

Project Number: CC016

Title: Exploring the relationship between palatal cleft type and width and the use of relieving incisions

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Scientific Outline:

In the United Kingdom the mainstay cleft palate repair technique is the intravelar veloplasty (IVVP) as described by Sommerlad. This technique involves incising the cleft margin, performing repair of the nasal mucosa, dissection and repositioning of the palatal muscles into a more anatomical position, then repair of the oral mucosa. Where possible a direct side to side repair of the oral mucosa is preferred. However it is not always possible to align the oral mucosa in the cleft midline in order to achieve a tension free repair. Indeed repairing the oral mucosa under tension may lead to relative hypoperfusion of the tissues, wound breakdown and eventual fistula formation.

In cases where it is not possible to perform a direct side to side repair, wide undermining of mucoperiosteal flaps of oral mucosa from the cleft margin to the alveolus and incision around the palatal alveolar margin allows the oral mucosa to be elevated as a bipediced flap and transposed to the midline in order to aid cleft closure. This can be performed unilaterally or bilaterally and is a well established adjunct to palatal closure and follows the principles of von Langenbeck's palatoplasty.

There is however concern from the cleft community that the addition of relieving incisions and raising of oral mucoperiosteal flaps to IVVP may cause abnormal palatal/maxillary growth. Indeed studies of alternative cleft palate repair techniques performed worldwide have demonstrated that wide elevation of oral mucosa can be deleterious to palatal growth. It is thought that this leads to damage or devascularisation of the palatal growth centres. This however has not been investigated in the IVVP technique.

We therefore propose using national data from the Cleft Collective to investigate this problem. The data collected by this study would provide valuable information for the cleft community to provide to parents of children born with a cleft on the likely need for the use of relieving incisions in their child.

This initial study would provide the groundwork for future investigation into the outcomes of the use of relieving incisions as an adjunct to IVVP.