

The Cleft Q as an Outcome Measure after Palatoplasty

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Abstract

The Cleft Q, a patient-reported outcome measure, has been adopted by the International Consortium for Health Outcome measurement as a valid tool for the measurement of outcomes following intervention on a patient with a cleft. It is scarcely used in sub-Saharan Africa. We report our first experience with the Cleft Q in measuring the outcomes following palatoplasty in an African adult female with a Veau type II defect. The Cleft Q was able to demonstrate improved scores across all domains measured. There is however a need for further validation of the Cleft Q in our setting.

Keywords: Cleft Q, cleft palate, palatoplasty, patient reported outcome

INTRODUCTION

The patient with a cleft of the lip and or the palate has functional and psychosocial limitations which are associated with the cleft type-specific deformity.^[1-3] These limitations include problems with feeding, drinking, increased occurrence of chest and middle ear infection as well as speech deficits. Psychosocial limitations become apparent as the child becomes self-aware and could persist into adulthood if the defect is not repaired.^[1,4] For the patient with an isolated cleft of the secondary palate, the specific challenges are with eating, drinking, speech function and psychosocial function.^[5] It is expected that an optimal outcome in the comprehensive management of the patient with a cleft is that which impacts positively on the cleft type-specific functional status and psychosocial well-being of the patient. While objective outcome measures^[6,7] have shown usefulness in measuring the outcomes of intervention in cleft care, patient reported outcomes, allow self-reporting of the impact of the intervention on the life of the patient with a cleft deformity.

The Cleft Q is a patient-reported outcome measure that has been accepted by the international consortium for health outcome measures.^[8] It has been shown to be discriminatory enough between cleft types and between age groups.^[9] It consists of three main domains: appearance, facial function and psychological function. Patient-reported outcome measures of cleft palate repair are scarcely reported in sub-Saharan Africa

possibly due to the difficulty among cleft surgeons in deciding on an appropriate tool that will cut across the diverse cultures in the region and the high default of patients to follow-up in our setting.^[10] We report our first experience with the cleft Q as an outcome measure in a patient who received primary palatoplasty as an adult.

CASE REPORT

A 20-year-old female university undergraduate presented to us with a speech deficit since childhood. Although she had been aware that she had a palatal defect the surgery was not done due to financial constraints of her parents. With awareness of the smile train support for cleft care, she presented at our institution for care. Examination revealed a complete defect of the soft palate extending up to the posterior portion of the hard palate [Figure 1a]. A diagnosis of an incomplete cleft of the secondary palate (Veau type II cleft) was made. The Cleft Q questionnaire was administered, and she was referred to a speech therapy provider for speech assessment. She subsequently had a palatoplasty using Bardach's two flap palatoplasty and Sommerlad's intravelar palatoplasty technique. She commenced speech therapy 1 month after her

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surgery and she attended regularly. One year after her surgery, she was deemed to no longer need supervised speech therapy sessions. The cleft Q was re-administered 15 months after her surgery and 3 months after the completion of supervised speech therapy.

RESULTS

The pre-intervention Cleft Q score showed her lowest score was on the speech distress subscale while the highest score was seen on the psychological function scale [Figure 2]. The post-operative period after the palatoplasty was satisfactory. She was discharged on the fifth post-operative day in line with the team’s protocol. The integrity of the repair was maintained [Figure 1b]. The post-intervention responses on the Cleft Q showed improvement in all subscales [Figure 2]. The greatest improvement in outcome was seen with the speech distress subscale, next to this was speech function. She also achieved a perfect score on psychological function post intervention. When her pre-intervention scores were compared with the normative cleft Q mean scores for her age, gender and cleft type [Figures 3-5], she fell below the 95% confidence interval for all the subscales pre-intervention. Post-intervention she surpassed these values for speech function, speech distress and psychological function. School and social function were however still lower than the 95% confidence interval for patients with her cleft type, age and gender.

DISCUSSION

We have reported the use of the domains of facial function and psychological function of the Cleft Q in measuring outcome following palatoplasty in an adult female with a Veau type II cleft. It is noteworthy that following palatoplasty and speech therapy the cleft Q was able to show an improvement in the functions of all subscales measured. However, we observed that the pre-intervention values we obtained from this patient were much lower than the normative values provided for her cleft type. Indeed, her pre-intervention speech function and speech distress scores were lower than the mean cleft Q scores for patients with a Veau type IV cleft as reported by Riff *et al.*^[9] Although post-intervention scores for psychological function, speech function and speech distress surpassed the cleft type normative cleft Q values, scores for school and social function still remained low. This clearly suggests that the cleft Q may need further validation in our setting.

Ideally, repair of the palate is done between 6 and 18 months of age.^[5] When palatal repair is not done in childhood as seen in our patient, the individual has to cope with the persisting speech limitations till adulthood.

