Management of Oro-Facial Injuries in Sports

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Epidemiology (Primary Dentition)

- Frequency varies: 4% - 33%
- Peak age: 2-4 years
- 31-40% males
- 16-30% females
- 2-1 males to females
- Maxillary anterior teeth
Children and Adolescents

- Most of the traumatic injuries to the teeth occurred between the ages of 8-11 in the anterior maxillary region.

Etiology of Dental Trauma

- The most common injuries to the permanent dentition are due to:
  - Falls
  - Traffic injuries
  - Acts of violence
  - Sports

Clinical Examination

• Palpation of labial bone
• Mobility of fragments
• Dislocation of fragments
• X-ray (#2 film)
• 55 degrees angulation
• Assess for root fracture
• Establish a baseline
Orofacial Injuries in Sports (USA)

- 300,000 annually
- 14-29 years of age
- 49 million dollars
- Cycling-100,000
- Baseball-60,000
- Soccer- 4,000

Review of the Literature

- Most frequent injury - laceration (upper lip)
- Most Injuries (men) sport - Football
- Most Injuries (women) sport - Basketball
Out of 791 injuries, 34 or 4% were injuries to the orofacial area.

Prevention

• Type of sport
• Frequency
• Level
• Skeletal-dental profile
• Orthodontic Treatment
• Dental Prosthesis

• Custom made and properly fitted mouthguard
Custom Fitted Mouthguards

Less than 6% of athletes participating in contact sports are using custom made mouthguards, J.Public Health, 2007.
“The Academy for Sports Dentistry and the Pan American Confederation of Sports Medicine recommends the use of a properly-fitted mouthguard made over a dental cast and delivered under the supervision of a dentist; and supports a mandate for the usage of a properly-fitted mouthguard in all contact and collision sports”

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Orthotics- Improve Performance?
Oral Trauma

- Soft tissue laceration
- Tooth fracture
- Tooth avulsion
- Alveolar bone fracture
  - Bone transplant
  - Dental Implants
  - Stem Cells
  - PRP
Mandibular Fracture
Surgical Considerations

- Suture selection: silk, chromic gut, plain gut, poliglycol (Dexon) acid, polитетrafluoroethlene
- Needle (x-1, x-8, fsd-2, c-22)
- Absorbable or non-absorbable
- Number of sutures
- Diameter of sutures (3-0, 4-0, 5-0, 6-0)
- Filaments (mono)
- Removal
Sutures Selection

• Mucosa: silk 3-0,4-0 or plain gut

• Tongue: vicril 3-0,4-0

• Skin: chromic gut or nylon 5-0,6-0

• Sub epithelial: prolene or nylon 3-0,4-0
Suturing

• Start at the Center
• Never widespacing
• Approximately 2mm apart.
• Deep sub-cutaneous should be taken before closing the skin
• Placing irregular edges together
Suturing

• More than 24 hrs. (loose approximation (face))
• Lip, gingiva and tongue - primary closure
• 4-0 nylon, Interrupted
• Remove every other suture in 5 days (skin)
Incised and Penetrating Wound

- Metal, glass, wood
- Cleaned wound
- X-ray
- Primary closure (6-0,5-0,4-0)
- Petroleum gely
- Dressing
Tooth Avulsion

• Tooth out of the socket
CAC Games- 20 years

- Central American and Caribbean Games
- Cuba 1982- El Salvador 2002 (20 years)
- 279-patients
- 133- mouthguards
- 18- acute injuries
- 52- restorative
- 76- evaluations

Thank You,