

When treated at a very early stage, the outcome is most satisfying. No recurrence, scar or functional impairment was observed. When acted on in a very advanced state of growth, the anatomy of the eyelid was seen to be harmed, function and aesthetics compromised and intraorbital advancement caused a displacement of the eye. Laser treatment aims at an inhibition of progression and reduction of volume. Systemic cortisone can decrease the growth rate.

Conclusion: Hemangiomas in the periorbital region should be classified as an urgency and treated in the earliest stage. Laser treatment in that stage is effective and causes little side effects.

O.238 Our experience with the treatment of lymphatic malformations of the head and neck

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Introduction and Objectives: Lymphatic malformations in the maxillofacial region are usually congenital. Small lesions in the oral cavity frequently occur in association with venous malformations. Lymphatic malformations can be large and life threatening. There are different treatment options and several factors affecting the choice of treatment.

Material and Methods: In the past 3 years six children and four teenagers with lymphatic malformations in the head and neck region were referred to our department. Two children with large lesions in the neck were treated with OK-432, one successfully with two injections and one with surgery afterwards. Four teenagers with lesions in the oral cavity were treated with the Nd-Yag laser. Two children with lesions in the neck were operated and the others are still under observation.

Results: One child treated only with OK-432 has had no recurrence three years after the second injection. Two children with large lesions in the neck were operated (one child receiving OK-432 prior to surgery) and have had no recurrence but have some functional problems due to the operation. All patients with smaller lesions in the oral cavity were successfully treated with the laser. Three children are still under observation.

Conclusions: Results depend on the type and extent of the lesions, choice and time of treatment. Small lesions of the mucosa can be successfully treated with laser, large lesions can be treated with OK-432 or need to be removed by surgery. In order to remove the lesions completely, some functional structures in the neck must sometimes be sacrificed.

O.239 Validity of the Demirjian's method in determination of dental age of children of Mazovia, central Poland

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Precise evaluation of dental age is an integral part of treatment in craniomaxillofacial surgery of paediatric patients. Demirjian's method basing on calcification of 7 left mandibular teeth on panoramic radiograms is widely used for this purpose. So far Polish authors have not dealt with that issue. Therefore the aim of the study was to determine whether the Demirjian's standards can be used to evaluate dental age in population of Polish children. The material consisted of 994 panoramic radiograms of 584 girls and 410 boys aged from 6 to 16 from the Mazovia region (Poland), divided into 10 yearly groups. Dental age was calculated using the Demirjian method. The results were analysed

statistically using paired *t*-test, *F*-test and linear regression and correlation analysis.

Dental ages evaluated according to Demirjian were significantly accelerated in the analysed group (81.68% of girls; 77.56% of boys) and affected in particular girls aged 11 and 12, as well as 13-year-old boys. No statistically significant differences were observed between girls and boys in yearly groups. Using a non-linear regression model there were established function formulas allowing modification of the Demirjian standard to make it useful in the studied population. Afterwards chronological ages were again compared with dental ages; acceleration was seen in 55.82% of girls and 50.24% of boys, which might come from a positive secular trend in the population reported by many authors. In conclusion, development standards used by Demirjian are not suitable in the studied population; therefore it is necessary to establish new population-specific maturity curves.

O.240 The use of biodegradable plates in oral and maxillofacial surgery in children

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Introduction and Objectives: Clinical studies on biodegradable plates in children have been very few until now (Eppley 1997, 2000, 2005; Eppley et al., 1997; Kurpad et al., 2000; Yerit et al., 2005). Aim of the present study was to present our experience with biodegradable osteosynthesis plates, used in children and to discuss their efficacy and relevant parameters of importance.

Material and Method: Twelve children aged 6 months to 14 years, treated for 12 months (from February 2005) were included in the study. More specifically the cases were 7 mandibular fractures (symphysis and body), 2 fractures of the zygomatic complex, 1 case of craniosynostosis, 1 case of hemifacial microsomia and 1 case of antral window. Fixation of fractures and osteotomies was achieved with 17 biodegradable osteosynthesis plates composed of polylactide chains (Inion Ltd, Tampere, Finland).

Results: Post-surgical period was uneventful in all cases. Mean follow-up time was 8 months. Fractured bone stability and healing were achieved without any major local reaction or impairment of skeletal growing of the young patients.

Conclusions: The use of biodegradable osteosynthesis plates and screws in children had good results in our cases. Young patients avoided a second operation for removal of the plates (as with titanium plates). However, follow-up is required though, for possible late problems. Clinical research would help registering indications for the use of these plates according to their properties.

O.241 Management and treatment of paediatric facial fractures: Our experience in a series of 320 fractures

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Introduction and Objectives: Trauma is one of the main causes of morbidity and mortality in the paediatric age group. An important part of these causes are related to craniofacial fractures. There is great disparity in the available epidemiologic data and little consensus about the management in the scant literature on this important subject.

Our objectives are to establish the general principles and methods in the initial management, diagnosis and treatment of facial

fractures. We will also describe our experience in this field in the last 9 years.

