Abstract:
Tessier cranio facial cleft is among the rarest congenital anomalies reported in literatures and there are many issues arguing about its multi disciplinary repairing techniques. Amongst the clefts, Number 5 and 7 are extremely rare. There are only a very few literatures describing these clefts and their surgical modalities. Number 5 Tessier cleft begins medial to oral commissure in the upper lip and extends superiorly as a groove through the check and ends at the middle third of lower eyelid. Bony involvement consists of alveolar ridge, maxillary bone lateral to infra orbital foramen and orbits lower rim and floor. Number 7 Tessier cleft begins at the oral commissure and varies from a mild broadening of the oral commissure with a pre auricular skin tag to a complete fissure extending toward a microtic ear. Bony involvement consists of bony cleft passes through pterygo maxillary junction. This case report is about a patient with Bilateral Tessier Number 5 and 7 Facial cleft and the surgical approach on her.

Keyword: Tessier's Cleft, Facial anomaly, cranio Facial clefts

Introduction:
Tessier facial clefts involve mouth, maxilla, eyes, nose, and forehead and may extend to visero cranium and neuro cranium too. These clefts are numbered from 0 -14, representing the extension of the cleft. These clefts can be described as oro – ocular cleft and fronto nasal dysplasia (1). Tessier clefts have well defined positions and have definite axes. Clefts are evaluated corresponding to the mouth and eyes positions. Clefts involve both the soft tissue and skeletal structures. Skeletal defects are prominent with exceptions of associated ear anomalies. These clefts do not course along main vessels and do not imply absence of main nerve and vessel trunks in the area that the cleft has appeared (2). Clefts above upper eyelids are defined
as cranial and clefts below lower eyelids are classified facial ones (2). Silva R. et al (2008), presented six patients with Tessier No 5 cleft, treated in combined centres, two patients had bilateral and four had unilateral clefts. 3 of the patients had associated No 4 clefts and one patient had an associated No 3 cleft (3). Makhija L K et al (2011), presented a series of 17 patients of Tessier No 7 cleft treated in a centre (5).

**Case Report**

A 5 month old girl presented to our department with macrostomia, coloboma eyelid and facial disfigurement. It was a case of bilateral craniofacial cleft No 5 and No 7. She was the first born child of non consanguineous marriage with no significant antenatal history. Detailed examination revealed a right side No 5 Tessier facial cleft, originating about 10mm medial to right oral commissure vermilion extending upward and laterally making a groove on the cheek and ending in the middle third of lower eyelid, with coloboma right lower lid. The medial Canthus was normal in its place, but the lateral canthus was lower compared with the left side. Alveolar ridge was involved in association with unilateral complete cleft palate of the same side. Maxilla was split and rotated three dimensionally into lateral, inferior and posteriorly. Pre maxilla was in its proper place but lateral alveolar ridge was rotated in the same manner. On her left side a mild No 7 Tessier facial cleft was present leading to macrostomia (Fig 1,2). There was no exposure keratitis right eye as the upper eyelid was normal.

(Fig 1,2) patient with Bilateral facial cleft, No 5 on right side and No 7 on left side, with coloboma right lower eyelid. Then a thorough investigation for possible associated syndromes and anomalies was conducted which revealed none. The consultation of paediatrician, neurologist, ophthalmologist and cardiologist did not define any associated anomaly describing a known syndrome.

**Investigation:**

(Fig 3,4,5) showing number 5 cleft on right side and number 7 cleft on left side

**Surgical Strategy:**

The child was operated under general anaesthesia. On the right side the scar like soft tissue was released by z plasty. Incision was made through skin and underlying soft tissue to just above the periosteum. Bony cleft was lateral to infra orbital foramen, therefore incision over periosteum and dissection in a subperiosteal plane was made. Soft tissue dissection was made under dural fat in sub cutaneous plane, up to two millimetres each side of the incision. All soft tissue and periosteum were drawn medially to obscure of the bony cleft as much as possible preserving the infra orbital neurovascular bundle. Orbicularis oris muscle dissected bilaterally, preserving the zygomatic complex muscle and sutured to each other.
Wet and dry mucosa sutured to each other after reconstructing advancement flap medially and laterally using two unilimb Z plasties bilaterally. (Fig 6,7). Coloboma right lower eyelid was corrected using a check advancement technique with a Z plasty modification to gain extra length.

(Fig 6,7) per operative picture, right lower eyelid coloboma corrected with cheek advancement flap, and markings for No 5 cleft correction on the left side, No 7 facial cleft was corrected by commisuroplasty, which included scar excision and Orbicularis oris muscle realignment. Orbicularis oris function after operation was observed and it was satisfying when the child cried or laughed. The function of zygomatic muscles was preserved. (Fig 8,9)

(Fig 8,9) post operative picture, after bilateral cleft correction
Secondary correction and palatoplasty were planned at a second stage at 10 months of age.

orthodontic and orthognathic procedures planned at appropriate ages. Sutures were removed on the sixth post operative day. And gentle scar massage was started after 10 days.

Discussion:
The craniofacial clefts are rare congenital anomalies. They pose multiple problems for the operating surgeons. Standardized treatment plan are not possible because of the variety of craniofacial clefts and levels of severity. The surgical plan should be staged in the craniofacial clefts. The first stage should involve soft tissue correction at the age of infancy 3-12 months unless associated with functional problems like exposure keratitis. If it is associated with the functional problems the surgery should be done as an emergency basis, i.e on the day of birth. Midface reconstruction and bone grafting can be done in second stage, when the child is older, i.e at 6-9 yrs of age. Orthognathic procedures are delayed until skeletal maturity, i.e 14 yrs of age or older. In this child as the cleft was mild and coloboma without exposure keratitis, only the soft tissue correction was done at the presenting age. Cleft palate treatment was planned at later date due to extensive dissection involved and increased operation time needed. The soft tissue readjustment should be done without discarding skin, as these cleft patients are usually deficient of skin and soft tissue. The Clefts 5 and 7 involve the orbicularis oris. As in any cleft surgeries the exact approximation of the muscle is essential to achieve a good post operative lip function.
Conclusion
We recommended early repair of cleft using autogenous tissues and minimal disposal of the healthy tissues as possible. Early rehabilitation with scar massage is also recommended.

References: