Displacement of Primary and Permanent Anterior Teeth – Luxation

Intrusion of teeth and Extrusion of teeth

Intrusion of the anterior primary teeth is common in children during the first 3 years of life. Frequently falling and striking the teeth on hard objects may force the teeth into the alveolar process to the extent that the entire clinical crown becomes buried in bone and soft tissue.

Treatment

Immediate treatment of soft tissue damage.

Most of injuries of this type occur at age when it would be difficult to construct a splint or appliance to stabilize the repositioned teeth.

The developing permanent incisor tooth bud lies lingual to the roots of the permanent central incisors. If intrusive displacement occurs the primary tooth usually remains labial to the developing permanent tooth. If intruded permanent tooth is found in a lingual relationship to developing permanent tooth it should be removed. This can be determined by a lateral radiograph of the anterior segment. X-ray should be taken to detect root fracture, fracture of alveolar bone, evidence of damage to permanent successor.

The force in field will cause turner or localized hyperplasia. If trauma is severe it cause gross malformed to the permanent teeth called dilacerations.

Primary intruded teeth as a result of blow re-erupt within 3-4 weeks after the injury.

The intruded tooth in future may be resorbed, root resorption, pulp necrosis, ankylosis.

Primary teeth if displaced but not intruded try to reposition the tooth with slight pressure, as soon as possible by the dentist or parents after the accident to prevent interfering with occlusion.

Give the child soft diet, analgesic, antibiotic and observe after 1 week, one month to observe the condition by X-Ray.

The prognosis for severely-loosened primary teeth is poor. The teeth frequently remain mobile and undergo rapid root resorption. When resorption occurs it was more extensive and progressed more rapidly in teeth with incomplete root development.

Intruded permanent teeth have poor prognosis than similarly injured primary teeth. The tendency for the injury to be followed by rapid root resorption, pulpal necrosis, or ankylosis is greater.

Treatment by orthodontic extrusion or waiting until spontaneous re-eruption of intruded permanent teeth remains a matter of clinical judgment.

If fully embedded inside the jaw, better to extract and do space maintainer to help child psychologically and esthetically.

The Extensive Luxation of Permanent teeth usually result in the teeth becoming pulpless. The immediate treatment, if mobile involves the careful
epositioning of the teeth and stabilization if the repositioned teeth do not respond to the pulp test within 2 to 3 weeks after repositioning endodontic treatment should be done before there is evidence of root resorption, which occur mostly after sever injuries of this type. If the tooth not mobile just reduce little bit of the incisal edge.

**Avulsion and Replantation**

Replantation is the technique in which a tooth usually one in the anterior region is reinserted into the alveolus after its loss or displacement by accidental means. The replanted tooth serves as a space maintainer and guide adjacent teeth into the proper position in the arch. The success of the replantation procedure is undoubtedly related to length of time that elapses between the loss of the tooth and its replacement in the socket. Sooner a tooth can be replanted in its socket after avulsion the better prognosis will be for retention. If the tooth replanted in less than 30 minutes the prognosis more favorable The Condition of the tooth & the condition of p.d.l tissue remaining on the root surface are also important factors. If the apical end of the tooth is incompletely developed at the time of the injury there is greater chance of regaining pulp vitality after replantation. If the apex is closed, pulpectomy a few days after replantation should be done. If parents calls the dentist that the tooth avulsed without other oral, neurologic or physical complaint

**The instruction of dentist to parent:**

replace the tooth in the socket immediately and hold it in place with light finger pressure while the patient is brought to dental clinic. If the tooth avulsed in clean place, nothing should be done to the tooth before parents replants it. If the tooth is dirty, clean the tooth surface but preserve any remnants of the periodontal ligament that still attached to the root. So the root should not scrub or cleaned with chemical agent. The best way to clean the tooth gently with milk or hold the tooth under cold running tap water. Isotonic saline is an excellent solution to use for this purpose if available. Patient own saliva is preferable to tap water. The tooth must keep moist during the trip to the dental clinical if the parent cannot replant it. Poor prognosis if avulsed tooth dehydrate before replantation. Isotonic saline or pasteurized whole bovine milk may be the most favorable known storage medium. Save.A.Tooth (the emergency tooth preserving system) is the only product that uses Hanks Balanced salt solution to preserve teeth for up to 24 Hours. The tooth should planted as quick as possible. If clot is present in the socket it will be displaced as the tooth repositioned, the socket should not scrapped with an instrument. When the tooth is not slip back into position with relative ease when finger pressure is used, L.A and X-Ray are indicated. L.A also used when fracture and displaced alveolar bone must repositioned before the tooth is replanted. Soft tissue suturing may be delayed until the teeth replaced in the socket. The suture should be done to control the bleeding before the tooth stabilized.

**Stabilization**

Acrylic splint with cold cure acrylic cover, the crown of 6 anterior teeth all in one piece then cemented fixed for a period of one month – 1.5 month. Acid etch technique by fixing a wire to the anterior surface of the teeth by composite. Bite plate acrylic cover palatal area by acrylic to ½ crown of all teeth.
Ligated arch bar.
Inter dental wiring.
Direct bonded orthodontic brackets a light labial arch wire bent and ligated to the brackets if properly done this result in excellent technique