Following a palatoplasty it is expected that problems with eating, drinking and speech deficits would resolve. This however is not



Figure 1: (a and b) Pre and post palatoplasty in a 20-year-old female

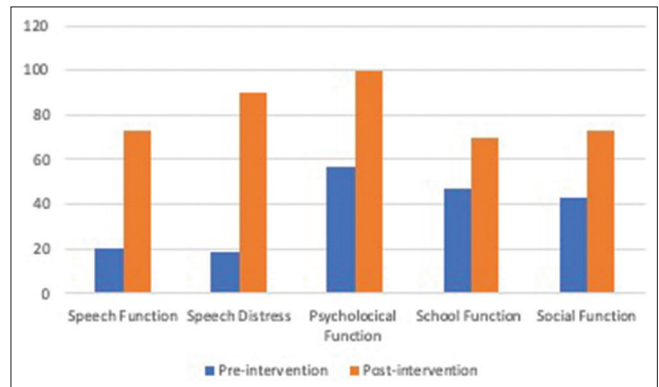


Figure 2: Patients Cleft Q values before and after palatoplasty and speech therapy

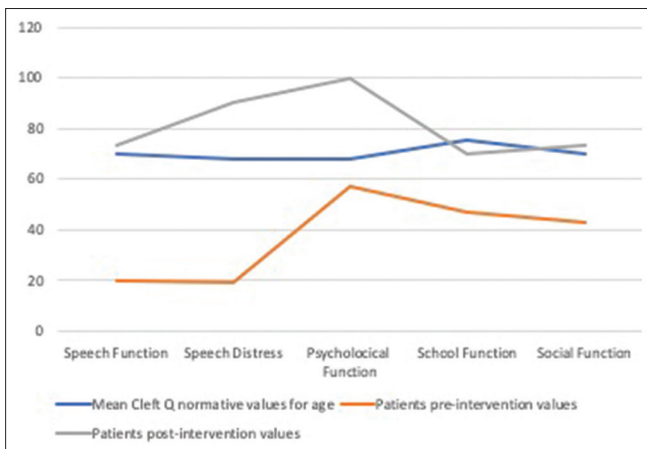


Figure 3: Comparison of Cleft Q normative values for age with index patient’s values

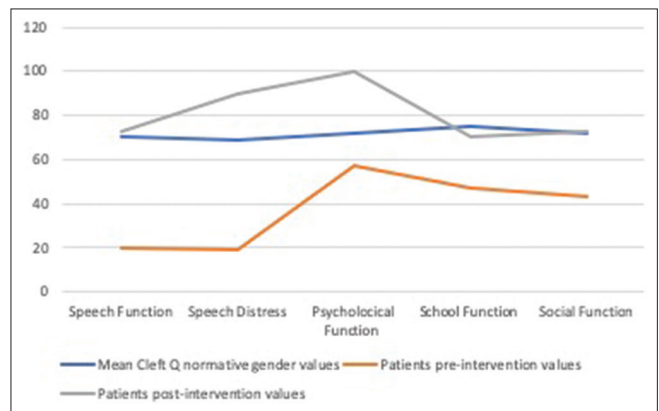


Figure 4: Comparison of Cleft Q normative values for gender with patient’s values

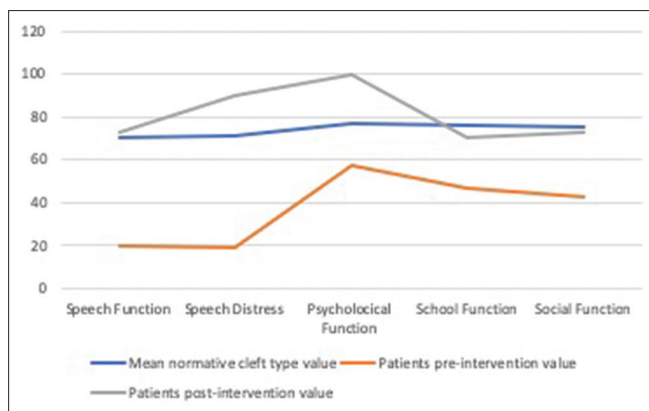


Figure 5: Comparison of Cleft Q normative values for patients with cleft palate and the index patient's values

always the case especially for the later.^[4] However, the outcome of intervention on a cleft deformity is largely dependent on the severity of the defect, timing of surgery, method of repair and experience of the surgeon. Patient reported outcomes are increasingly becoming more important in the evaluation of care as this provides a basis for the need for further intervention.

CONCLUSION

The cleft Q was able to show substantial post-intervention improvement in facial and psychological function in our patient with a Veau type II cleft. There is however a need for validation of the cleft Q in our setting.

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Conflicts of interest

There are no conflicts of interest.

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