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Coronavirus Pandemic Experience of a "Specialized Surgical Service"

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PERSPECTIVE
The COVID-19 pandemic has had its greatest impact on provision of healthcare services in both public and private sector hospitals, on a global scale. The disruption that resulted as the pandemic gained momentum after March 2020, affected the working of specialized tertiary care units like Burn and Plastic Surgery services. We wish to share the experience of handling the services amidst this pandemic.

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Perspective

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The COVID-19 pandemic has had its greatest impact on provision of healthcare services in both public and private sector hospitals, on a global scale. The disruption that resulted as the pandemic gained momentum after March 2020, affected the working of specialized tertiary care units like Burn and Plastic Surgery services. We wish to share the experience of handling the services amidst this pandemic. Jinnah Burn & Reconstructive Surgery Centre (JB&RSC) is an autonomous entity inside Allama Iqbal Medical College / Jinnah Hospital complex in Lahore, Pakistan. It became fully functional in 2014, being one of the largest, state of the art institution providing acute burn care, post burn and trauma reconstruction including replant services. The elective work carried out in the center include head and neck cancer surgery, post mastectomy breast reconstruction and whole range of genital deformities. It can house serious burn patients in independently catered 10 HEPA filtered suites and has a capacity to have 78 in-patients. It has Burn ICU, HDU for post-surgical patients and 8 operating theatre suites with modular design and laminar airflow. This unit has 541 employees including 68 medical staff and 90 nurses and the rest of support and ministerial staff.

1. "Crisis before the disaster":

At start of the pandemic authorities` response was to allocate and reserve space and beds, in different hospitals for treating COVID-19 patients. Before the actual Corona pandemic lockdown was enforced in later half of March 2020, we had to face existential threat by the health managers planning the response strategy for the pandemic. We were about to fall victim to our own success having earned a reputation of being well-designed and well-managed facility. Our isolated and self-contained premises seemed attractive enough for the purpose by expeditious officials. Little did they know that sophisticated closed air-handling system with no immediate solution to make it an open one, foiled the attempt and proved to be our savior. Our additional argument of providing essential service for burn and trauma patients would have fallen on deaf ears.

2. The Fear & Preparations:

The lockdown resulted in closure of outdoor services which meant that the unit's routine function came to a halt. We cater for more than 30,000 patients in our outdoor clinics, annually. Routine admissions and surgeries were all stopped but we kept admitting acute burn, trauma patients and active cancer related cases. Initially, there was a fear of the unknown created by media frenzy in the minds of front-line staff despite low prevalence of the infection at that time. Personal Protective Equipment (PPE) shortage compounded panic amongst the concerned personnel. We set about to arrange PPEs on self-help basis. Disposable gloves and sanitizers were procured partly through our regular funds and donations. The administrator office at JB&RSC was converted into a make-shift `factory` for preparing face shields (Fig 1). We sought the help of some technically savvy philanthropists who provided 3-D printed scaffolds on which protective face shields were fabricated for all staff. Doctors, nurses, paramedics and ministerial staff all worked tirelessly to produce these face shields. Approximately 700 pieces were prepared by our staff in a short span of time, out of which 250 were donated to the Corona unit at Jinnah Hospital. As disposable gowns were in short supply at this time as well, we activated our links with our surgical linen suppliers and helped them to design re-sterilizable water-

proof protected clothing. Their testing and alteration kept us all busy for a few days. Thermal scanners were procured and it was made mandatory for every visitor to have the temperature checked with no exception (Fig 2). It was decided that JB&RSC being one of its kind tertiary care center providing facilities for patients with complex problems, shutting our doors completely for non-emergency patients would not be justifiable. Therefore, we devised a strategy to provide essential OPD services, all be it scaled down. A triage area was established in an open space where patients to be seen, were filtered and ushered into waiting area, in small numbers so to maintain social distancing (Fig 3). Their single accompanying relative were only allowed if necessary.

Fig 1: Face-shield Factory – Staff at work

Fig 2: Temperature Monitoring at JB&RSC Entrance

Fig 3: Social Distancing Arrangement in OPD Waiting Area of JB&RSC

3. Disruption of Services:

A waiting list is maintained for elective admissions for surgery at JB&RSC. Some of the patients requiring non-essential elective procedures may have to wait for over a year. Due to lockdown and suspensions of routine services, all such patients missed their turn and now had to be adjusted in future operation lists. They will be competing with not only emergencies and urgent patients but also those routine patients who were supposed to be admitted on future dates. This will be a difficult juggling act and we had to grapple with this mayhem for foreseeable future.

Those lucky ones who managed to get their foot in the door after crossing all those hurdles of lockdown then had to undergo COVID-19 PCR screening before being operated upon. That further catapulted management of the operating time allocation.

4. Coping with the "New Reality":

Burn and reconstructive surgeries are demanding and there is a need for maintaining high ambient temperature in theaters to prevent hypothermia. This presented a big challenge for surgical teams as we had to shut down our air conditioning system and additional protective clothing made life intolerable for those working in these circumstances. Long reconstructive procedures like limb

replantation became physically demanding. Multiple teams had to be deputed to relieve each other during these arduously long procedures.

5. COVID-19 Positive staff: Amidst all this, we had to manage 67 health care workers out of 541, who tested positive for COVID-19 in post Eid-ul-fitr spike in June 2020. Altogether, 10 doctors, 8 nurses, 3 admin staff and 49 paramedical staff were found positive. As there is no tradition of "Occupational Health Service" in any institution in our set up, we had to nominate a hurriedly formulated task force for this purpose. The composition of this team was made up of members of infection control team, pharmacy, housekeeping and security staff. The focal person for coordination of activities was Assistant Professor, Dr Ahsan Riaz. This task force was responsible for all matters related to COVID-19. This comprised entry control, enforcement of SOPs, surveillance, staff testing of suspected cases, contact tracing, their management and provision of replacement staff. We had our staff trained to obtain nasopharyngeal swab samples for PCR testing for COVID-19. The samples were transported to Jinnah Hospital PCR lab for testing and timely reporting. The same team was also keeping the inventory for PPEs up to date.

As for majority of the staff who came down with infection, had one thing in common; they were all "moonlighting" in Corona centers of private hospitals clandestinely. They subsequently infected their contacts in our center (unpublished observations). Fortunately, no fatality was reported in any staff or patients and no transmission in patients was traced to be originating from any infected staff of JB&RSC.

Conclusions:

This was an unprecedented health emergency situation requiring extraordinary planning, execution and participation by all and sundry. The staff must stay vigilant and avoid complacency in using appropriate PPEs we are not out of the woods yet. No elective surgery should be carried out without first screening for COVID-19 by PCR.

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