Quality and Patient Safety Committee
Department of Anesthesia
The Ottawa Hospital

# Protocol for dental trauma under anesthesia

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## Introduction

The incidence of dental trauma under general anesthesia in prospective studies is significantly higher than the reported in retrospective database studies 12%(1) vs 0.05%(2).

Most injuries involve central maxillary incisors, and comprise: enamel fractures, loosening, subluxation, luxation, avulsion, crown and root fractures, and missing tooth/teeth. (3)

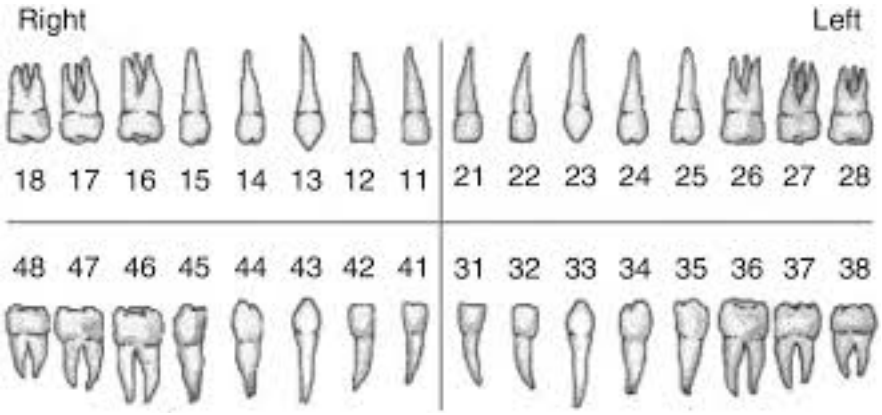
## Managing risk of dental injury

**Identify:**

- Patient risk factors(1)
  - Poor dentition, reconstructive work, presence of periodontal disease (Age, smoking, and certain medical conditions such as diabetes, are main risk factors for periodontal disease)(4).
  - Difficult intubation, or risk factors for difficult direct laryngoscopy suggested by the presence of:
    - Neck circumference $\geq$ 38.6 cm
    - Interincisor gap $\leq$ 3.5 cm
    - Thyromental distance $\leq$ 6 cm
    - Limited mouth opening
  - Increased age
- Anesthetic procedure related factors
  - Endotracheal intubation
  - Use of oropharyingeal airways(5)

**Preoperative Assessment and Consent:**

- Ask patient about loose teeth, presence of caps and crowns
- Identify, confirm with the patient, and document vulnerable teeth. Use FDI numbering system (see below). Use specific descriptors. E.g. “poor oral hygiene with generalized periodontal disease”, “maxillary right central incisor (#11) has a fractured incisal edge which I have confirmed with the patient”.(5)
- Discuss risk of dental injury with the patient
- Document the consent discussion in the anesthetic record




**Referral and action:**

- Consider preoperative dental referral in high risk patients or patients with suspected intraoral abscess.
- Consider securing a loose tooth to prevent aspiration and as aid for tooth's retrieval if dislodged.
- Use of bite block between maxillary and mandibular molar to prevent contact and damage to anterior teeth, and clenching down over the endotracheal tube. If this is used, please remember to leave a long tail for its retrieval from oropharynx, and/or attach to endotracheal tube. Document the use of bite block.

PART II.

## IF DENTAL INJURY OCCURS

### **Managing Avulsion**(6)

Dental Emergency!

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Assess need for replacement:

*Only replace permanent tooth from a healthy mouth in a patient who is not immunocompromised*

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Do NOT touch root surfaces

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Push into socket and hold for several minutes.

*If no comfortable replacing tooth, store in saline or milk.*

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**Immediate consultation with dentistry service**

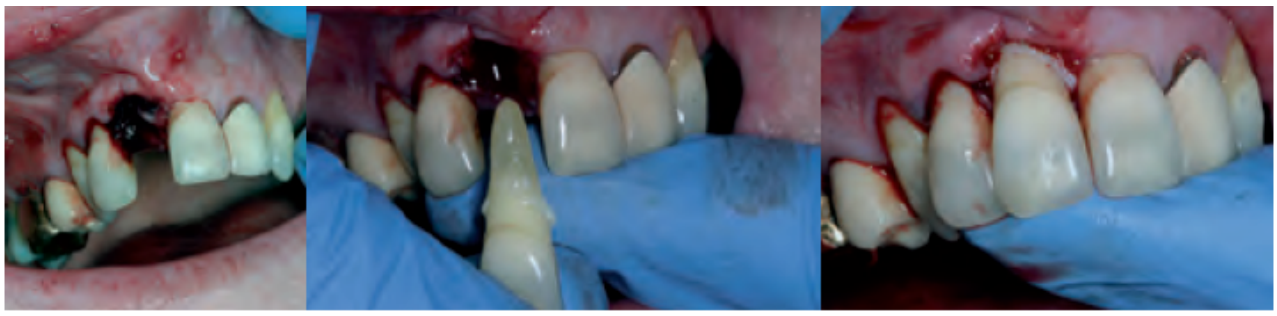
Dental Clinic- Civic Campus:

613-798-5555 x 14053

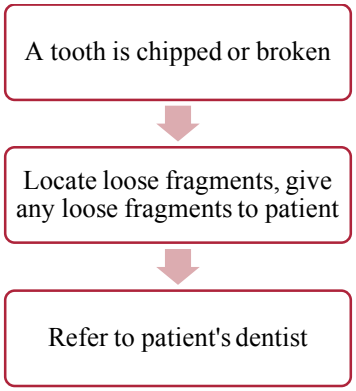
Ottawa Dental Society

[Dental Emergency Referral Service]

613-523-4185



**Managing damage**(7)




As per CMPA:

- If damage to teeth occurs, this needs to be disclosed to the patient. Items to be considered in the discussion could include the following: damage to teeth is considered an inherent risk of the procedure, any difficulty encountered during the procedure, as well as any precautions that were taken to avoid this complication.
- If immediate dental treatment is required and is arranged by the treating physician, care should be taken to avoid allowing any inference the costs will be borne by the physician.
- If a patient does allege her/his teeth were damaged during a procedure despite reasonable care by the physician, the physician should not offer or promise financial help but should contact the Association immediately for advice.

**Useful resources:**

https://www.cmpa-acpm.ca/web/guest/-/how-to-reduce-the-risks-of-dental-injury

https://www.cmpa-acpm.ca/-/disclosing-harm-from-healthcare-delivery-open-and-honest-communication-with-patients

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