

Cleft Lip & Palate Surgery "Where do we stand in the 21st century?" Based on study of referral patterns to a tertiary care centre

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A prospective study was carried out over the period of six years including 215 patients. **The objective** of this study has been to evaluate the types of the clefts, their predisposing factors, age at first presentation and need for revisional surgery and to compare these with published studies on the subject and to draw conclusion about the epidemiology and the facilities available for its surgical correction. **Design:** Prospective, observational study. **Methodology:** 215 patients were evaluated over a period of six years by filling a proforma, which was entered into database. Different parameters were evaluated. **Conclusion:** There are a significant number of cleft patients presenting for first time above the age of 10 years. A large number of inappropriately treated patients require revisional surgery because of lack of properly trained cleft surgeons. Due to lack of specialized cleft care teams in our country no patient in this study could get comprehensive care for this deformity. It is need of the hour to provide multidisciplinary care to these patients.

Key Words: Cleft lip, cleft palate, revisional surgery.

Cleft lip and Palate (CL & P) is one of the most common congenital anomalies in our part of the world. Unfortunately, no national register exists which could tell us the true incidence and other relevant data of such a devastating deformity. So, we carried out this prospective study to evaluate the types of the clefts, their predisposing factors, age at first presentation and need for revisional surgery and to compare these with published studies on the subject and to draw conclusion about the facilities available. The data collected included a record of 215 patients over a period starting from July 1999 to date.

Methodology

Data collection was started in July 1999, by means of a proforma filled in at the time of discharge of a CL & P patient. The proformas were collected and finally entered into a database for analysis. Following parameters were assessed: Patient age, sex, maternal age, family history, order amongst siblings, age at first presentation, type of cleft and any previous surgery.

Results:

A total of 215 patients have so far been studied. Patients' age range was between 3 months to 30 years with a mean age of 6.81 years. There was a slight male preponderance with a male : female ratio of 1.38 : 1 (Fig. 1). Patients were also grouped according to maternal age at childbirth. 145 patients (67.7%) had mothers 20 - 29 years of age while 48 patients (22.4%) had mothers 30 - 39 years of age (Fig. 2).

Age at first presentation ranged from birth to 21 years with a mean of 19.77 months. Only 32 patients (14.8%) had a positive family history of CL & P (Fig. 3). Grouping according to order among siblings showed that 52 patients (24.1%) were second in order, while 50 patients (23.2%) were last and 48 patients (22.3%) were first in order among siblings.

Unilateral Incomplete Cleft Lip was the most common type in 70 patients (32.5%), Unilateral Complete

Cleft Lip & Palate was next common in 51 patients (23.7%), Bilateral Cleft Lip & Palate in 40 patients (18.6%), Cleft of Secondary Palate (Isolated) in 23 patients (10.6%), Bilateral Complete Cleft Lip in 12 patients (5.9%), Unilateral Complete Cleft Lip in 13 patients (6.0%) and Unilateral Incomplete Cleft Lip & Palate in 6 patients (2.8%).

