

MECHANICS OF SURGICAL CLEFT MISSIONS AND STATISTICS OF A RECENT CLEFT MISSION IN SINDH

Cleft Lip & Cleft Palate is one of major congenital anomaly. Every year approximately 160,000 new patients with cleft lip and palate are born in the whole world. Pakistan is 4th country in the world after China, India, and Indonesia having the highest number of cleft children born every year where more than 11000 children born in every year with cleft deformity. Not more than 5000 of such patients operated by Plastic Surgeon, Pediatric Surgeons, ENT Surgeons, Maxillofacial Surgeon and even General Surgeon Collectively. This is due to less trained doctors, lack of expertise and deprived of basic facilities for cleft care in far away areas of Pakistan. Need for integrated cleft care teams becomes paramount for poor patients with cleft lip and palate.



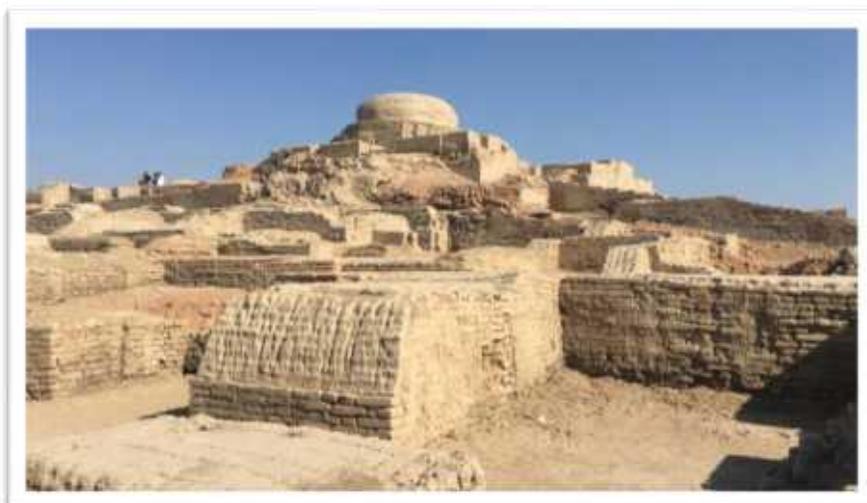
A surgical cleft mission provides proper optimal care and delivers safe surgeries at remote sites in the developing and underdeveloped regions of a country. It helps to immediately treat the cleft lip and palate problems of a high number of patients in a short period of time, transforming them from the disabled to enabled members of the society. Pakistan is among those countries in the world where most of patients with cleft lip and palate cannot get access to specialized cleft care units. Cleft missions play an important role in providing surgical care to the areas of the world with limited resources.

With Preop Patients



Smile Home Trust with the help of Smile Train Choose these unfacilitated and deserving population for outreach surgical mission in Sindh. Skilled medical and paramedical staff move to their door step to server humanity. There are two Surgical centers selected, one in Tharparkar district and other in Larkana district.

Historical place Mohenjo Daro



In October 2021 we conducted a surgical mission in Larkana Sindh province of Pakistan for 12 days from 09th to 20th October 2021. Larkana formally known as Chandka its is fourth most populated city of Sindh Province. It is the home of the Indus valley civilization site of Mohenjo Daro which build around 2500 BC.

We are pleased to share the mechanics how we work in a surgical mission. Planning of surgical mission start approximately 2 months before surgical dates.

Step 1

Making plain about OPD spots and involvement of local hospital administration to allow OPD clinic in specific dates. we request them to point a Liaison Officer for coordination.

Step 2

Public Awareness Campaign. this starts with Printing of advertisement material. Advertisement team usually consist of 6 persons and 1 driver. team supervisor provided written planed for each OPD about areas which have to be covered Banners (Cross Banners, Pole Banners) and posters with pictures of cleft lip and palate and address of OPD places are being affixed. Pana flax placement on important areas like Railway Stations, Bus Stations, Main Bazar of that area, Hospitals and Schools.

