

T7.OR049**Three dimensional planning in the treatment of the orbital trauma**

S. Pimentel^{1,*}, P. Pino², R. Anicama¹, J. Velasco³, R. Ardito⁴, S. Serpa⁵

¹ Instituto Latinoamericano De Investigación En Cirugía Cráneo-facial Y Orbita (ILAICCO), Chile

² Cirugía de Cabeza y Cuello y Maxilofacial. Hospital Edgardo Rebagliati Martins (ESALUD), Lima-Peru./Instituto Latinoamericano de Cirugía Cráneo-facial y Orbita (ILAICCO), Lima-Perú, Chile

³ Servicio de Cirugía Plástica Ocular, Instituto Nacional de Oftalmología/Instituto Latinoamericano de Cirugía Cráneo-facial y Orbita (ILAICCO), Lima-Perú

⁴ Cirugía Plástica Ocular y Orbita, Clínica Ricardo Palma Lima-Perú/Instituto Latinoamericano de Cirugía Cráneo-facial y Orbita (ILAICCO), Lima-Perú, Chile

⁵ Oncología Ocular, Instituto Nacional de Enfermedades Neoplásicas, Lima-Perú/Instituto Latinoamericano de Cirugía Cráneo-facial y Orbita (ILAICCO), Lima-Perú, Chile

Orbital trauma are frequent complaint. Treatment aims to reconstruct defect, improve functional deficits and restore facial anatomy. Given its complexity and variability, the surgeon must take extreme caution in orbital management. In recent years has developed technology that allows us to precise orbital reconstructive procedures.

Aim: Describe three-dimensional surgical planning with models and intraoperative guides that support anatomical, functional and aesthetics results for patients with orbital trauma.

Methods: CT data stored in DICOM format. Planning was performed in 2D and 3D images and transfer to prototype models for optimization of surgical treatment. Additionally, were manufacture surgical repositioning guides and preformed plates and mesh. It proceed to surgery with transconjunctival extended with lateral canthotomy.

Results: Presents three-dimensional planning and transfer elements (model surgical guides and use of customize pre-bending mesh and plates) applied to the surgical treatment of orbital trauma. Benefits arising from use of this technology: decreased operative time, improved results and reduced learning curve.

Conclusions: Computer assisted three-dimensional planning with biomedical models is an option for treatment of orbital trauma. Its a valuable tool, providing better prognosis and quality of life for patient.

Key Words: Orbital Trauma, Prototype, Surgical guides, Computer assisted surgery

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T7.OR050**Cranio-maxillofacial injuries in northwestern Ontario, Canada**

B. Pynn

Thunder Bay Regional Health Sciences Center, Canada

Objective: The purpose of this study was to assess the cranio-maxillofacial injuries managed at the Thunder Bay Regional Health Sciences Center (TBRHSC), Thunder Bay, Ontario, Canada Study.

Design: The records of the 1077 cranio-maxillofacial injuries for TBRHSC over a 10-year period were reviewed. A number of parameters, including age, gender, race, mechanism of injury, type of facial injury, associated injuries, treatment modality and post-operative complications assessed.

Results: Males between the age of 18–25 sustained the majority of the injuries. Most of the fractures were the result of interpersonal violence, with alcohol and drug abuse being major co-factors. First Nations people comprised 70% of the injuries, despite only consisting of 17% of the population of the area. The most common fracture site was mandible (29%), followed by malar (22%) and dentoalveolar injuries (20%). There was a fracture recurrence rate of 7% in the trauma population.

Conclusion: The findings of this study were similar to those reported in the world literature with regard to incidence and mechanism of fracture pattern as well as their related co-factors. Education, preventive measures along with an after-care programs have been developed to assist patients whom have suffered cranio-maxillofacial injures.

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T7.OR051**Management of zygomaticomaxillary complex fracture without infraorbital rim fixation**

M. Rai*, S. Ginimav

K.V.G. Dental College and Hospital, Sullia, Karnataka, India

Purpose: The purpose of this study was to evaluate the adequacy of reduction and stability of fixation of isolated unilateral zygomatico-maxillary complex (ZMC) fracture without infraorbital rim fixation and also to formulate an operative strategy that will achieve the surgical objective of stable fixation while minimizing the morbidity of procedure.

Materials and methods: Eighty two patients with isolated unilateral ZMC fracture over a period of 4 years were randomly assigned into two point fixation group. Results of the fixation were analyzed on immediate post operative day, 1st, 12th and 24th post-operative week respectively. This included clinical, radiological and photographic evaluation.

Results: All patients maintained better stability at fracture sites resulting in decreased incidence of dystopia, enophthalmos, infraorbital scar, paresthesia of infraorbital region. The patients had better malar projection and height as measured radiologically.

Conclusion: We conclude that two point rigid fixation of ZMC fractures are not only adequate but are very stable. Compared to the three point fixation technique, it is less morbid with least complications.

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T7.OR052**The impact of maxillofacial trauma scoring systems in predicting maxillofacial injury severity in developing countries**

S. Ramalingam^{1,*}, N. Nooh¹, R. Neelakandan²

¹ College of Dentistry, King Saud University, Saudi Arabia

² Meenakshi Ammal Dental College, India

Background and objectives: Injury scoring systems are useful in assessment, grading and predicting injury severity of the trauma patient. Scoring systems for maxillofacial trauma are how-

ever not in popular use. Maxillofacial injury severity score (MFISS by Zhang et al., 2005) and facial injury severity scale (FISS by Bagheri et al., 2006) are among the reported maxillofacial trauma scoring systems. The objective of the present study is to evaluate and compare the MFISS and FISS in predicting injury severity in Indian maxillofacial trauma patients as determined by treatment cost and days of hospitalization.

