Transoral Excision of benign Parapharyngeal Space Tumors

Purpose: to focus on the anatomy of the parapharyngeal space (PPS), clinical presentation, pre-operative assessment, imaging, and surgical approaches for resection of PPS tumors. Experience with transoral excision of five cases is also presented.

Patients and Method: five patients with benign PPS tumors presenting intraorally were treated between December 1998 and February 2001. Patients ranged in age from 45 to 61 years with an average age of 54 years. Based on computed tomography (CT) scanning all lesions were extraparotid, prestyloid and located anterior to the great vessels. A presumptive diagnosis of lipoma in the PPS was made on the basis of imaging in two patients and fine needle aspiration biopsy (FNAB) confirmed salivary gland origin in the remaining three patients. Surgical exposure was made through the transoral approach. No tracheostomy or external carotid artery ligation was done. Tumors were delivered into the oral cavity using blunt finger dissection and all incisions were sutured with a resorbable suture material after hemostasis was effected.

Results: pleomorphic adenoma (PMA) was excised in three females aged 50 to 61 years with an average age of 56.3 years and lipoma was excised in two males aged 45 to 56 years with an average age of 50.5 years. Tumors ranged in size from 2.5 to 3.5 cm and complete gross tumor removal was accomplished in all five patients. No surgical complication was encountered and blood loss was minimal in all cases. Patients were discharged on the second day after surgery and they all were disease free during a follow-up period that ranged from 16 to 42 months with an average age of 27.6 months.

Conclusion: in appropriate selected patients, the transoral approach is a safe and effective method for surgical excision of small prestyloid PPS tumors not palpable in the neck or parotid region. Local disease control with no need for tracheostomy or external carotid artery ligation offers significant advantages for the patient.

Maxillo-Mandibular Swellings: what Can MRI Add for Surgical Planning?

The goal of this study is to realize what MRI can add for surgical planning of the maxillo-mandibular swellings. So the value of magnetic resonance imaging versus other radiologic modalities was studied in a group of 62 patients. Other imaging modalities included conventional radiographs (panoramic, postero-anterior, oblique and periapical views) and C.T. All imaging methods were evaluated for their ability to detect the lesion and define lesion margins, soft tissue extension and bone involvement. The abnormality was identifiable with all radiologic modalities. The conventional radiographic images were unreliable because they visualized only the interface between tumor and bone but did not show any interface between tumor and normal soft tissue. For benign cystic lesions (40%), MRI was equal to CT. In the imaging of malignant neoplasms (13%), MRI was superior to CT. In the evaluation of lesion margins and soft tissue extension of the disease, whereas it was equal to CT in lesion detection and in the evaluation of bone involvement. Magnetic resonance imaging also had the highest rate of correlation with clinical findings, either from physical examination or at the time of surgery. We concluded that Magnetic resonance imaging can demonstrate a variety of lesions than...
CT. It provided essential macropathological details which correlated well with the histopathological findings. MRI can routinely delineate the tumor margin and their soft tissue extension in more detail than CT. It is able to evaluate the extent of tumor invasion of the mandible which is important in surgical planning.

3-

Treatment of Central Giant Cell Granuloma of the Mandible with Intralesional Injection of Corticosteroid

This study was carried out to report our experience with ten cases of central giant cell granuloma (CGCG) of the mandible treated with intralesional injection of corticosteroid with special reference to the possible effect of corticosteroid on CGCG microscopically and by DNA cytophotometry. Ten patients with CGCG of the mandible were included in this study. Triamcinolone acetonide was injected into the lesions, the injection was repeated weekly for a total of six weeks. Panoramic radiographs were obtained every three months to evaluate the healing process. Complete regression of the lesions was proved in three patients with no evidence of recurrences during a follow-up period of one year. The other seven cases needed surgical excision, which revealed significant decrease in the number (P=0.001) and size (P=0.01) of multinucleated giant cells (MNGCs). Whereas, no differences were reported between the number of blood vessels, DNA content and ploidy pattern of MNGCs before and after the intralesional corticosteroid injection. It could be concluded that, this form of treatment may be advantageous, particularly for large lesions in order to cure or reduce the size of the lesion and thus minimize the need for extensive surgical resection that could result in functional and esthetic deficits.

