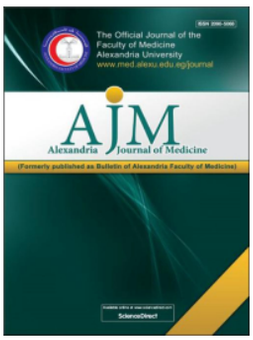

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Alex Davies & Sherif Wilson

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Invited commentary on: comparative study between Fisher anatomical subunit approximation technique and Millard rotation-advancement technique in unilateral cleft lip repair

Alex Davies and Sherif Wilson

Department of Plastic Surgery, Southmead Hospital, Bristol, UK

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To quote Thompson: "all cleft lip surgeons have their favorite surgical technique for repairing the unilateral cleft lip. It is usually a hybrid of training experience and imagination." [1] Of the myriad of repair techniques that have been described, several techniques have gained popularity. Millard introduced his rotation-advancement repair in the 1960's [2], and its simplicity and "cut as you go" approach saw it adopted by cleft surgeons worldwide. Despite this, the resulting line of repair is not an anatomical reflection of the non-cleft side philtral column, especially at the top of the lip where it deviates to the non-cleft side. The transverse alar incision can result in nostril stenosis. In cases where a large rotation of the medial lip element is required in order to level Cupid's bow, the long medial incision necessitates a matching marginal lip incision of the lateral lip element. This may require the surgeon to violate Noordhoff's point and subsequently sacrifice transverse lip length in order to achieve sufficient height.

In order to avoid the drawbacks of the Millard repair, Fisher introduced his anatomical-subunit approximation technique [3]. In this technique, the resulting line of repair ascends the lip along the cleft-side philtral column and curves along the lip-columellar junction to enter the nostril. This aims to achieve symmetry with the non-cleft side whilst placing the scar at the boundaries of the lip subunits. The nostril sill is aligned such that the nostrils form equal circumference, and the avoidance of a transverse incision at this level aims to prevent nostril stenosis. The heights of the lip elements are matched using a small triangle of lateral lip tissue just above the white roll, as well as taking advantage of the Rose-Thompson effect, wherein length is gained by opening the angles of the repair.

The proposed advantages of Fisher's technique have seen it gain increasing popularity around the world, and in many institutions, including our own, it has replaced Millard's repair. However, in spite of this, there is a paucity of evidence that firmly demonstrates that any particular technique is superior to the other. Indeed it is possible that excellent as well as poor results can be achieved with any chosen technique. A lot may come down to the experience of the operating surgeon. The authors of this study should, however, be commended on their attempts to address the question of which technique results in better esthetic outcomes.

The gold-standard method of comparing two or more treatment options has to be the randomized controlled trial. These powerful studies have the ability to control many confounding factors that may influence the final result. However, as is often the case in the advancement of surgical knowledge, such studies often prove to be impractical, especially as, for example, blinding of the operating surgeon is not feasible. As such we often have to rely on the outcomes of cohort studies.

Patients born with a cleft lip form a disparate group with many different phenotypical features on initial presentation: the associated presence of cleft palate, incomplete versus complete clefting of the lip, differing alignment of the two lip elements, the extent of the cleft nasal deformity and the need for primary nasal correction. All these features may necessitate alterations and additions to the techniques required to repair the lip.

In their study, the authors do not provide a detailed description of the above factors in their two cohorts. Unfortunately, therefore, it is not possible to determine if the two cohorts are truly comparable. Such pre-operative measurements would have been useful to aid comparison of the two techniques. Indeed separate analyses for complete and incomplete lips would have been interesting to determine if the degree of clefting affected the final outcome. One might surmise that complete clefts may be associated with increasing degrees of nasal deformity. Associated cleft palate may also result in varying degrees of lesser segment collapse, with subsequent effects on the alignment of the two lip elements. Fisher addresses this with presurgical

CONTACT Sherif Wilson sherifwilson@doctors.org.uk Department of Plastic Surgery, Southmead Hospital, Southmead Road, Bristol BS10 5NB, UK

orthodontics. Unfortunately this is not mentioned in this study. The authors do take steps to randomly assign patients to either repair technique, although the method for doing so is not explicitly stated.

Reviewing the outcomes of one's own patients, as the authors do in this study, is prone to introducing bias. Review by a panel of independent assessors would perhaps yield more reliable results.

One of the great challenges for any cleft surgeon is maintaining patience whilst waiting for long-term outcomes in these patients. There can be significant changes resulting from facial growth into adulthood. The reader would be advised to interpret the results of studies advocating one technique over any other with limited follow up with caution. In their study, the authors report their results at six months. Whilst it is encouraging to see that differences can be seen between the repair techniques at this early stage, it remains to be seen if these differences are maintained with facial growth in order to support one method of repair over the other.

With multiple grading criteria presented in the literature for the assessment of cleft lip repairs, it is perhaps fair to conclude that none of them are truly ideal. Indeed comparing studies of outcomes for cleft lip repairs can be difficult due to the range of methods presented. As yet, it cannot be firmly stated that one technique is truly superior to another. Much has to be said for the training and experience of the operating surgeon, and which repair technique they feel most comfortable with, as this will often result in the best outcome in their hands. However, the authors should be commended for their attempts to evaluate their practice to determine which repair technique works best in their hands in order to optimize outcomes for their patients.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributors

Alex Davies is a Specialty Registrar, Department of Plastic and Reconstructive Surgery, Southmead Hospital, Bristol, United Kingdom and Honorary Lecturer, Faculty of Medicine and Dentistry, University of Bristol, Bristol, United Kingdom.

Sherif Wilson is a Consultant Plastic Surgeon, Department of Plastic and Reconstructive Surgery, Southmead Hospital, Bristol, United Kingdom.

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