

Tooth Injuries

Rajat Sachdeva*

Director and Dean, Dr. Sachdeva's Dental Institute of Dental Sciences, Delhi DAYA Foundation, Delhi, India

***Corresponding Author:** Rajat Sachdeva, Director and Dean, Dr. Sachdeva's Dental Institute of Dental Sciences, Delhi DAYA Foundation, Delhi, India.

Received: June 24, 2019; **Published:** June 28, 2019

Reason of trauma to tooth

- Grossly carious/Decayed tooth
- Accidents
- Chewing hard food
- Opening bottles, walnut
- Assault
- Excessive grinding of teeth
- Teeth that have undergone root canal therapy and have not received a crown.

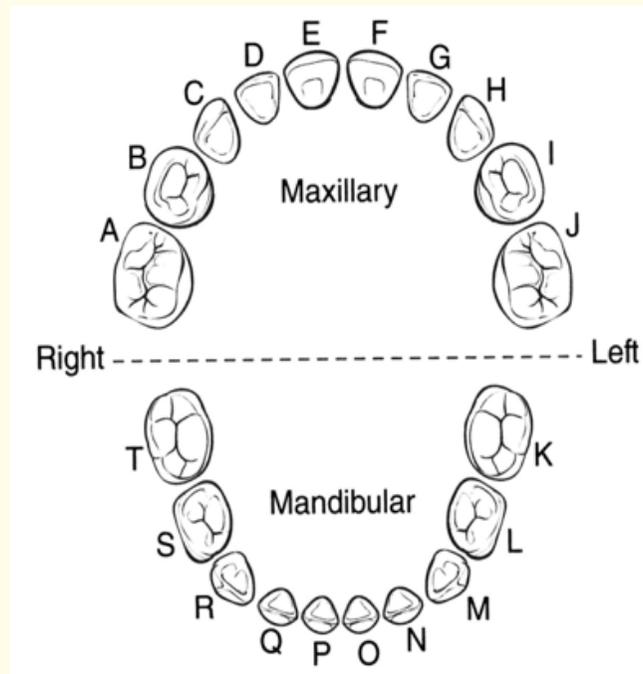


Figure 1: Primary Tooth

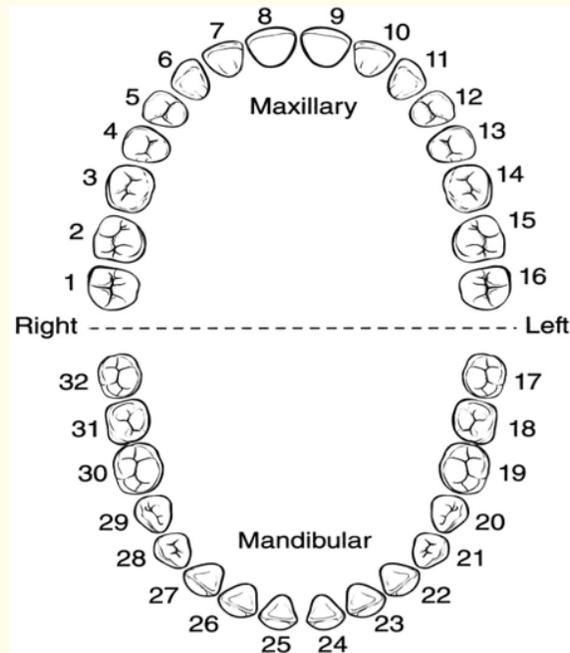


Figure 1: Primary Tooth

Types of tooth trauma

Crown fractures

1. Enamel.
2. Enamel and Dentin.
3. Enamel, Dentin and Pulp.

Root fractures

1. Horizontal - A horizontal crack in the tooth root.
2. Vertical - a vertical crack in the tooth root.

Displaced or loosened teeth within the socket

1. Concussion - The tooth has absorbed the force of the injury.
2. Displacement - The tooth has become dislocated inside the socket.
3. Avulsion - The tooth is out of the socket.

Enamel fracture

Sign and symptoms

- No tenderness/pain.
- No mobility.
- Tooth seems to be chipped minimally.

Treatment

- Bonding, if the broken tooth fragment is available.
- Restoration with composite resin.

Enamel and dentin fracture

Sign and symptoms

- No pain.
- No mobility.
- Sensitivity to hot or cold.

Treatment

- Bonding, if the broken tooth fragment is available.
- GIC or bonding agent and composite resin can be used.
- If the exposed dentin is within 0.5 mm of the pulp, place calcium hydroxide base and cover with a restorative material.

Enamel, dentin and pulp

Sign and symptoms

- Pain/tenderness present.
- Sensitivity would be there.
- No mobility.

Treatment

- Pulp capping or Partial pulpotomy - to maintain pulp vitality.
- RCT - In patients with mature apical development.
- Bonding if the broken tooth fragment is available.
- Restoration after pulp treatment with dental restorative materials.

Root fracture: Fracture of pulp, dentin and cementum.

Vertical root fracture

Signs and symptoms

- Pain on biting.
- Pain may be mild to moderate.
- Infection may take place.

Treatment

- In single rooted teeth - extraction is only treatment.
- In multi rooted teeth - fractured root can be removed by hemisection.

Horizontal root fracture

When fracture line is perpendicular to the long axis of the tooth.

Signs and symptoms

- In apical third - mild or no pain, only detected radiographically.
- In middle third - pain and tender on percussion infection or swelling.
- In coronal - severe pain and tender on percussion, infection or swelling.

Treatment

- Re-positioning, stabilization and occlusion adjustment.
- In case of pulpal damage, root canal treatment.

Concussion

Signs and symptoms

- Bleeding may be present.
- Tender on percussion positive.
- Non displaced tooth.

Treatment

- No treatment is needed.
- Monitor pulpal condition for at least one year.

Subluxation: Injury to periodontal tissue.

Signs and Symptoms

- Mobility of tooth.
- Undisplaced tooth.
- Pulpal damage can occur.
- Tender on percussion.

Treatment

- Splinting and root canal treatment.

Avulsion: Tooth is completely out of the socket.

Signs and symptoms

- Tooth is knocked out completely from socket.
- Bleeding tends to occur.
- Surrounding area is inflamed and lacerated.

Treatment

- Early management within 20 - 40 minutes of injury needs to be done.
- Deciduous teeth should not be replanted due to the risk of damaging the permanent tooth germ.
- After rising the tooth gently, store in saliva, milk or saline.
- RCT one month after re-implantation.

Volume 18 Issue 7 July 2019

©All rights reserved by Rajat Sachdeva.