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PRESURGICAL AND INFANT ORTHOPAEDICS
Ms. G. Stuffins, U.K.

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DYAGNOSTIC VALUE OF DYNAMIC MRI FOR VELO-PHARYNGEAL FUNCTION. Y.YAMAWAKI,*M.D., M.SAWADA,M.D.,N.ISSHIKI,M.D.,T.TAIRA,M.D. M.NAITO,M.D.,K.KOHNO., K.SHIMIZU. Department of Plastic and Reconstructive Surgery, Faculty of Medicine, Kyoto University, Kyoto,Japan.606
(purpose) Dynamic MRI(Shimadzu Minimum Angle SHot method) for assessing velopharyngeal function. (method) Dynamic MRI of the nasopharynx during phonation was conducted both in the normal and in some patients with velopharyngeal incompetence. (results) During production of consonant ( ), a gap in the nasopharynx was observed in patients with VPI. The levator veli palatini muscles of patients with VPI appeared thinner and its contractions were poorer than normal cases. These phenomena are assumed to be chiefly responsible for the VPI. Passarvan's ridge is likely to be formed with muscle tissue (discussion) Dynamic observation of the nasopharynx has been possible by nasoendoscopic as well as fluorovideoscopic examinations. These methods, however, could not provide information about the corss-section of nasopharynx, leaving the movement of levator veli palatini muscle during phonation unknown. Using ultra-fast FE (Field Echo) sequence observation of soft tissues (especially, muscle tissue) on the arbitrary crosssection become availabe. It is assumed that this dynamic MRI will be one of the most valuable dyagnostic methods for testing velo-pharyngeal function.

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PUSH BACK OPERATION WITH SKIN GRAFT TO THE INCOMPLETE CLEFT PALATE TO PREVENT MAL OCCLUSION M. OSADA M.D.,R.TANINO M.D.,M.NISHIMURA M.D. Tokai Univ.School of Med.,Isehara City,Kanagawa,Japan
Push back operation with mucoperiosteal flaps has been generally perfomed for the cleft palate patients and could gain good speech results. But scar contracture due to the elevation of the mucoperiosteal flap would results malocculusion and sometimes maldevelopment of maxilla when the operations was perfomed in early age. Many methods have been reported to prevent maldevelopment of maxillae, one way is to perform the operations on the hard palate after 5 years old, and another way is to perfom the operation in early age with minimal surgical invasion to the hard palate. But later methods are liable to be inferior to the conventional push back methods in speech result, especially in incomplete cleft palate cases. The authors have been perfromed conventional push back method to the incomplete cleft palate cases and have covered raw surface after the elevation of the mucopriosteal flaps with skin grafts. The skin grafts were taken from inguinal region formally, but split skin from the scalp is used recentlly . The skin grafts were fixed with sutures and loose tie over fixation were performed and fixed tightly with surgical pack. The skin grafts were well taken and occulusion of the milk teeth were satisfactory in majority of cases. The authors wish to present the techniques of skin grafts on the hard palate and results of the operations.

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SOFT PALATE REPAIR - THE PERKO PROCEDURE. M.PERKO * M.D., H.F.SAILER M.D., W.GNOINSKI D.M.D. Zurich University Children's Hospital CH-8032, Clinic for Maxillofacial Surgery CH-8091, and Dental Clinic CH-8028, Zurich, Switzerland

The procedure used in Zurich over the years is demonstrated in detail. Pa- tion is given to the reposition struction of the velar m- vision.

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RECONSTRUCTION IN THE SEVERE SECONDARY CLEFT DEFORMITY AND OTHER CONGENITAL ANOMALIES

Larry M. Wolford, D.D.S.