Advertisement field work



Handbills are distributed while radio, newspapers and cable TV are also used to disseminate information among the general public.

Awareness campaign Talk



This time we chose 6 OPD places in Larkana Surgical Mission. Our public campaign remained 24 days. These OPD were conducted in Larkana, Nawab Shah, Sanghar, Jaccoabad, Dadu and Sukkur Dist.

1- **Larkana** OPD we covered area of Larkana Dist.

- (a) Larkana City (b)Bakrani(c) Dokri(d)Ratodero(e)Kamber Ali Khan(f) Miro Khan
- (g) Nasirabad, (h) Qubo Saeed Khan(f)ShahdatKot(g) SujawalJunejo(h)Warah

2-**Sukkur** Dist. Awareness campaign was

(a) New Sukkur (b) Sukkur (c)Pano Aqil (e)Rohari (f)Salehpat

3-**Nawab Shah** Dist. Campaign we Covered population of

(a) Daur(b)Kazi Ahmed (c)Sakrand (d) Nawab Shah.

4-**Sanghar** Dist. Covered are was

(a) Jam Nawaz Ali (b)Khipro (c)Shahdadpur(d)Sinjhoru (e)Tando Adam, Sanghar

5-**Dadu** Dist. Campaign we Covered

(a) Dadu City(b) Johi (c) Khairpur Nathan Shah (d) Mehar

6-**Jacobabad** Dist. Campaign we Covered

(a) Garhi Khairo(b)JacobabadCity (b)Thul

Some time we have to divide advertisement team in 2 parts and add some more labor to finish campaign in time.

Step 3

Provision of surgical treatment of Cleft Lip & Cleft Palate patients. Our medical and paramedical staff travelled from Lahore to Larkana. This time team consist of Two Surgeons, Two Medical Officer, Two Anesthetist, Camp Manager, 4 OTA worked to assist Surgeons in operation theater, 2 OTA worked with Anesthetist, 3 Nursing Staff, 1 Photographer, Hospital also Provide Receptionist, Lab Services, Sweepers, Electrician and Ward boys.

End of the Mission, Team Dinner





Composition of the smile home Mission Team

Awareness Campaign Team	7
Surgeon	2
Anesthesiologist	2
Manager	1
Outpatient's clinic staff Doctor	1
Surgery assistants	4
Anesthesia assistants	2
Recovery room OTA	1
Medical Officer	1
Circulators	2
Sterilization coordinator	1
Nursing staff	2
Supporting staff	4
Photographer	1
Total members	30

All necessary equipment required to set up fully functional operation theaters is present in hospital. Some additional stuff was also brought in from Lahore, about 840 kilometers away. It included one operating two table, two anesthesia machines, two diathermy machines, four cardiac monitors, pulse oximeters, operating instrument sets, emergency equipment, and all other necessary medicines and surgical items. The equipment and medicines were packed in wooden containers to be wheeled down into the van. our trained theater assistants managed four operating tables set up, 2 in each Operation Rooms. oxygen supply was central and connected to the anesthesia machines. cardiac monitors and Pulse oximeters were also set up for each operating table. Emergency medicine trays were always kept ready in the operation theater and ward,

Our Camp Manger make arrangements for traveling to all surgical team from Lahore to Larkana and booked local hotel for accommodation which was located near to hospital. There were 2 anesthesiologists, 1 in each room, to look after 2 operating tables. There were 2 surgeons to operate on patients with cleft. The second table in each operation room was used to get the next

patient with cleft ready. Each operation room had paramedic, and 1 circulating person to facilitate the team members. One paramedic was responsible for smooth provision of sterilized instruments for surgery.

Our working start from OPD where our Medical Officer & Camp Manager worked together.

OPD Different days



Screening of fit patients provided free Lab services (CBC Hepatitis B and C and HIV Screening BT CT) these fit for surgery patients provided transportation from OPD place to surgical place.

OPD in progress



In Hospital our anesthetist check all patients again along with their Lab reports subjected to SOP of Smile Train.

