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CHURCHILL LIVINGSTONE

osseous part (surface-treated, Ø 3.3 mm, length 4 and 6 mm), a polished transmucosal neck and an abutment. Clamp-caps are used for reliable fixation of transpalatal arches, made of square rigid orthodontic wires (0.032 x 0.032 inch), at the abutment. Six adult patients were implanted with a fixture (length = 6 mm) in the midsagittal region of the palate during a pilot study. All patients had an angle class 2 malocclusion (distal occlusion 7–8 mm, overjet approximately 8 mm) and the treatment goal was, therefore, extraction of the first maxillary premolars, retraction of the frontal teeth and maximal anchorage of the lateral teeth without using a head gear or class 2 elastics. Due to the one-stage design, only a simple surgical procedure of 10 min duration was required for implantation, while no further invasive actions are needed until the time of explantation. Thus, the strain on the patients was reduced to a minimum. They are now at varying stages of active treatment and the most advanced cases are demonstrated here. The clinical and radiological findings after the treatment revealed no implant mobility or dislocation, favourable periimplant soft tissue conditions, and no marked mesial movement of the implant supported teeth. The frontal teeth were retracted by about 8 mm with space closure occurring in a relatively short treatment period. No compliance-dependent extraoral anchorage aids were needed as a result of this treatment approach. Furthermore, bonding of the well aligned mandibular dentition and its use with class 2 elastics was avoided.

Interposition with Dacron Vascular Prosthesis in Temporomandibular Ankylosis Arthroplasty

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Using the state of the art technical means in our possession, a vascular prosthesis made of long threads of dacron patterned in a tabular structure was used in 4 temporomandibular ankyloses (3 patients aged 8–23 years) in the past two years. Resection of the bony mass and the arthroplasty involving the new articular interposition were performed. The longitudinally incised vascular prosthesis, if compared to other synthetic materials in use, is smooth, elastic and it fits perfectly the subjacent bony surface. The vascular prosthesis is also long lasting, and it preserves its integrity and elasticity over a long period of time. It is well tolerated and integrated in the host tissues, playing the part of a buffer between the bony surfaces which replace the articular meniscus. This technique allows for the final recovery of the mandibular mobility. Two years after the operation the results are excellent.

Effusion in Magnetic Resonance in Temporomandibular Joint: A Study of One Hundred and Eleven Patients

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the radiologist to call this finding, in concordance with similar studies in other joints. Few papers have been published to evaluate this image.

Purpose: The aim of this paper is to correlate clinic and image features with this finding.

Materials and Methods: One hundred and twenty-three joints (111 patients) with effusion image have been reviewed. Forty-six joints (31 patients) alveatory chosen have been reviewed as group control. Five clinical variables (articular pain, irradiated pain, oral opening, clicking, and clinical stage), and 3 image findings (disk displacement, osteophytosis and disk morphology) have been evaluated. The χ^2 test was used in order to consider significance ($P < 0.05$).

Results: Effusion in TMJ could be put in relation with disk displacement, and osteophytosis. Clicking is more frequently founded in TMJ without effusion. These findings could show the effusion as a marker in TMJ with tendency to osteoarthritis.

Surgical Treatment of Basal Cell Carcinoma of the Face

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Basal cell carcinoma (BCC) is the most common malignant neoplasm affecting facial skin. The frequency of BCC of the face appears to increase with growing numbers in young subjects. The present investigation reviews the history of 673 patients having undergone surgical treatment for 1301 BCCs of the face between 1977–1992 in our institution. Based on this series, the features with bearing on the surgical strategy, such as type, size and location of the lesions will be outlined. Emphasis is put on the variants of local flap reconstruction and skin grafting techniques particularly in the problem zones on the nose and eyelids, where no excess skin for closure of the defect is available. Throughout the whole series, histologic control of the adequacy of marginal and deep tumour resection was performed. It became obvious that the required ranges for clearance to tumour edges and removal in depth cannot be predefined arbitrarily or on pure clinical judgement. Frequently, a two-staged procedure of resection and repair will be necessitated. Recurrences during the mandatory follow up were thoroughly reassessed to identify the reason for failure (e.g. accuracy of histologic category, multifocal growth, predisposition, etc.) and related to the time span from primary excision. Our series confirms that morphologically controlled surgical excision of the BCC of the face and subsequent application of reconstructive techniques produces both safe oncologic and aesthetic results.

The Use of Porous Polyethylene in Craniofacial Surgery: One Hundred Implants

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– Medpor. Between 1992–1995, 71 patients were treated with this material, involving a total of 100 implants. The material was used in a variety of implant sites: orbit (16), nose (3), zygomatic bone (5), mandible (17), chin (18), upper maxilla (10), ear (17), temporal (6) and frontal (1) regions, cranial vault (3).