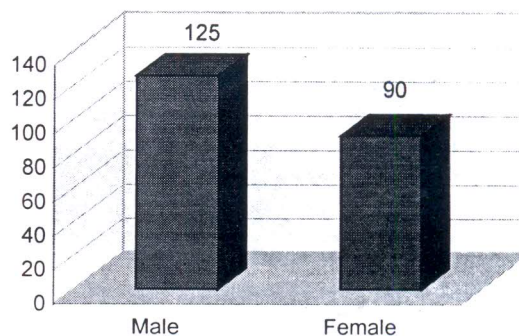


Fig. 1 Sex wise distribution

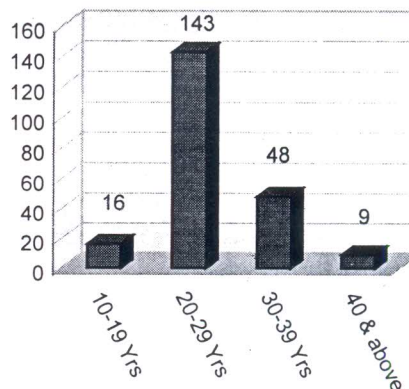


Fig. 2 Maternal age

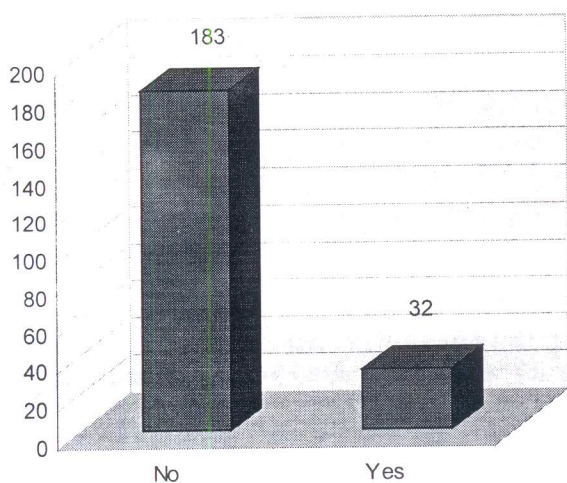


Fig. 3: Family history

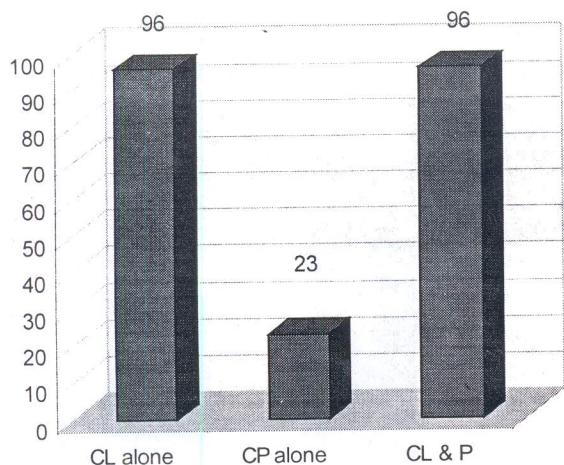


Fig. 4: Type of cleft

Discussion:

Our patients had a wide age range with a significant proportion of the patients (29.2% cases) above 10 years resulting in a mean age as high as 6.81 years (Fig. 5). 16.2% cases presented for the first time after age 10 years who did not have any kind of cleft surgery before, while 13% of cases presented for revisional cleft surgery after age 10. These figures reveal that unfortunately even now in the 21st century still too many cleft lip and palate patients are roaming around in the society with their clefts un-repaired even after the age of 10 years and good number had inappropriate treatment resulting in unacceptable cosmetic and functional results.

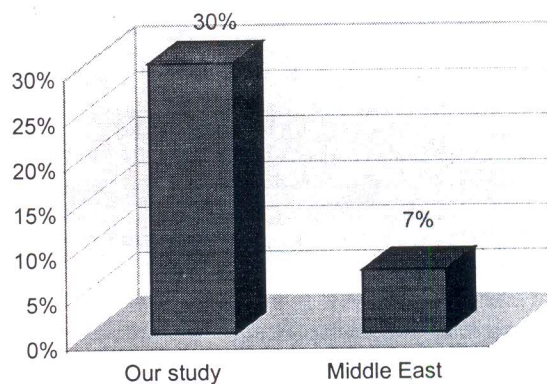


Fig. 5: Age of presentation >10 years

Overall, 35.8% cases presented with the history of previous cleft surgeries. This can be attributed to the fact that we are located in a tertiary care hospital with many patients being referred to us from the periphery having undergone surgeries for the same presentation (Fig. 6).

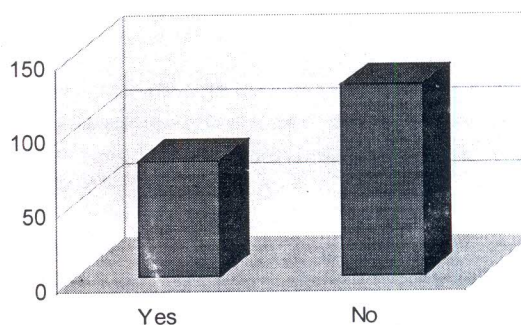


Fig. 6: Previous surgery

The sex preponderance as in other international studies slightly favoured the male gender International studies have had differing views about the association of maternal age with increased incidence of CL & P. Our analysis revealed a slightly increased incidence of CL & P in mothers 30-39 years of age (22.4% cases). There was no evidence of increased risk in mothers 10-19 years of age.

Family history was only elicited in 14.8% of cases as compared to international figures of up to 25% (Fig. 7).⁵ This could be because of under-reporting of cases in our setup, as well as subclinical types not coming to our attention. Some international studies have shown a higher incidence of CL & P in the 3rd or 4th sibling, where as our study showed the 2nd sibling to be most commonly affected.

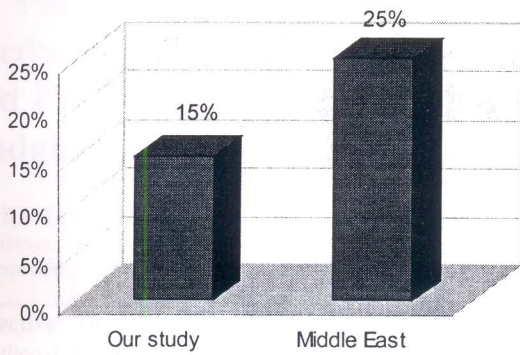


Fig. 7: Family history

Grouped according to type of cleft, CL alone were 44.6%, CP alone were 10.6% and CL & P were 44.6%. This data is comparable to that collected from Middle East and Africa, in contrast to Far East and Europe, which had a much higher incidence of CP alone (Fig. 8).^{1,2,4,5} This could be attributed to the fact that CP alone patients have normal facial appearance and do not present for palate surgery for speech improvement in our set up. A significant number of our patients (30%) had technically difficult operations of Bilateral CL & P and CP alone. This is explained by our location in one of the leading tertiary care hospitals of the city.