4-

Dental Extractions in Patients on Oral Anticoagulant

Purpose: To evaluate the local hemostatic effect of oxidized, regenerated cellulose (Surgicel; Johnson & Johnson Products, Inc, New Brunswick, NJ) in patients on oral anticoagulant undergoing dental extraction without interruption of their treatment.

Patients and Method: This study included 50 consecutive patients who were on warfarin, requiring dental extraction of their single teeth, randomly allocated into study and control groups. Other 25 patients who had never been on anticoagulant therapy were considered as a negative control group. For all patients, prothrombin time (PT) and international normalized ratio (INR) were detected on the day of extraction. Following dental extraction, in the study group, the sockets were packed with Surgicel and the gingival mucosa was sutured. In the control and the negative control groups, the gingival mucosa was only sutured. Patients were instructed to communicate any bleeding complication after extraction. Patients with no bleeding complication were seen on the eighth day for suture removal. They were examined for the presence of swelling, pain, and local infection. Data were collected and statistical difference in age and sex distributions, INR level, and post-
extraction bleeding that required treatment were analyzed. Statistical significance was
declared as a value of P< 0.05.
Results: Local hemostasis was obtained immediately in the study group and only after 10 to 30
minutes in both the control and negative control groups. As regard bleeding
complications, no cases of post-extraction bleeding that required treatment were recorded in both the negative
control and
study groups. Five cases of post-extraction bleeding that required treatment were encountered in the control group. This difference was statistically significant. No patient
had postoperative pain, swelling, or wound infection.
Conclusion: Dental extractions can be performed in
patients on oral anticoagulant without modification of their treatment regimen, provided that an effective local measure is
used. Local hemostasis with Surgicel and sutures appears to be efficient in preventing postoperative bleeding.

5-
**Transnasal endoscopic Enucleation of Dentigerous Cysts Involving the Maxillary Sinus**

Purpose: To evaluate the efficacy of transnasal endoscopic sinus surgery (TESS) for
enucleation of dentigerous cysts involving the maxillary sinus.
Patients and Method: Ten patients with dentigerous cysts were treated between January
2001 and February 2004. Patients ranged in age between 14-50 years with an average age
of 21.8 years. Preoperative evaluation included, clinical examination, panoramic and
occipitomental radiographs, and computed tomography (CT) scan of the paranasal
sinuses. The surgical technique included retrograde resection of the posteroinferior part
of the uncinate process, enlargement of the natural maxillary ostium, and enucleation of
the cysts through the middle meatal antrostomy window.
Results: TESS was sufficient for complete enucleation of the cysts and their associated
teeth in 7 cases. In the other 3 cases, trials for removal of the cyst wall were failed as the
cysts had partially destroyed the aniral bony walls. Immoral approach was used for
enucleation of cysts in those 3 cases. Postoperative follow-up ranged from 8 to 15
months. All the patients had uneventful recovery and the presenting symptoms were
completely relieved after surgery.
Conclusion: Based on the results of the present paper, it could be concluded that TESS is
a reliable, minimally invasive method for enucleation of dentigerous cysts involving the
maxillary sinus, provided that the bony walls of the sinus are intact.

6-
**Role of Polylactic Polyglycolic Co-Polymer (Fisiograft) in Bone Regeneration: An
Experimental Study**

Purpose: An animal study was carried out to evaluate the effect of locally implanted
polylactic polyglycolic acid (Fisiograft) on bone repair in induced bone defects.
Materials and Method: Eighteen, 2-3 months old, male guinea pigs weighing between
200 and 250 grams were used in this study. After anesthesia, each animal was subjected to implantation of Fisiograft in an induced bony cavity at the right side of the submental region. A similar bony cavity was induced on the left side to serve as a control. Animals were divided into 3 groups, each of 6. They were sacrificed at 2, 6 and 12 weeks following implantation. The mandibles were dissected out, fixed, decalcified and stained using both hematoxylin and eosin and Masson’s trichrome stains.