Patient Traveling OPD to Surgical place



We conducted 8 days operating list from 8.00 am to 7.00 pm. As Covid pandemic is not still ended so that we observed all necessary measures e.g Placement of awareness flex in which precaution about Covid 19 were written, distribution of mask and hand sanitizer and managing safe distance among patients. Our OPD team also defer and refer all those patients to physician who have fever and chest infection.

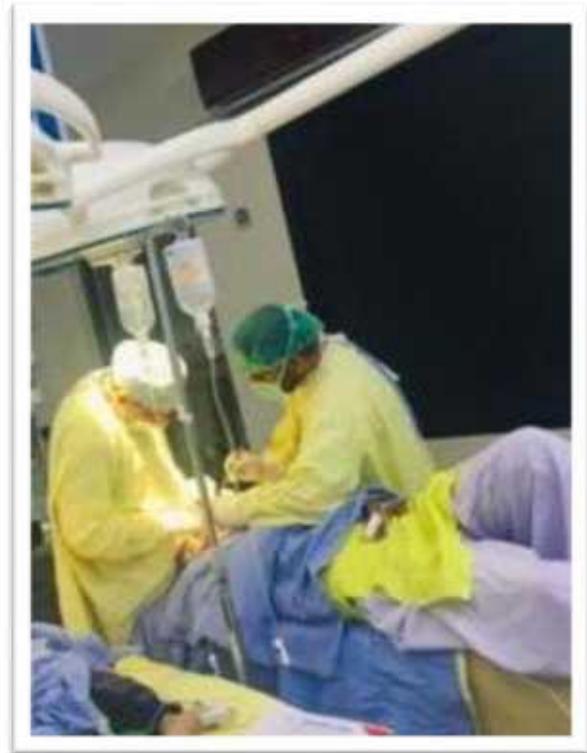


This time we use 2 operation theaters with 2 operating table in each OR. Near the completion of procedure next patient induction started in another table and after intubation patient prepared by surgeon's assistant.

Beautiful Child of Cleft Palate before intubation



No time was wasted during this way as saving at least 25 to 35 valuable minutes between 2 surgeries. To remain comfortable ,reduce fatigue and physical stress, all surgeons used adjustable chairs while operating. When surgeon start next procedure the pervious was extubated on table and then shifted to recovery room and next cleft patient brought in OR for intubation. we used Sevoflurane in paediatric age group due to which extubation remained smooth and took less time.



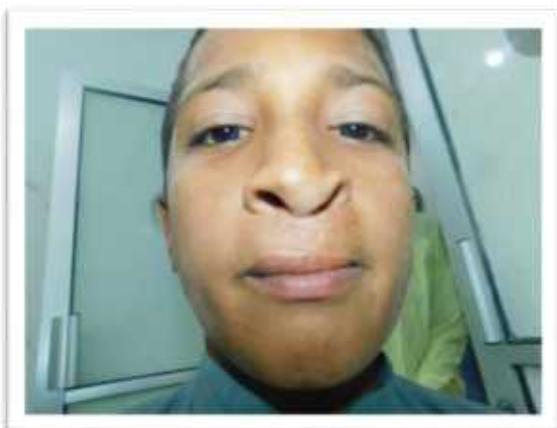
By this mechanics we save valuable time between surgeries. So numbers of cleft operations increased in limited time period. In recovery room trained OTA and Staff Nurse take care patients. Patients remain there till their NPO time is over (usually 5.00 hours) under direct supervision of our anesthetists. Staff keep patient record in register, check vitals and ensured proper side positioning. We also hire a local person as translator who understand the local language and Urdu to overcome language barrier during communication. When fully in senses and can take orally, the patients were shifted to the wards, where our trained nursing staff looked after them.



The patients remained in the ward overnight under the supervision of a doctor from the team and discharged the next morning if the doctor deemed appropriate. Advice on postoperative wound care and food restriction was provided by the specialist staff nurses. Patients were given written instructions in the local language for postoperative care and follow-up. Operated patients who were complaint free and taking their medicine and oral free being provided **transport** from surgical place to OPD place 1 seat for 1 passenger.