Operated clefts occasionally will develop severe functional and esthetic deformities. The methods to correct these severe secondary cleft deformities will be presented, including: 1) soft tissue flap designs to simultaneously close oronasal fistulas, bone graft alveolar clefts, and perform osteotomies, 2) osteotomy design using rigid fixation and porous block hydroxyapatite grafting, and 3) method to lengthen pre-existing pharyngeal flaps. The secondary stage of reconstruction usually involves lip-nose revisions and rhinoplasty, as well as secondary pharyngeal flap procedures and other esthetic procedures.

Correction of other severe deformities such as Treacher-Collins and hemifacial microsomia will be presented, with counter-clockwise rotations of the maxillomandibular complex and reconstruction with sternoclavicular grafts.

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RECONSTRUCTIVE MATERIALS FOR CRANIO-FACIAL SURGERY. H. F. Sailer*, Universitatsspital Frauenklinikstr. 10/8091 Zurich

The reconstructive part of every cranio-facial intervention is usually more time consuming that the osteotomies. this is caused by the desired positioning of the mobilized cranio-facial unit, its fixation and retention and the bridging of the created defects.

The following fixation means are available:

* Suture materials (resorbable and non resorbable).
* Wire (steel and titanium).
* Miniplates, microplates, screws (made from titanium/vitallium).
* Intersceletal suspension.
* Fixateur extern (cranio-frame).

For reconstruction the following materials are available:

* Autologous bone
  a) From cranio-maxillofacial area: calvarium, chin bone, mandibular bone
  b) From distant areas: ribs, iliac bone, fibula, etc.
* Homologous tissues from tissue banks
  a) Lyophilized bone from different sources
  b) Lyophilized cartilage
  c) Others
* Alloplastic materials (hydroxy apatite, glass ionomere, acrylic).
* Bone morphogenic proteins (BPM) in combination with special carrier systems.

Modern craniofacial surgery avoids the use of autologous tissues.

* It is time consuming to take autologous tissues.
* Very large amounts of autologous material are not always available.
* A 2nd or 3rd operation site can cause pain and complications.
* Autologous materials resorb and transform faster than homologous ones.

At the Department of Cranio-Maxillofacial Surgery in Zurich cranio-facial reconstruction is performed exclusively by the use of homologous, lyophilized, sterilized bones and cartilage combination with bone morphogenetic proteins.

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CRANIAL BASE SURGERY IN CHILDREN AND YOUNG ADULTS J. Posnick, DMD, MD Center, Washington, DC 20007, USA

Pediatric cranial base surgery has evolved gradually. A coordinated interdisciplinary approach to the management of pediatric congenital, traumatic and neoplastic cranial base problems is essential. After thorough evaluation, the pediatric neurosurgeon, craniofacial/plastic surgeon, pediatric anesthesiologist and skilled nursing staff work together to complete effective urgent and elective craniofacial-cranial base procedures.

A perspective of historical landmarks, current treatment approaches and what we have yet to accomplish will be reviewed. Ongoing innovations into the prevention of disease, ideal staging and more effective operations through accurate diagnosis and technical advances should be expected.

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TREACHER COLLINS SYNDROME

Professor Khursheed F. Moos
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This autosomal dominant syndrome with varial expression bilaterally and affects the face. T clefting defects of the orbits, infraorbitally, later and through the zygomatic arches are accompan by severe malar hypoplasia, ear deformity a deafness, gross hypoplasia of the mandible w retrogenia, beaking of the nose and abnormalities the skin of the face and eyelids. In a third of cas it is accompanied by a cleft palate. Other anoma frequently occur.

Staged reconstruction is essential with initial airv management, treatment of the conductive hear loss followed by orbitozygomatic reconstructio the 5-8 year age period. This is followed by conv tional presurgical orthodontic treatment a orthognathic surgery between 14-15 years and fin by rhinoplasty from 16-19 years of age. Cranial b graft is ideal and planned reconstruction using cor CT scans is helpful. Soft tissue changes around orbits are difficult to correct. Lateral canthal rep tioning should be carried out when the orbit is. reconstruction with an osseo-integrated imp supported prosthesis and bone anchored hearing produces the best aesthetic and functional result