

Surgical Correction of Congenital Macrostomia in Cattle Calf

C. Rohit Kumar, Hidayat A. Shaikh, Anil V. Kandarpalle, Kartik Allure

Abstract- Congenital macrostomia is a very rare deformity of the mouth, and it is still rarer to see cases of isolated unilateral (right) macrostomia. The condition has not been reported in cattle calves so far. Although the creation of a symmetric neo-commissure is imperative, this presents a technical challenge. A review of the literature for surgical solutions revealed various techniques. This report presents the case of a 15 days old non-descript male cattle calf with isolated right unilateral macrostomia for whom straight line closure was performed. After one-month follow-up, the oral commissures are symmetric and no lateral migration of neo commissure seen.

Index Terms- Unilateral macrostomia, rare deformity, muscle repair, straight line closure

1 INTRODUCTION

Congenital macrostomia, also known as transverse facial cleft, is a rare facial developmental anomaly with wide mouth and extended lips which has not been reported in buffalo or cattle calves so far [10]. Many different repairs for this deformity have been reported specially in humans [12]. Initially Z-plasties were commonly performed [7], [1] but the scar was found to be aesthetically sub-optimal especially when smiling [12], [6]. Simple line closure was reported to have excellent results, and fears of scar contracture appeared to be exaggerated [12]. Other techniques such as W-plasty [3] and triangular flaps [9] have also been reported with good results. We have followed the technique of simple line closure and have obtained satisfactory results.

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2 MATERIALS AND METHODS

A 15 days old cattle calf was presented to mobile veterinary clinics of Pashu Arogya Seva services accessed through toll free number 1-9-6-2 operated by GVK EMRI (Figure 1) with the history of inability to swallow milk after suckling from the dam. The lateral extent of the cleft was located at the anterior border of the masseter muscle. After a thorough evaluation to rule out any associated anomalies, the calf was scheduled for surgical correction. The neo-commissure was determined by comparing with left side and the reference points were coincided. The skin edges of lips, mucous membrane and some muscle fibres of orbicularis oris were trimmed with a B.P. blade about the level of incisors to the commissures of lips on both upper and lower lips bilaterally (Figure 2). The trimmed edges of the upper and lower lips, mucous membrane and orbicularis oris muscle were sutured under local infiltration anaesthesia (Figure 3 and 4). The postoperative period was uneventful (Figure 5). At 30 day follow-up, there was good oral competence with no lateral migration of neo-commissure (Figures 6).



Figure 1: Preoperative view



Figure 2: Intraoperative view



Figure 3: Muscle repair



Figure 4: Immediate post-operative photograph



Figure 5: Immediately after surgery calf taking milk, suggesting restored oral competence



Figure 6: One week after surgery, calf suckling milk directly from his mother

3 RESULT AND DISCUSSION

The cleft of macrostomia includes a three layered defects of the skin, muscle and mucosa, the discontinuity in the muscle results in an incompetent oral sphincter. The goals of surgery for macrostomia include symmetric placement of the neo-commissure, restoration of oral competence by repair of the orbicularis oris muscle, and closure of the buccal mucosa to achieve a normal contour and prevent lateral migration of the commissure the point of the new commissure must be determined accurately to achieve the above goals [2]

In the current case, the skin edges of lips, mucous membrane and some muscle fibres of orbicularis oris were trimmed with a B.P. blade about the level of incisors to the commissures of lips on both upper and lower lips unilaterally. The trimmed edges of the upper and lower lips, mucous membrane and orbicularis oris muscle were sutured with No. 1.0 vicryl catgut in simple interrupted sutures and skin was sutured with No. 1 silk in interrupted horizontal mattress pattern The calf recovered uneventfully and the skin sutures were removed on the 14th postoperative day.

4 CONCLUSION

We conclude that a functional and well-contoured orbicularis oris reconstruction is key to achieving a normal looking commissure. Simple line closure of the skin defect gives the best results.

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