All the implants were obtained starting from blocks or sheets of Medpor which had been opportunely modelled with a scalpel or a rotating burr. The implants were then anchored in the desired zone by screw, screw and plate or wire osteosynthesis. Medpor turned out to be a biocompatible material (the number of osteoblasts inside the porous cavity grew up over a period of some weeks), morphologically easily adaptable and it does not migrate nor does it vary in size. Moreover, Medpor was also used on two small patients who had been subject to sampling of rib cartilage to reconstruct the cartilaginous skeleton in order to prevent future rib deformities. Some of the cases treated have been followed up for as long as 4 years. Medpor has proved to be an extremely reliable material because of the valid results obtained and because the few complications that resulted needed only minor corrections, which did not involve the loss of the implant.

Does Miniplate of Condylar Fractures in Children Influence the Growth of the Mandible?

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Many clinical investigations have revealed that conservative treatment of fractures of the condyle in adolescents is not always achieving good morphologic and functional results. Therefore, active surgical treatment is proposed by various authors for this kind of trauma. However, up to now there has not been any kind of investigation as to the adverse influence exerted by miniplate on the growth of the mandible. In this paper, our series of investigations in 16 minipigs at the age of 6 months are reported. In 4 young animals only the lateral periosteum was lifted. In another 12 pigs we cut the condylar neck on one side only. In 4 out of these, miniplate osteosynthesis was performed, in 4 other ones lag screws were used and in the last 4 pigs no osteosynthesis was done after osteotomy. In each group, one animal each was sacrificed 4 weeks, 2 months, 4 months and 8 months postoperatively. Mandibular growth was evaluated radiologically and studied histologically. It was found that there was no disturbance of growth in any group of animals tested. The length of the condylar process as well as of the ascending ramus were identical to the contralateral side that served as a control.

Temporomandibular Joint Involvement in Generalized Osteoarthritis and Rheumatoid Arthritis: Histologic and Immunohistochemical Findings Correlated to Arthroscopy

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Aims: To conduct the first histologic and immunohistochemical study on patients with generalized osteoarthritis (GOA) and temporomandibular joint (TMJ) involvement

and compare with patients having rheumatoid arthritis (RA) and TMJ symptoms and an age-matched reference (autopsy) material (REF).

Materials:

	Patients/ joints	Male/ female	Left/ right	Age (years) mean (range)
GOA	20/20	4/16	10/10	53 (30–78)
RA	22/22	7/15	11/11	44 (18–78)
REF	9/17	6/4	9/8	43 (24–64)

Methods: On conventional histology, synovial inflammation and degeneration of the subsynovial connective tissue were evaluated. Immunohistochemical examination was performed with monoclonal antibodies: PCNA (against proliferating cells), GD45RO (against T cells) and CD68 (against macrophages).

Results: Frequencies of synovial inflammation on histology were similar high in both GOA and RAs and also higher than arthroscopic synovitis, and differed clearly from those in the REF material ($P < 0.001$). Connective tissue degeneration was commoner in GOA than RA ($0.01 < P < 0.05$). Several of the specimens, without synovial lining proliferation with conventional histology, were positive for staining with PGNA.

Conclusions: Similar high frequencies of synovial inflammation suggest the same type of tissue reaction in the TMJ in GOA and RA patients. Histologic and immunohistochemical findings in GOA and RA differed clearly from those in the REF material, and added useful information to arthroscopy. Synovial biopsies are therefore recommended as a complement to TMJ arthroscopy in patients with GOA or RA.

Autologous Mini-Micrograft Hair Transplantation in Laser Technique

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Between August 1994 and May 1995, 94 patients underwent transplantation of autologous hair. Transplanted were on average 900 (range 350–2550) micrografts, containing one or two hair roots and minigrafts, containing 3–5 hair roots. 93 male and 1 female were treated on an outpatient basis, using local anaesthesia with vasoconstriction and using a CO₂ laser technique to prepare the recipient channels. The 40 W laser was connected to a computerized scanner (Silk Touch, Sharplan Inc.), assuring a penetration of the channel of 5–6 mm with a diameter of 1 mm, 1.25 mm or 1.4 mm. Assessment was by inspection and clinical photographs before and after treatment. The follow up was between 6–18 months.

Results were excellent (i.e. the grafts took well, grew and could not be distinguished from normal hair) in regions where recipient channels did not exceed 1 mm in diameter. The take and aesthetic outcome of transplants within channels of 1.25 mm in diameter were satisfactory (i.e. 50% survival). However, transplants were likely not to survive where the recipient channel was 1.4 mm in diameter and results were accordingly unsatisfactory. In this respect, it seems that the laser technique concerning the applied heat-time quotient needs to be improved. No postoperative haemorrhage, no infection and no permanent deficiency of sensibility, dermoid cysts or scars were seen. One patient showed