Materials and Methods: We have retrospectively reviewed the facial fractures attended in our Department between 1996 and 2004. The total amounted to 320 diagnosed fractures in 282 patients under 16 years of age. We analysed the mechanism of trauma, patient age and sex, and fracture location, as well as their treatment and outcome. We fulfilled a bibliography revision and compared our results to those in the literature.

Results: The total number of cases of facial fractures was 320. The sex ratio was 1.7:1 (male/female). The main causes were accidental falls, followed by aggressions, motor-vehicle crashes and sport accidents. The most common were nasal fractures, succeeded by mandibular and orbital fractures. Zygomatic, nasoethmoidal, frontal and panfacial fractures were found to be infrequent.

Conclusions: Facial fractures in the pediatric age group have special characteristics and therefore require subject-specific knowledge of the diagnosis, treatment and follow-up. This study aims to analyse and clarify the general aspects of the management of pediatric facial trauma establishing work-up and treatment protocols.

O.242 The role of maxillo-facial surgery in patients with NF1

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Introduction and Objectives: Neurofibromas are a clinical manifestation of neurofibromatosis type I. Management of these tumours remains a challenge for the clinician. Goal of the present study is to point out treatment guidelines for these lesions.

Material and Methods: Eighteen patients diagnosed with NF1 and presenting lesions of the cranio-maxillo-facial district were included in the study. On the basis of clinical evidence and patient's expectations, only 6 patients of this group underwent surgery.

Results: All patients who had no surgery were included in a follow-up protocol to evaluate progression of disease. Four patients that underwent surgery had good functional/aesthetical result, whilst two patients had incomplete rehabilitation.

Conclusions: Twelve of 18 patients of this study had no surgery. Four of 12 patients had previous surgery followed by unsatisfactory results and decided to defer second surgery. This data, according to literature, induces to consider surgery only as part of complex treatment, still waiting for additional treatment options. Surgical management remains the mainstay of treatment for these lesions, but functional impairment is almost inevitable when resecting tumours involving this region. Surgical indications and timing in paediatric patients need to be carefully compared to the physical and psychological consequences of treatment. Radical resection of the tumour, wherever possible, and simultaneous reconstruction, wherever indicated, represent the gold standard up to now.

O.243 Use of cadaveric human bone for reconstruction of maxillary cystic lesions in paediatric patient

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Craniofacial surgery almost requires the use of bone grafting. Although autografts (especially from iliac crest, calvaria or rib) are the standard procedure for bone grafting from many years, it

is sometimes not possible to harvest bone or is not possible to achieve enough bone in case of big reconstructions or in case of poor quantity of bone in the donor sites (like in pediatric patient). The use of allograft bone provides a reasonable alternative to meet the need for graft material. The most common source is cadaveric donors. These types of donors should increase over the next few years. Preservation and availability of bone allografts harvested from cadaveric human donors are only possible in tissue banks, which offer adequate structural, human, technical and managerial conditions for the storage of large quantities allografts for clinical applications.

A major disadvantage of using allografts is the possibility of disease transmission (infection, graft resorption and immunogenicity too). Bone banks have made significant progress in the past few years to develop a plentiful supply of safe and efficacious grafts. We present our experiences about 20 cases in the last 24 months of paediatric patients with maxillary cystic lesions, in which cadaveric bone was used for the restoration of bone structure, with or without autologous bone graft taken from anterior iliac crest.

O.244 Alpha-2 interferon as a coadjuvant antiangiogenic therapy for giant cell tumors

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Introduction: Based on the hypothesis of vascular proliferation as the aetiology of these aggressive tumours, and based on the experience of other authors like Kaban, we present a case of a giant cell tumor (GCT) treated with surgery and an antiangiogenic protocol using alpha-2 Interferon.

Material and Methods: In October 2003 a 10 year-old male patient presented a 4×3 cm rapidly expansive left maxillary mass. Initial CT findings and biopsy confirmed the diagnosis of GCT. PTH and calcium serum levels were normal. Corticoid therapy lacked response and surgical conservative excision was performed. One month later, subcutaneous treatment with alpha-2 Interferon at 3,000,000 a day was initiated for 6 months. No side effects were reported. However, 2 months after the end of the treatment, a local recurrence was diagnosed. Again, the patient was treated with local excision and a new cycle of alpha-2 Interferon for 6 months. The patient is, to date, free from disease. A dental obturator was used for maxillary rehabilitation.

Discussion: The pathogenesis of this tumour and its response to antiangiogenic factors is not yet well known. However, the hypothesis that the interferon may induce osteoblast differentiation inhibiting vascular proliferation seems to be demonstrated in recent publications. In this way, interferon may facilitate bone production at the surgical defect and lower the recurrence rate. This protocol includes a monthly screening for side effects like anaemia, trombopenia or hypertransaminemia.

Conclusion: This case supports the hypothesis that the antiangiogenic therapy should be considered when treating large, aggressive GCT in the maxillofacial area.