

Effects of Cleft Width and Veau Type on Rates of Palatal Fistula and Velopharyngeal Insufficiency after Cleft Palate Repair

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Purpose: Rates of palatal fistula and velopharyngeal insufficiency (VPI) after cleft palate repair have been linked to factors including Veau classification and surgical technique[1]. The effect of cleft width on outcomes has only been rarely studied[2].

Methods: A retrospective review of all patients undergoing primary cleft palatoplasty by a single surgeon between 2004 and 2011 was performed. Primary outcomes were palatal fistula and VPI. Multivariate logistic regression was conducted to identify predictors of primary outcome.

Results: 177 patients (84 male and 93 female) were identified. Median age at repair was 10 months with median follow-up time of 3.8 years (inter-quartile range 2.56-5.39 years). All four Veau types and a variety of cleft widths were represented. Palatal fistula was observed in 8 patients (4.5%), but required surgical repair in only 2 (1.1%). Fistula was associated with Veau IV classification (odds ratio 8.35, $p=0.012$) but not with cleft width. VPI needing surgical intervention occurred in 7 patients (4%) and was associated with increasing cleft width (odds ratio 1.39, $p=0.01$).

Conclusion: Overall rates of palatal fistula rates were low, even in patients with wide clefts. Repair using two-flap palatoplasty and adjunctive techniques such as vomer flaps, acellular dermal matrix, and osteotomy of the vascular pedicle bony foramen for better flap mobilization may have contributed to the observed low fistula rates. Techniques for repairing wide clefts can shorten the palate without recreating physiologic motor function, leading to the observed higher VPI rates in patients with wider clefts.

References

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