

## **DENTAL AVULSION**

### **INTRODUCTION**

A tooth avulsion happens when you lose your permanent tooth. Accidents and injuries can knock out a tooth. You must seek immediate treatment to save your tooth. You can first reinsert your tooth yourself or save it in liquid. Then you should seek help from a dentist for further treatment.

### **DEFINITION**

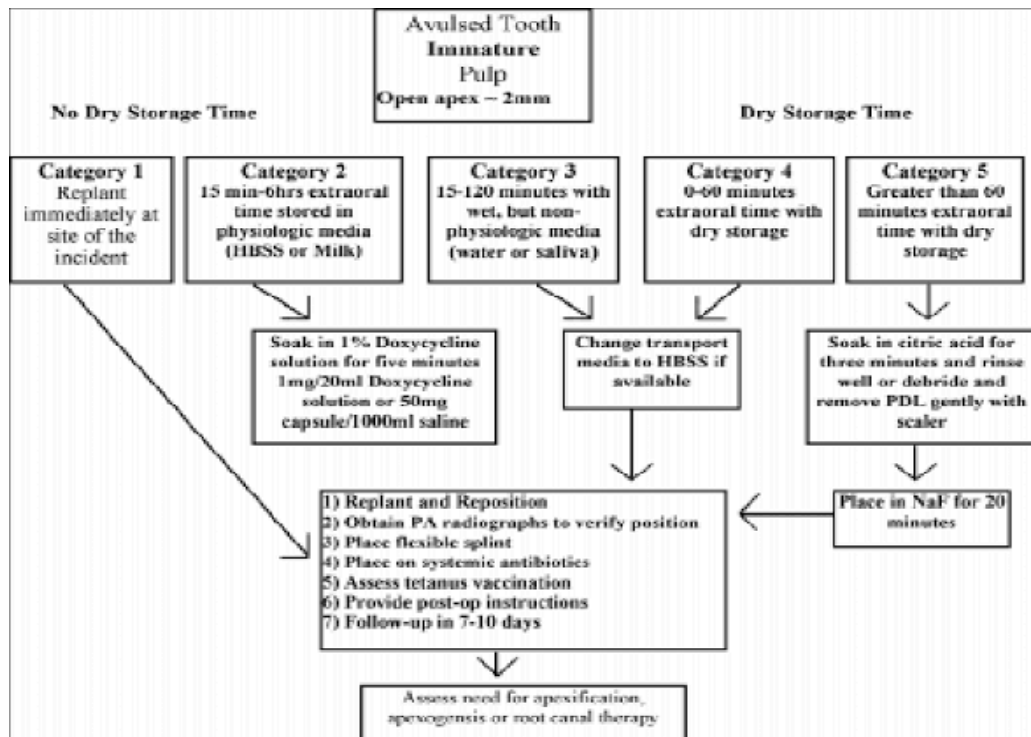
An avulsed tooth occurs when a tooth is completely dislodged from its socket.

### **CAUSES**

- Falls.
- Bicycle accidents.
- Sports injuries.
- Traffic accidents.
- Assaults.

### **MANAGEMENT OF DENTAL AVULSION**

- Pick up your tooth by the crown (white chewing surface).
- Rinse your tooth with water or milk to remove any dirt.
- Gently place your tooth back into the socket, root first.
- Bite on a napkin, gauze or handkerchief to anchor your tooth in place.
- Visit a dentist.



## Treatment in the office

### Emergency visit

- Place tooth in HBSS while exam is conducted and history is taken.
- Prepare socket for gentle repositioning of the tooth.
- Prepare the root.
- Extraoral dry time < 20 minutes: Closed apex—replant immediately after gentle washing. Open apex—soak in 1 mg doxycycline in 20 mg saline for 5 minutes.
- Extraoral dry time 20 to 60 minutes: Soak in HBSS for 30 minutes and replant.
- Extraoral dry time > 60 minutes: soak in citric acid, 2% stannous fluoride, and doxycycline and replant. Endodontics can be done extraorally.
- Semirigid splint for 7 to 10 days. (If alveolar fracture is present, rigid splint for 4 to 8 weeks). Suture soft-tissue lacerations, particularly in the cervical area.
- Administer systemic antibiotics (penicillin V potassium if possible)
- Chlorhexidine rinses and stringent oral hygiene while the splint is in place (7 to 10 days).
- Analgesics as required.
- Second visit after 7 to 10 days.

### **Endodontic treatment**

- Tooth with open apex and extraoral dry time of < 60 minutes: No endodontic treatment initially. Recall every 3 to 4 weeks to examine for evidence of pathosis. If pathosis is noted, disinfect the pulp space and start apexification procedure.
- Tooth with open apex and extraoral dry time > 60 minutes: If endodontics was not completed in the emergency visit, start endodontics and follow apexification procedure.
- Tooth with closed apex: Endodontics should be initiated after 7 to 10 days. Careful chemomechanical instrumentation under strict asepsis.
- Splint removed at end of visit.

### **Obturation visit**

- If endodontics was initiated 7 to 10 days after the avulsion, obturation can take place after short-term calcium hydroxide treatment.
- If endodontics was initiated more than 14 days after the avulsion or inflammatory resorption, long-term calcium hydroxide for 6 to 24 months, obturated when an intact lamina dura is traced.

### **Restorations**

- Temporary restorations: Should be 4 mm deep. Reinforced zinc-oxide-eugenol, acid-etch composite resin, glass-ionomer cement.
- Permanent restoration: Placed immediately after obturation. Acid-etch resin and dentin bonding agents.

### **Follow-up care**

- Twice per year for 3 years and yearly for as long as possible. Late complications are common.

## **CONCLUSION**

Although clinical forms of avulsed teeth and local injuries are diverse, most common cases include avulsed maxillary central incisors with intact crown and extra-alveolar period more than 60 minutes without proper storage media.

## **Reference**

1. Grossman endodontic practices 5<sup>th</sup> ed
2. Ingle's textbook of endodontics.