Results: There was no evidence of adverse responses in any of the animals throughout the study. At 2 and 6 weeks, histological examination revealed that gradual new bone formation took place at the experimental sides in a more rapid rate than that occurred at the control sides. At 12 weeks, the level of reossification had adjusted similarly in both study and control sides.

Conclusion: Fisiograft is allowing fibro-vascular tissue ingrowth, permitting bone healing in a more rapid rate, completely reabsorbed, and do not cause foreign body reactions. These advantages make it a promising choice when the jaw bone augmentation is needed.

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**Cryosurgical Treatment of Oral Hemangiomas**

Purpose: To report the outcome of treatment of eleven cases of hemangioma of the oral cavity using cryosurgery, and to discuss the different modalities used for treating oral hemangiomas.

Patients and Method: Eleven patients with hemangiomas of different sites of the oral cavity were treated using cryosurgery. The freezing session was performed using two consecutive freeze-thaw cycles. In each cycle, freezing was continued for 2 minutes and thawing proceeds spontaneously for 5 minutes. If any residual lesion remained, another course of cryosurgical treatment was performed after one week, and so on until complete resolution of the lesion.

Results: Of the 11 included patients, there were 8 females and 3 males with an age range of 19.6 years. Healing was uneventful in all patients. Except for two cases, no recurrence of the lesions was recorded up to 18 months following treatment.

Conclusion: Based on the results of the present paper, it could be concluded that, cryosurgery has been both effective and predictable method for the treatment of oral hemangiomas. Its conservative, vital tissue-sparing, non-hemorrhagic, non-infective and painless nature gives it, in our opinion, clear preference over the other treatment modalities.

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**Replacement of Missing Maxillary Anterior Teeth: Role of Dental Implants**

Purpose: To evaluate the dental implants as a treatment option for replacement of missing maxillary anterior teeth.

Patients and Method: Eleven patients seeking replacement of their missing maxillary anterior teeth were selected for this study. Screw-vent dental implants were used for such purpose. Surgery was performed under local anaesthesia at 2 stages with a six months latency period. Patients were recalled at 6 months and one year following crown cementation for clinical and radiographic evaluation.

Results: Included patients were 7 males and 3 females with an average age range of 27.6 years. Trauma was the main reason for single tooth loss (80%). Except for one implant, which failed to osseointegrate, all the implants were successfully integrated and no
failures have been reported both clinically and radiographically. Conclusion: From the results of the present paper, it could be concluded that, dental implants are good treatment option for replacement of missing maxillary anterior teeth.

9- Role of ultrasonography as an aid for localization of odontogenic fascial space infection
Some odontogenic infections are very serious and require management by oral surgeon who has extensive training and experience. Thus, early diagnosis and treatment are mandatory. This study included 18 patients suffering from oral and fascial space infection. For every patient full history, clinical examination, panoramic radiograph and ultrasonography (US) of the affected region were performed. We will use the US to investigate the accuracy and sensitivity in determining the spread of infection to the deep fascial spaces and then evaluate what can it add for the surgical management of orofacial space infection. US imaging modality is available for diagnostic use in oral and maxillofacial surgery. In conclusion US has minimized the therapeutic dilemma for oral surgeons, and provided the clinician, with more information to manage fascial space infection properly.

10- Odontoma of the jaws: A clinical study of 15 cases
Purpose: Odontomas are benign tumor of odontogenic origin characterized by their slow growth. They may lead to interference with eruption of its associated tooth. Materials and Method: A retrospective study was conducted on patients with odontoma of the jaws treated between 1999 and 2006. Patients were analyzed with regard to the following parameters: age, gender, anatomic location, size of the lesion, histopathological classification, and associated tooth. Results: Fifteen patients with odontoma of the jaws were included (8 females and 8 males). Their age ranged from 9 to 38 years (mean 21.1 years). Of the 15 cases, 11 were complex odontoma, and 4 were compound odontoma. Whereas no site preference for complex odontoma, compound odontoma had a predilection for the anterior maxilla. Conclusion: Although odontoma has a limited growth potential, it should be removed because it contains various tooth formulations that can predispose to cystic change, interferes with eruption of permanent teeth and cause considerable destruction of bone.

