Simple Technique Overcoming a Persistent Problem in Cleft Palate Repair

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Abstract

Purpose Cleft palate repair mandates use of a mouth gag and Dingmans moth gag is the most commonly used for the same; but the use of Dingmans mouth gag may have the demerit of the suture getting tethered at various places of the instrument during cleft palate closure particularly in the hands of the beginner surgeon.

Method This article discusses about a simple technique of using a rubber dam sheet to cover the frame of the mouth gag.

Conclusion The technique discussed in this article is simple, cost effective method to overcome the potential disadvantage of suture adherence during repair of palatal tissue. The technique also has the potential to reduce the total operative time which needs a further study to validate the same.

Keywords Rubber dam · Dingman's mouth gag · Cleft palate

Introduction

A mouth gag is a part of the basic necessary armamentarium required in cleft palate surgeries. These mouth gags are of different shapes and sizes and have evolved to eliminate the potential demerits and problems over a period of time [1, 2].

Dingmans retractor is a popular equipment among cleft surgeons and was first introduced in 1962 by Dingman and Grabb who modified the open, C-shaped frame Dott-Kilner gag into a rectangular, closed frame [1].

Many different companies manufacture this equipment. The inherent design involves lot of springs, corners, crevices and hooks which have a potential disadvantage of the suture getting tethered during closure of palatal soft tissues. This teethering causes an increase in the total operative time and adds to the irritation and frustration of the operating surgeon. Thus, in our unit we decided to overcome this basic inherent problem by draping these hooks, corners, springs and crevices of the Dingmans mouth gag by a suitable material, thereby eliminating the teethering effect of these structures of the gag and creating a smooth and flat platform for easy passage of suture into the oral cavity.

Technique

After the patient is prepared for the palate surgery, the Dingmans mouth gag is applied as done routinely and infiltration of the vasoconstrictor solution is done. While we wait for the effect of the vasoconstrictor a commercially available rubber dam sheet of size 6" × 6", gauge medium (0.18 mm), which is sterilized in an autoclave is applied all around the mouth gag at seven different points (Fig. 1). This is a self retaining sheet due to its elasticity and does

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Fig. 1 Adaptation of rubber dam sheet over the Dingmans mouth gag. Points marked 1–7

Fig. 2 Access created through the centre of the sheet

not require any additional retaining device over the frame of the mouth gag. The four points are at the four corners of the mouth gag (points 1–4), one point is at the cadual side

at the retaining end of the tongue blade (point 5). The lateral two retaining points are on either side of the gag at the holding screws of the cheek retractor (points 6, 7). After the rubber dam is stretched and applied at the seven points as described, the central portion is cut off with scissors thus providing access to the oral cavity for subsequent surgical procedure (Fig. 2).

Discussion

The simple technique of using a rubber dam for the purpose of draping and eliminating suture retentive areas of the mouth gag can comfortably be performed without adding an exponential cost.

Availability of rubber dam sheet is also not a problem as it is routinely used for isolation in day to day dental practice.

Moreover, the technique ensures easy, smooth, and prompt passage of suture without getting retained. This technique is likely to reduce the total operating time thereby eliminating frustration particularly in the beginner surgeons; however a comparative study evaluating the total time involved in the procedure with and without application of a rubber dam sheet is required to substantiate the same. The use of this technique can be practiced easily by beginners but should be avoided in patients reporting with latex allergy.

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