratocyst: Review of 256 cases for recurrence and clinicopathologic parameters. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod.* 2001 Mar;91(3):328-33
2. Choung PH, **Seo BM**, Chung CP, Yamada KM, Jang JH. Synergistic activity of fibronectin and fibroblast growth factor receptors on neuronal adhesion and neurite extension through ERK pathway. *Biochem Biophys Res Commun.* 2002, 295:898-902.
3. Oh JE, Kook JK, Park KH, Lee G, Seo BM, Min BM. Phospholipase C-gamma1 is required for subculture-induced terminal differentiation of normal human oral keratinocytes. *Int J Mol Med.* 2003 Apr;11(4):491-8
4. Chung JH, Park KH, **Seo BM**, Kim ES, Hong JR, Chung IH, Kang N, Baek JH, Min BM, Choung YH, Akaike T, Choung PH. Determination of specific interactions between glucose ligand carrying polymer and glucose transporter type-1 (GLUT-1) using different cell types. *J Biomed Mater Res.* 2003, 67A:1055-9.
5. **Seo BM**, Miura M, Gronthos S, Bartold PP, Batouli S, Brahim J, Young M, Robey PG, Wang PC, Shi S. Investigation of multipotent postnatal stem cells from human periodontal ligament. *Lancet.* 2004, 364:149-5

6. Miura M, Chen XD, Allen MR, Bi Y, Gronthos S, **Seo BM**, Lakhani S, Flavell RA, Feng XH, Robey PG, Young M, Shi S. A crucial role of caspase-3 in osteogenic differentiation of bone marrow stromal stem cells. *J Clin Invest*. 2004, 114:1704-13.
7. Lee JH, Kim MJ, Choi WS, Yoon PY, Ahn KM, Myung H, Hwang SJ, **Seo BM**, Choi JY, Choung PH, Kim SM. Concomitant reconstruction of mandibular basal and alveolar bone with a free fibular flap. *Int J Oral Maxillofac Surg*. 2004;33:150-6.
8. **Seo BM**, Miura M, Sonoyama W, Coppe C, Stanyon R, Shi S. Recovery of stem cells from cryopreserved periodontal ligament. *J Dent Res*. 2005, 84:907-912
9. Shi S, Bartold PM, Miura M, **Seo BM**, Robey PG, Gronthos S. The efficacy of mesenchymal stem cells to regenerate and repair dental structures. *Orthod Craniofac Res*. 2005, 8:191-9
10. Sonoyama W, Liu Y, Fang D, Yamaza T, Seo BM, Zhang C, Liu H, Gronthos S, Wang CY, Shi S, Wang S. Mesenchymal stem cell-mediated functional tooth regeneration in Swine. *PLoS ONE*. 2006 Dec 20;1:e79.
11. Miura Y, Gao Z, Miura M, Seo BM, Sonoyama W, Chen W, Gronthos S, Zhang L, Shi S. Mesenchymal stem cell-organized bone marrow elements: an alternative hematopoietic progenitor resource. *Stem Cells*. 2006 Nov;24(11):2428-36.
12. Miura M, Miura Y, Padilla-Nash HM, Molinolo AA, Fu B, Patel V, Seo BM, Sonoyama W, Zheng JJ, Baker CC, Chen W, Ried T, Shi S. Accumulated chromosomal instability in murine bone marrow mesenchymal stem cells leads to malignant transformation. *Stem Cells*. 2006 Apr;24(4):1095-103
13. Rho KS, Jeong L, Lee G, **Seo BM**, Park YJ, Hong SD, Roh S, Cho JJ, Park WH, Min BM. Electrospinning of collagen nanofibers: Effects on the behavior of normal human keratinocytes and early-stage wound healing. *Biomaterials*. 2006, 27(8):1452-61
14. Bi Y, Ehrlichou D, Kilts TM, Inkson CA, Embree MC, Sonoyama W, Li L, Leet AI, **Seo BM**, Zhang L, Shi S, Young MF. Identification of tendon stem/progenitor cells and the role of the extracellular matrix in their niche. *Nat Med*. 2007 Oct;13(10):1219-27. Epub 2007 Sep 9
15. Sonoyama W, **Seo BM**, Yamaza T, Shi S. Human Hertwig's epithelial root sheath cells play crucial roles in cementum formation. *J Dent Res*. 2007 Jul;86(7):594-9.
16. Hong J, Yun PY, Chung IH, Myoung H, Suh JD, **Seo BM**, Lee JH, Choung PH. Long-term follow up on recurrence of 305 ameloblastoma cases. *Int J Oral Maxillofac Surg*. 2007 Apr;36(4):283-8. Epub 2007 Jan 11.
17. Fang D, Seo BM, Liu Y, Sonoyama W, Yamaza T, Zhang C, Wang S, Shi S. Transplantation of mesenchymal stem cells is an optimal approach for plastic surgery. *Stem Cells*. 2007 Apr;25(4):1021-8. Epub 2006 Dec 14.
18. Hong J, Yun PY, Chung IH, Myoung H, Suh JD, Seo BM, Lee JH, Choung PH. Long-term follow up on recurrence of 305 ameloblastoma cases. *Int J Oral Maxillofac Surg*. 2007 Apr;36(4):283-8.
19. **Seo BM**, Sonoyama W, Yamaza T, Coppe C, Kikuri T, Akiyama K, Lee JS, Shi S. SHED repair critical-size calvarial defects in mice. *Oral Dis*. 2008 Jul;14(5):428-34.