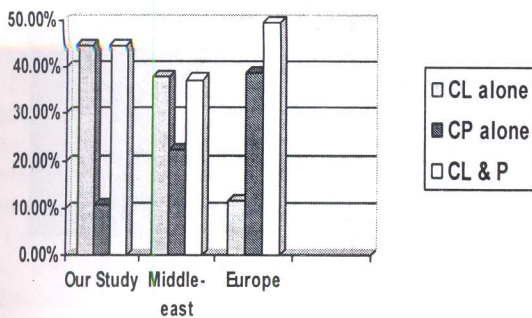


Fig. 8

None of the patients had: pre-surgical infant orthopaedics to align the skeleton and reduce the cleft gap; naso-alveolar moulding by splints to correct nasal deformity; speech therapy after cleft palate surgery;

corrective orthodontics to align the jaws and teeth; and alveolar bone grafting for eruption of permanent teeth. So, keeping all these deficiencies, difficulties and deformities in view if we really want to get cleft patients out of their miseries then it is a dire need of the day to establish specialized cleft centres having dedicated cleft care teams. An *ideal cleft care team* should include Plastic Surgeon, Orthodontist, Speech Therapist, ENT Surgeon, Paediatrician, Psychologist, Oral Surgeon and finally Specialised Cleft Nurse whose duty should be to coordinate with all these services and act as a link person between the care providers and the cleft patient and his family (Fig. 9).

Conclusion:

The epidemiology of CL & P patients referred to our tertiary care centre is comparable to other published studies. We still have a significant number of CL & P patients (35.8% cases) being inappropriately treated by surgeons not trained for this specialized job (Fig. 10). This puts extra burden on Plastic Surgery Centres in the form of difficult revisional surgical procedures. In Pakistan there are still many untreated Cleft patients above the age of 10 years (16.2% cases), which is one of the highest prevalence in the world (fig. 11).

There is lack of ancillary care of the cleft patients like pre-surgical infant orthopaedics, speech therapy, orthodontics and orthognathic surgery. There is need for concerted efforts to establish specialized cleft centres in the country catering for the needs of these patients and provide them with multidisciplinary care at par with international standards in the 21st century.

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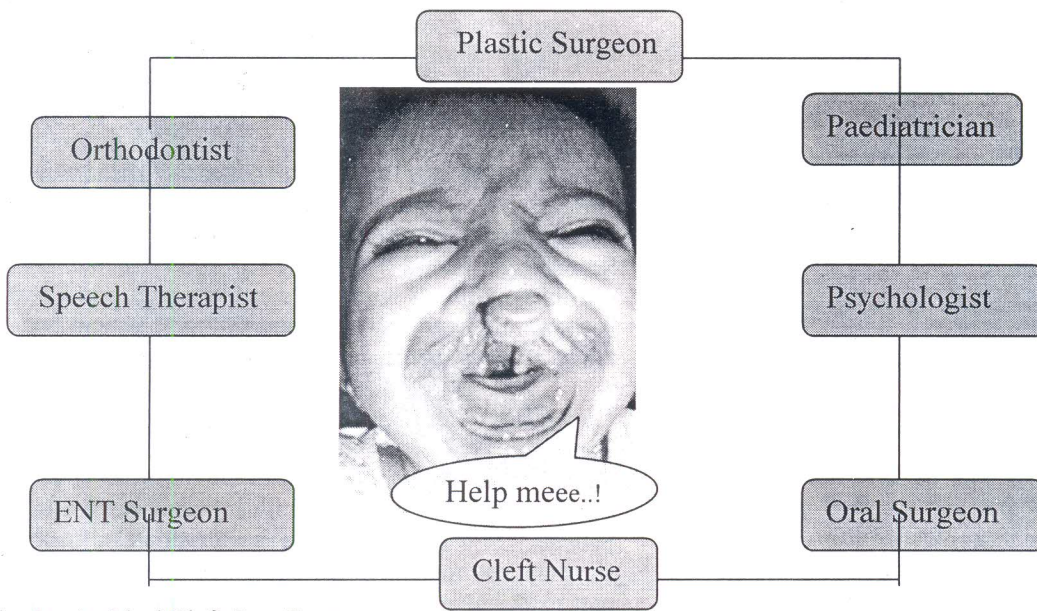


Fig. 9 An Ideal Cleft Care Team



Fig. 10: Poorly repaired cleft



Fig. 11: Un-repaired adult cleft