\*\*\*Management of concussion

Management:¬ Advise soft food for 1 week. Advise brushing with a soft brush and rinsing with chlorhexidine 0.1 % to prevent plaque and debris accumulation and facilitate healing. Monitor pulpal condition for at least 1 year.

Follow up:¬ Clinical and radiographic control at 4 weeks, 6-8 weeks and 1 year.

Prognosis:¬ Usually positive with the tooth retaining its vitality and the periodontal tissues healing.

\*\*\*Management of subluxation

Management:¬ A flexible splint to stabilize the tooth for patient comfort can be used for up to 2 weeks. Advise soft food for 1 week. Advise brushing with a soft brush and rinsing with chlorhexidine 0.1 % to prevent plaque and debris accumulation and facilitate healing.

Follow up:¬ Splint removal and radiographic control after 2 weeks. Clinical and radiographic control at 2 weeks, 4 weeks, 6-8 weeks and 1 year.

Prognosis:¬ Usually positive with the tooAround 15% of teeth with a closed apex will lose their vitality. Teeth with open apices rarely do♣th retaining its vitality.

\*\*\*Management of extrusion

Management: Clean the exposed root surface of the displaced tooth with saline. Reposition the tooth by gently re-inserting it into the tooth socket with axial digital pressure (local anesthesia is usually not necessary). Stabilize the tooth for 2 weeks using a flexible splint. Advise soft food for 1 week. Advise brushing with a soft brush and rinsing with chlorhexidine 0.1 % to prevent plaque and debris accumulation and facilitate healing.

Follow up:¬ Splint removal and radiographic control after 2 weeks. Clinical and radiographic control at 2 weeks, 4 weeks, 6-8 weeks and 1 year and yearly for 5 years.

Prognosis:¬ More than half of the teeth with closed apex (55%) shown to develop pulpal necrosis. A fifth of those with an open apex (20%) reported to develop pulpal necrosis.

\*\*\*Management of lateral luxation

Management:¬ Rinse the exposed part of the root surface with saline. Apply a local anaesthesia. Reposition the tooth with forceps or with digital pressure to disengage it from its bony lock and gently reposition it into its original location. Stabilize the tooth for 4 weeks using a flexible splint. 4 weeks is indicated due to the associated bone fracture.θ

Advise soft food for 1 week. Advise brushing with a soft brush and rinsing with chlorhexidine 0.1 % to prevent plaque and debris accumulation and facilitate healing.

Follow up:¬ Clinical and radiographic control after 2 weeks. Clinical and radiographic control and splint removal after 4 weeks. Clinical and radiographic control at 6-8 weeks, 6 months, 1 year and yearly for 5 years. Monitoring the pulpal condition is essential to diagnose root resorption. If the pulp becomes necrotic, root canal treatment is indicated to prevent infection related root resorption.

Prognosis:¬ Lateral luxation is a severe form of injury, The apex of the tooth has been forced into the bone by the displacement, crushing nerve and blood supply. The majority of closed-apex teeth (75%) will develop pulpal necrosis. Around a third of teeth with an open apex are likely to develop pulpal necrosis

\*\*\*Management of intrusion

Management:¬ Dependent on stage of root development and injury severity. Three options are possible: -Spontaneous eruption -Orthodontic repositioning -Surgical repositioning

Follow up for all intrusion cases:¬ Clinical and radiographic controls after 2 weeks. Splint removal and clinical and radiographic controls after 4 weeks. Clinical and radiographic controls after 6-8 weeks, 6 months, 1 year and yearly for 5 years.

Prognosis: All teeth with closed apex are reported to lose their vitality. A third are reported to development replacement resorption (ankylosis). Prognosis in open apex teeth is dependent on severity of injury and stage of root development. Up to 68% of open apex teeth will develop pulp necrosis, a third will develop inflammatory root resorption.

\*\*\*Management of avulsion

Multiple scenarios are possible depending on apex development stage and extra-alveolar dry time:¬

Open apex:♣ Tooth replanted by the patient. EADT less than an hour EADT more than an hour

Closed apex:♣ Tooth replanted by the patient. EADT less than an hour EADT more than an hour

Clinical and radiographic control after 4 weeks, 3 months, 6 months, 1 year and then yearly thereafter.

\*\*\*Splinting traumatised teeth

The aim is to immobilize the tooth in the correct anatomical position so that further trauma is prevented and healing can occur.

Splinting regimen depends on the tissues that need to heal: ⁻

Periodontal tissues (luxation injuries): 2-4 weeks, flexible splint to reduce the risk of ankylosis.

⁻Root fractures: 4 weeks up to 4 months depending on site and mobility.

⁻Bone fractures: 4 weeks, rigid splint.

Types of splints Composite resin and wire splint/ Orthodontic bracket and wire splint /Foil-cement splint/ Laboratory splints

\*\*\*Sequelae of dental trauma in permanent teeth

Pulp necrosis (PN)

¬ Pulp canal obliteration (PCO)

¬ Replacement resorption

¬ Inflammatory resorption:¬ • External • Internal • Cervical