

A useful tool for impacted canines bonding technique:

Transbond Moisture Insensitive Primertm (MIP):

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Note: The author has no financial interest in the products described in this article.

INTRODUCTION

Ectopic eruption and impaction of canines is a frequently encountered clinical problem. The incidence of impaction ranges between 1% and 3%. Canine impaction can be the result of localized factor(s) or polygenic multifactorial inheritance in association with other dental anomalies. There are a number of possible sequelae to canine impaction, ranging from loss of space in the arch to resorption of the roots of the adjacent teeth. Although the management of the ectopically erupting teeth necessitates the combined expertise of a number of clinicians, the orthodontist should have the primary responsibility of coordinating these efforts to provide the patient with the optimal treatment options and the most stable and favorable outcome (1).

Advances in bonding techniques and materials allow for reliable bracket placement on ectopically positioned teeth. The aim of this study is to present some clinical uses of the Transbond MIP primer (3M Unitek), a new product designed for bonding in a wet field.

CASE 1

R.V. 13.8 YEARS OLD female, Skeletal class I, Molar class I, OB 2mm OJ 1mm
Impacted upper right canine.

A mucoperiosteal full thickness vestibular flap was elevated between the upper first premolar and the lateral Incisor.

The dental follicle was excised and a small area of the upper canine crown was exposed (Fig.1). After etching for 30 seconds, the crown was rinsed abundantly (fig.2). MIP primer was applied immediately and a lingual button was bonded on the crown (Transbond light curing composite). After 40 seconds of light curing (fig. 3) clear power chain was placed and the mucoperiosteal flap was sutured (fig.4)



fig1



fig 2



fig. 3



fig. 4

CASE 2



fig.5

S.A. 14.7 YEARS OLD female, Skeletal Class I, Molar class I, OB 1mm OJ 2mm

Bilateral palatally impacted canines (fig.5)

Two palatal full thickness mucoperiosteal flaps were raised under local anaesthesia to expose the upper canines. On her upper right, the canine was located close to the lateral incisor root (fig.6)

In the upper left, the canine was palatal to the lateral incisor root (fig.7)

Due to the conspicuous bleeding, a complete dry field could not be achieved. After etching a small portion of the canine crowns, MIP primer was placed and 2 palatal button were bonded (fig.8).

Power chain was placed on the steel ligature around the button after suturing the mucoperiosteal flaps (fig.9)



fig. 6

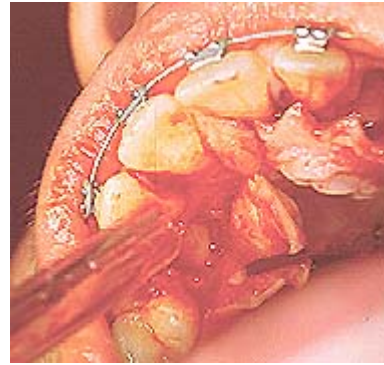


fig. 7



fig. 8



fig.9

DISCUSSION

The palatally impacted canine requires a combination of both surgical and orthodontic management. The advent of bonded brackets has allowed considerable flexibility in the exposure technique. Complete canine crown exposure is not required yet, as a bracket can simply be bonded to small exposed surfaces. (2) Two types of approaches are commonly used: simple exposure, or exposure with bracketing at the time of surgery (3).

Forced orthodontic eruption of impacted maxillary canines with a well bonded orthodontic traction hook and ligation chain, used in conjunction with a palatal flap or an apically repositioned labial flap, results in predictable orthodontic eruption with few complications (4).

During surgical exposure and bonding procedures, the main problem is the control of blood, saliva and fluid contamination to obtain stable and durable bracketing of the impacted tooth..

Transbond MIP contains HEMA to attain moisture insensitivity and BisGMA for bond strength and hydrophilic monomers, which are moisture friendly.

Therefore, it is especially useful where moisture control is troublesome, i.e. in the posterior region or on partially erupted teeth. It can be used in dry, wet or saliva contaminated environments, whereas the usual bonding systems can only be used in dry environments.

For these reasons, Transbond MIP can be considered an effective bonding system in the management of impacted canines.

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