11- Prosthetic rehabilitation following surgical resection of recurrent ameloblastoma
Ameloblastoma is a locally destructive lesion, arising centrally within the bone and has a great tendency to recur. This tumor is often recurs following conservative surgical treatment. Prosthetic rehabilitation is required following treatment of ameloblastoma. In this study, removable partial dentures were used to Improve the facial appearance of the patients. Seventeen cases of recurrent ameloblastoma of the mandible and two cases of recurrent ameloblastoma of the maxilla were included in this study. They were 15 females and 4 males. They ages ranged from 24-45 years. The anterior body of the mandible was affected in 4 cases, the posterior body was affected in 13 cases and the palate in 2 cases. In all cases, the lesions were scraped from 2-3 times (conservative treatment) but each time the growth has recurred. Each case was studied both clinically
and radiographically. Surgical resection was performed for all cases under general anesthesia. Prosthetic rehabilitation following resection of recurrent ameloblastoma makes the patient able to provide mastication, speech, saliva control, esthetics and normal facial profile.

12-

**Surgical treatment of central giant cell granuloma of the mandible**

This study was carried out to report the outcome of surgical treatment of CGCG of the mandible, and to discuss the different modalities used for treatment of CGCGs. Eleven patients with CGCG of the mandible were included for this study. The standard surgical treatment for all patients was curettage with peripheral ostectomy. All treated patients were evaluated at six months and one year postoperatively. Data were analyzed with reference to age, sex, side, anatomic location and signs and symptoms. Healing was uneventful in all patients. No recurrence of the lesions was observed up to the last observation period. It could be concluded that curettage and peripheral ostectomy is an effective treatment for CGCGs of the mandible. Further controlled studies are needed to evaluate the efficacy of the non-surgical alternative therapies.

13-

**Immunohistochemical analysis of P53 protein in odontogenic cysts**

The P53 is one of the most common tumor suppressor genes, the mutations of P53 are closely related to the decreased differentiation of cells and early recurrence. Findings of studies investigating immunohistochemical P53 expression in odontogenic cysts are controversial, the present study was carried out to investigate the immunohistochemical expression of P53 protein in odontogenic cysts. Thirty paraffin blocks of odontogenic cyst cases were processed for the investigation of the immunohistochemical expression of P53 protein. Odontogenic keratocysts (OKC, 11 cases) revealed P53 expression (81.8%), only one (out of three) dentigerous cyst cases (DC) revealed P53 expression among its cells (33.3%). All the studied 16 radicular cyst cases (RC) did not express P53 protein in their cells. The findings of the present work supports the reclassification of OKC as keratocystic odontogenic tumor.

14-

**Exploration of ultrasonography in assessment of fascial space spread of odontogenic infections**

Objective: The aim of the study was to explore the capability of ultrasonography (USG) as an alternative imaging modality to magnetic resonance imaging (MRI) in detection of fascial space spread of odontogenic infections.

Study design: Forty-two fascial spaces in 16 subjects, clinically diagnosed as odontogenic infections, were included in this prospective study. The fascial space involvements were examined with USG. The results were confirmed by MRI and microbiologic tests.

Results: Ultrasonography demonstrated 32 (76%) of 42 involved fascial spaces. There was 100% agreement between USG and MRI on 32 superficial space involvements, including 13 buccal, 10 submandibular, 5 canine, 2 submasseteric, 1 submental, and 1 infraorbital. Ultrasonography did not detect 4 masticator space, 4 parapharyngeal space, and 2 sublingual space involvements. Ultrasonography was able to stage infection starting from edematous change to cellulitis to complete abscess formation.
Conclusion: Ultrasonography could be considered to be an effective method in detecting and staging spread of odontogenic infections to the superficial fascial spaces. However, it might be difficult to detect deep fascial space involvements.