20. Hyun HK, Lee SJ, Ahn BD, Lee ZH, Heo MS, **Seo BM**, Kim JW. Nonsyndromic multiple mandibular supernumerary premolars. *J Oral Maxillofac Surg.* 2008 Jul;66(7):1366-9.
21. Kim JW, Lee SK, Lee ZH, Park JC, Lee KE, Lee MH, Park JT, **Seo BM**, Hu JC, Simmer JP. FAM83H mutations in families with autosomal-dominant hypocalcified amelogenesis imperfecta. *Am J Hum Genet.* 2008 Feb;82(2):489-94.
22. Kim SH, Kim KH, **Seo BM**, Koo KT, Kim TI, Seol YJ, Ku Y, Rhyu IC, Chung CP, Lee YM. Alveolar bone regeneration by transplantation of periodontal ligament stem cells and bone marrow stem cells in a canine peri-implant defect model: a pilot study. *J Periodontol.* 2009 Nov;80(11):1815-23.
23. Lee JH, Lee DS, Choung HW, Shon WJ, **Seo BM**, Lee EH, Cho JY, Park JC. Odontogenic differentiation of human dental pulp stem cells induced by preameloblast-derived factors. *Biomaterials.* 2011 Dec;32(36):9696-706.
24. Um S, Choi JR, Lee JH, Zhang Q, **Seo BM**. Effect of leptin on differentiation of human dental stem cells. *Oral Dis.* 2011 Oct;17(7):662-9.
25. Jung HS, Lee DS, Lee JH, Park SJ, Lee G, **Seo BM**, Ko JS, Park JC. Directing the differentiation of human dental follicle cells into cementoblasts and/or osteoblasts by a combination of HERS and pulp cells. *J Mol Histol.* 2011 Jun;42(3):227-35.
26. Nam H, Kim J, Park J, Park JC, Kim JW, **Seo BM**, Lee JC, Lee G. Expression profile of the stem cell markers in human Hertwig's epithelial root sheath/Epithelial rests of Malassez cells. *Mol Cells.* 2011 Apr;31(4):355-60.
27. Heo YY, Um S, Kim SK, Park JM, **Seo BM**. Responses of periodontal ligament stem cells on various titanium surfaces. *Oral Dis.* 2011 Apr;17(3):320-7.
28. Suh HY, Lee SJ, Lee YS, Donatelli RE, Wheeler TT, Kim SH, Eo SH, **Seo BM**. A more accurate method of predicting soft tissue changes after mandibular setback surgery. *J Oral Maxillofac Surg.* 2012 Oct;70(10):e553-62.
29. Lee JH, Um S, Jang JH, **Seo BM**. Effects of VEGF and FGF-2 on proliferation and differentiation of human periodontal ligament stem cells. *Cell Tissue Res.* 2012 Jun; 348(3):475-84..
30. Lee JH, Lee DS, Nam H, Lee G, **Seo BM**, Cho YS, Bae HS, Park JC. Dental follicle cells and cementoblasts induce apoptosis of ameloblast-lineage and Hertwig's epithelial root sheath/epithelial rests of Malassez cells through the Fas-Fas ligand pathway. *Eur J Oral Sci.* 2012 Feb;120(1):29-37.
31. Park HS, Song IS, **Seo BM**, Lee JH, Kim MJ. The effectiveness of decompression for patients with dentigerous cysts, keratocystic odontogenic tumors, and unicystic ameloblastoma. *J Korean Assoc Oral Maxillofac Surg.* 2014 Dec;40(6):260-5.
32. Lee JH, Um S, Song IS, Kim HY, **Seo BM**. Neurogenic differentiation of human dental stem cells in vitro. *J Korean Assoc Oral Maxillofac Surg.* 2014 Aug;40(4):173-80.
33. Nam H, Kim JH, Kim JW, **Seo BM**, Park JC, Kim JW, Lee G. Establishment of Hertwig's epithelial root sheath/epithelial rests of Malassez cell line from human periodontium. *Mol Cells.* 2014 Jul;37(7):562-7.