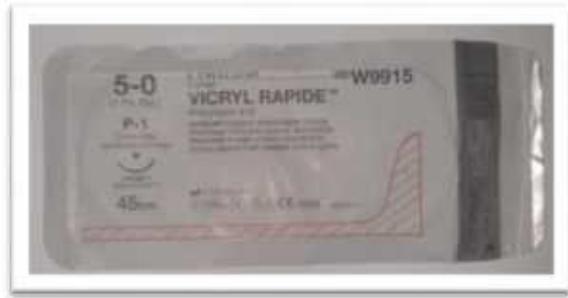
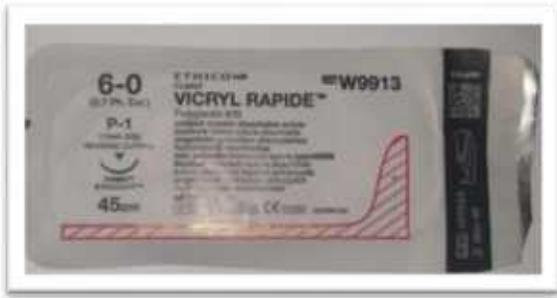
During hospital stay **food** is provided to the patients and their attendant 2 time in a day.

We did cleft rhinoplasty routinely on all patients with cleft lip during this mission.



Primary cleft rhinoplasty is not performed in many of the international cleft missions, either because of more time demanding procedure or lack of expertise. Similarly adult cleft palate and secondary cleft repair are not carried out routinely even in many international cleft missions due to risk of complications in these challenging cases. We have the protocol of operating upon all patients who are fit for surgery no matter what their age is.

Provision of proper follow up of the patients operated on, is one of the biggest problems identified as a limitation of a cleft missions, due to financial and human constraints. By considering all these limitations we used absorbable stiches in cleft lip and nose repair. vicryle rapide 6/0 used in children below 15 years of age and above this age we used vicryl rapide 5/0 suture.



There is no need for suture removal as it dissolved by itself after 7 days. In the presented cleft mission, a follow-up of the patients has been done already at 1 week and scheduled after one month for our surgical results audit.

Surgical Mission Larkana Statistics

There were 140 patients registered who were fit for surgery. Age ranged from 3 month to 35 Years old. These patients were operated in 8 days. The details of primary and secondary cases operated are shown in table below.

Primary & Secondary Cases Detail

Sr	Detail	Patients
1	Primary Cases	111
2	Secondary Cases	29

Total	140
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Primary Patients Detail

Cleft Palate

1	Bilateral Complete Cleft Palate	B/C/C/Palate	6
2	Soft Palate	Soft Palate	12
3	Bilateral Incomplete Cleft Palate	B/I/C/Palate	8
4	Cleft Complete Palate	C/C/Palate	27

Cleft Lip

1	Cleft Incomplete Lip	I/C/Lip	17
2	Lip Adhesion	Lip Adhesion	3
3	Cleft Complete Lip	C/C/Lip	28
4	Bilateral Cleft Lip	B/I/C/Lip	10

Total		111
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Secondary Detail

	Secondary Bilateral Lip	B/S/C/Lip	4
	Secondary Palate	Palate Fistula	12
	Secondary Cleft Lip	S/C/Lip	13

Total	29
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In the described cleft mission, we operated on 17 patients with secondary cleft lip and 12 previously operated patients with cleft palate. This was approx 20 percent of the cases.