15-

**Odontogenic tumors in Dakahlia, Egypt: Analysis of 82 cases**

Objective: This study was designed to analyze the frequency and distribution of different types of odontogenic tumors in Dakahlia, Egypt.

Study design: Records of the Oral and Maxillofacial Surgery and Oral Pathology Departments, Faculty of Dentistry Mansoura University with histologic diagnosis of odontogenic tumours (based on the World Health Organization, 2005), during a 15-year period were analyzed.

Results: A total of 82 cases of odontogenic tumors were reported. Of these (96.3%) were benign and (3.7%) were malignant. Ameloblastoma (41.5%) was the most frequent type, followed by keratocystic odontogenic tumour (19.5%), odontoma (13.4%) and odontogenic myxoma (8.5%). The mean age of the patients was 29.57, with a wide range (4-80 years). The male-female ratio and maxilla-mandible ratio were 1.2:1 and 0.2:1, respectively.

Conclusions: Odontogenic tumors show a definite geographic variation. In Dakahlia, Egypt, ameloblastoma and keratocystic odontogenic tumour are the most frequent odontogenic tumors, with distinct anatomic predilections.

16-

**Histological and biomechanical studies evaluating the early response of mandibular bony defects to synthetic nano-hydroxyapatite/chitosan composite**

Purpose: This study aimed to evaluate the effect of synthetic nano-hydroxyapatite-chitosan (nHAP-CS) composite histologically on guinea pigs' mandibular bony defects and to measure the compressive strength of its repaired bony cavities.

Materials and Methods: Bilateral submental induced bony cavities of the same size were prepared for forty adult male guinea pigs that divided into four equal groups. In group 1, the cavities were left out without any filling and considered as control while those of group 2 & 3 were filled with synthetic particulate CS and HAP respectively. Moreover, cavities of group 4 animals were grafted with synthetic nHAP-CS composite. The mandible of each animal was dissected out after 8 weeks and divided to its right and left counterparts. The left sided specimens were processed for heamatoxylin & eosin staining while that of the right side were subjected to the compressive strength testing.

Results: The quality and quantity of newly formed bone was less better and less prominent in nHAP-CS composite group rather than not only in control group, but also in CS and HAP groups. Statistical results for the histomorphometric analysis and compressive strength testing revealed a significant difference between the different groups (p

Conclusion: This novel synthetic composites fulfills many requirements for being a repair material for bone defects especially for load bearing bone substitution. In spite of it is slowly promotes bone formation, its repaired bone has relatively high compressive strength, its availability is unlimited, free from any risk of transmitting infections or diseases.
Implant supported versus retained mandibular distal extension removable partial overdenture: A preliminary study of implant and abutment marginal bone heights

Purpose: This study was aimed to investigate and compare the effect of implant supported versus retained mandibular distal extension removable partial overdenture (RPOD) on the abutment and implant marginal bone height changes.

Materials and methods: 20 healthy male patients were selected with mandibular bilateral distal extension ridges against edentulous maxilla. One osseointegrated self-taping implant was installed distally in the area of the second mandibular molar of each side. Patients were divided into two equal groups; Group I: received maxillary complete denture against implant supported RPOD, and Group II: received maxillary complete denture against implant retained RPOD. Digital panoramic radiographs were recorded for each patient immediately, 6 and 12 months after denture insertion to measure the abutment and implant marginal bone height changes.

Results: The mean tooth abutments marginal bone loss was statistically significant in both groups after 6 and 12 months of the study. However, this marginal bone loss was statistically significant between both groups after 12 months of the study. The mean implant marginal bone loss was statistically significant within and between both groups along the periods of the study.

Conclusion: Regardless the implant RPOD designs concept (supported or retained), abutment tooth and implant marginal bone were significantly reduced. However, this study recommended periodic monitoring of ridge base relation to preserve the supporting structures.