34. Lee JH, Nam H, Um S, Lee J, Lee G, **Seo BM**. Upregulation of GM-CSF by TGF- β 1 in epithelial mesenchymal transition of human HERS/ERM cells. *In Vitro Cell Dev Biol Anim*. 2014;50(5):399-405.
35. Oh HJ, Choung HW, Lee HK, Park SJ, Lee JH, Lee DS, **Seo BM**, Park JC. CPNE7, a preameloblast-derived factor, regulates odontoblastic differentiation of mesenchymal stem cells. *Biomaterials*. 2015 Jan;37:208-17.
36. Qadir AS, Um S, Lee H, Baek K, **Seo BM**, Lee G, Kim GS, Woo KM, Ryoo HM, Baek JH. miR-124 Negatively Regulates Osteogenic Differentiation and In Vivo Bone Formation of Mesenchymal Stem Cells. *J Cell Biochem*. 2015 May;116(5):730-42.
37. Song IS, Park HS, **Seo BM**, Lee JH, Kim MJ. Effect of decompression on cystic lesions of the mandible: 3-dimensional volumetric analysis. *Br J Oral Maxillofac Surg*. 2015 Nov;53(9):841-8.
38. Han YS, Jung YE, Song IS, Lee SJ, **Seo BM**. Three-Dimensional Computed Tomographic Assessment of Temporomandibular Joint Stability After Orthognathic Surgery. *J Oral Maxillofac Surg*. 2016 Jul;74(7):1454-62.
39. Lee CH, Park HH, **Seo BM**, Lee SJ. Modern trends in Class III orthognathic treatment: A time series analysis. *Angle Orthod*. 2016 Jul 19. [Epub ahead of print]

Research Interest

My main interests in developmental anomaly were initiated during my training course in the Department of Oral and Maxillofacial Surgery, Seoul National University Dental Hospital, Seoul, Korea. At that time I prepared my MSD thesis under the title of "Soft tissue changes after orthognathic surgery in prognathic patients." My dissertation thesis was "Expression of Bone Morphogenetic Protein Transcripts during Healing Process after Maxillary Tooth Extraction of Rat." Currently, dental stem cells are my main topic of interests.