Types of Surgical Procedures for Different Types of Cleft Lip and Palate

Diagnosis	Procedure
1. Unilateral complete cleft palate	2 flap palatoplasty with levator sling formation
2. Bilateral complete cleft palate	2 flap palatoplasty with levator sling formation
3. Bilateral incomplete cleft palate	Von Langenbeck repair with levator sling formation
4. Cleft of soft palate	Von Langenbeck repair with levator dissection and reposition
5. Secondary cleft palate (fistula)	Closure of the fistula with re-repair of the palate
6. Unilateral cleft lip (complete or incomplete)	Mohlar and fisher technique with primary cleft rhinoplasty
7. Bilateral cleft lip (complete or incomplete)	Mullikun technique with primary cleft rhinoplasty
8. Bilateral C/ lip with protruding premaxilla	Bilateral lip adhesion

During Surgical Mission we also received follow ups of Previous Mission operated Cases there are some Patients Preop & Post op Pictures.

Preop



Postop



Preop



Postop



Preop



Postop



Preop



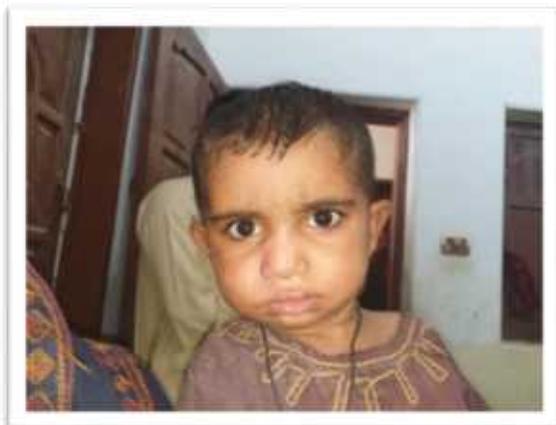
Postop



Preop



Postop



Preop



Postop



Preop



Postop



Preop



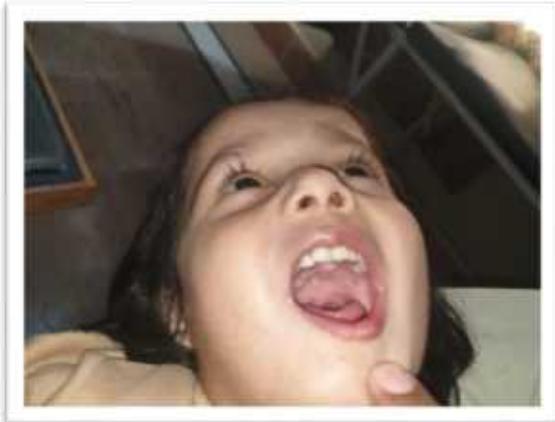
Postop



Preop



Postop



Preop



Postop



Preop



Postop



In recent Larkana Camp there are some preop and postop pictures taken during the surgical lists. Follow up will be collected after 3 months.

Preop



Postop



Preop



Postop



Preop



Postop



Preop



Postop



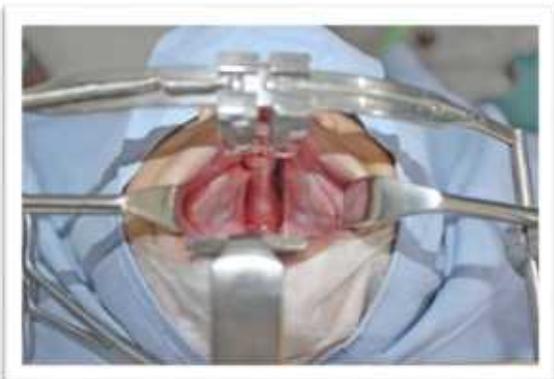
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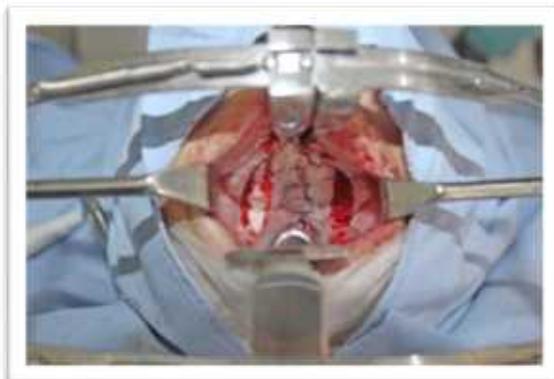
Postop



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