Methods: A retrospective chart review of 189 trauma patients was done. Patient records including case notes, radiographs and photographs were evaluated by 2 independent observers and scoring was done using MFISS and FISS. Data about treatment cost in Indian rupees (INR) and days of hospitalization were collected individually. Statistical analysis was done using ANOVA with significance level (P -value) < 0.05 .

Results: The mean values for MFISS, FISS, treatment cost and days of hospitalization were 14.04 (SD 9.35), 4.68 (SD 3.15), INR 2312.88 (SD 1399.11) and 4.12 days (SD 1.51) respectively. There was statistically significant difference in treatment cost and days of hospitalization in comparison to both MFISS and FISS scores. Also there was statistically significant correlation between the two scores.

Conclusion: In the scenario of a developing country like India, both MFISS and FISS were predictable indicators of injury severity as determined by treatment cost and days of hospitalization. Further emphasis must be on the routine and rational application of such scoring systems as they not only aid the maxillofacial surgeon in treatment planning and assessing outcomes but also have wider socio-economic implications.

Key words: maxillofacial; trauma; scoring

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T7.OR053

Osteosynthesis plate removal after zygomatic fracture fixation

A. Rennie*, S. Choudhari, S. Venugopal, J. Stocker, L. Hanu-Cernat

Department of Oral & Maxillofacial Surgery, University Hospital Coventry and Warwickshire NHS Trust, Coventry, CV2 2DX, United Kingdom

Background: Zygomatic complex fractures are common. In the UK maxillofacial practice removal of fracture fixation plates is currently undertaken only when attributable symptoms develop.

Aim: This study aims to investigate the factors affecting the removal of zygomatic osteosynthesis plate and attempts to assess the incidence of plate removal over a 5-year period.

Method: The patients who underwent osteosynthesis plate removal from the zygomatic area between 2008 and 2012 were identified using the hospital operating theatre database. The patient's demographics, mode of injury, initial operation details, smoking status and the reasons for plate removal were recorded and analysed.

Results: During the 5-year period a total of 239 operations were carried out for the fixation of zygomatic fractures. Only 7 patients with age ranging from 22 to 51 years old (mean age 34.7) had their plates removed. All these patients were male. Plate removal occurred between 3 and 72 months after fracture fixation. The most common reason for plate removal was pain 42.8% (3), infection 14.3% (1), and loose screws 14.3% (1). 2.8% of zygomatic complex plates were removed over the five-year period.

Conclusion: These results show a very low plate removal rate and support our current practice of inserting zygomatic buttress fixation plates and not removing them routinely.

Key words: zygomatic complex fracture; plate removal

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T7.OR054

Pattern of maxillofacial injury in patients reporting to a tertiary care hospital in eastern Nepal

A. Sagtani*, L. Pradhan, M. Jaisani, S. Dulal, A. Dongol

Department of Oral and Maxillofacial Surgery, College of Dental Surgery, B.P. Koirala Institute of Health Sciences, India

Background and objectives: Oral and maxillofacial surgery is an integral part of the Emergency Department both for the immediate management of injuries that can compromise a patient's vision, respiration, speech and feeding; and for expert consultation regarding pathologies that affect the maxillofacial region. Maxillofacial emergencies can vary from facial lacerations to complex facial fractures, bleeding from an extraction socket, facial space infections compromising the airway, etc. The objectives were to examine the pattern and frequency of maxillofacial emergencies in our hospital and plan effective treatment strategies.

Methods: Data of all patients who reported to the emergency department of our hospital and were referred for maxillofacial consultation were recorded. The variables documented include age, gender, chief complaint and clinical presentation. In cases of trauma the cause of injury, nature of injuries, and associated injury if any (head injury, orthopedic injury, ophthalmological or abdominal injury) were also recorded. Data was entered in Microsoft Excel.

Results: A total of 354 patients (males – 261; females – 93) were referred for maxillofacial consultation. Out of 317 cases of trauma, 157 (49.52%) were due to road traffic accident, 78 (24.60%) had a history of fall from height and 38 (11.98%) suffered from interpersonal violence. Fifty patients had a mandibular fracture, 41 had dentoalveolar fracture and 16 had pan-facial fractures. There were 21 cases of facial space infections, 9 cases of temporomandibular joint (TMJ) dislocation and 10 cases of bleeding from post-extraction sockets.

Conclusion: In our hospital, the major reason for maxillofacial consultation in the emergency setting was trauma due to RTA and mandible being the most common bone fractured.

Key words: maxillofacial trauma; mandibular fracture

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T7.OR055

The clinical and radiographical characteristics of zygomatic complex fractures: a comparison between the surgically and non-surgically treated patients

E. Salentijn*, J. Boverhoff, M. Heymans, B. van den Bergh, T. Forouzanfar

VU University Medical Center, The Netherlands

Background: The aim of this study was to retrospectively review and analyse the clinical and radiographical differences between surgically and non-surgically treated patients with zygomatic complex fractures over a period of 5 years.