Being Prepared for Dento-Facial Injuries

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Athletic therapists are on the front line when it comes to head, neck, and mouth injuries. Brushing up on tooth-saving triage may well help an athlete retain an injured tooth or teeth.

With the advent of modern protective gear such as face masks and mouthguards, there are fewer sports related dental injuries today. Still, what do you do, short-term, to help your team dentist or oral surgeon get ahead of a dental or facial injury? I'm assuming you've established a liaison with a local dentist and a competent oral surgeon you can count on in an emergency.

The common dental injuries an athletic therapist may encounter are:

- Fractured teeth
- Avulsed (knocked out) teeth
- Maligned or displaced teeth
- Cracked teeth
- Jaw fractures
- Temporo-mandibular joint (TMJ) articulation injuries

Recognition and Treatment

Fractured Teeth

How do you recognize and treat these situations? For fractured teeth (Photo 1), saving the piece of tooth may work, thanks to the wonders of bonding technology. Even if it’s a cap, it may be helpful to save the piece. If it’s a sizable piece of tooth, particularly an anterior tooth, the team dentist may be able to bond it back on. Until then, keep the piece of tooth in water if you can.

Meanwhile, look at the break. If there’s no pink bleeding spot in the center of the remaining tooth, that means the nerve is not involved. The tooth may still be sensitive, but it’s not as serious as when blood is visible.

Hemorrhage from the center of the tooth indicates nerve involvement. The tooth can still be salvaged, even if the nerve is involved, but it will require some professional help.

Remember the scene from “Marathon Man”? That’s how it feels to the athlete when the pulp tissue is exposed! Cover the break with a gauze pad because it will be extremely sensitive to air, or have your athlete put the mouthguard on if the tooth is an upper incisor. Then page your friendly team dentist.

Avulsed or Displaced Teeth

If you witness the accident and can realign the teeth immediately, push them back into alignment, dry the adjacent teeth with gauze and, if need be, tape the loose tooth to the stronger ones on each side; then call the team dentist.

It may sound hokey but it could help save the athlete’s teeth and avoid costly treatment later. The dentist can stabilize the teeth with a light wire splint or apply a bonding resin, joining the loose tooth to a stronger uninvolved tooth.

A knocked-out tooth has a very favorable prognosis if the dentist can reposition it within 20 minutes of the accident.

That may not always be possible, so 3M’s Save-A-Tooth emergency tooth preserving system should be in every athletic trainer’s field kit. This facilitates putting the tooth in a sterile and...
protective solution until the athlete can get to a dentist. According to the manufacturer, a tooth may be stored up to 24 hours in the solution before being replanting by the dentist.

In any case, when handling an avulsed tooth, don’t handle it by the root but rather by the crown portion so as not to disturb the periodontal ligaments on the root surface; these are absolutely vital to successful replantation (Trope et al., 1996).

Treatment within an hour of the accident holds the best prognosis for preserving the natural tooth. After that the odds get longer, although it’s always worth a try especially if you are able to store the tooth in the proper solution. Immediacy is the operative word here. In a pinch you can use milk or even tap water as a storage medium.

**Cracked Teeth**

Cracked tooth syndrome usually manifests itself after the teeth have closed forcibly. It may be difficult to see this type of injury. The athlete may complain that the teeth feel like they’ve been chipped, or the teeth may simply be exquisitely sensitive to heat, cold, sweets, or biting pressure. This calls for professional help; there’s not much you can do in the field except provide analgesics.

**Jaw Fractures**

Next to the nose, the lower jaw is the most commonly broken facial bone. The usual tipoff that your athlete has a jaw fracture is that he or she cannot close the teeth together in a normal bite. There is pain upon opening, a muscle cont-