

Tissue Preservation following Significant Dental Trauma

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INTRODUCTION

- The tissues in the oral cavity are very difficult to preserve. Once they have been lost, it can be very difficult to rebuild them.
- For this reason, the primary goal in treating dental trauma is to save the teeth.
- If the tooth cannot be saved, we still need to think about preserving the soft and hard tissues surrounding the tooth. If we wait too long, shrinkage of the soft and hard tissues may jeopardise the restoration of function and esthetics in the future.
- Though children are particularly prone to dental trauma, the principle of saving teeth and surrounding tissues is true for patients of all ages.
- The International Association of Dental Traumatology has recently published a new set of guidelines which focus on the preservation of natural dentition.
- The guidelines include recommendations on how to manage specific scenarios, and contains separate sections on primary and permanent dentition.

CASE STUDY

- 13-year-old male who fell while skating
- Central incisor missing
- Did not find tooth



Missing central incisor

TREATMENT

- Common treatment options until the patient is old enough to receive an implant:
 - Flipper (Removable partial denture)
 - Essex Retainer
 - Maryland bridges
- However, all of these options will result in significant loss of bone and soft tissue that will make later placement of an implant more complicated.
- Instead need to think about how we can enhance the preservation/restoration of the soft and hard tissue while waiting for the opportunity to place an implant.
- In this case an *autotransplantation* was performed by taking a premolar and transplanting it to the site of the missing central incisor.
- The time between extraction and placement of premolar was kept to an absolute minimum so that PDL cells were viable and could reattach at the site of the transplant.
- Composite crowns were then performed to improve the aesthetic of the implanted tooth.

TREATMENT OUTCOME



Premolar transplanted to site of missing central incisor



Composite crowns placed to improve aesthetic

- 20 months after auto-transplant, radiographs showed that the PDL was restored around the transplanted tooth.
- Soft and hard tissues around the tooth were preserved. This will make a significant difference to the outcome of later implant placement.
- Even if there are complications with transplanted tooth, the gains in soft and hard tissue restoration is something that cannot be achieved with any other treatment modality.

RESOURCES

- Webinar on [IADT website](#)
- [New IADT traumatology guidelines](#)