

COVID-19 Pandemic "Challenges to Overcome"

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COVID-19 was first reported in Wuhan, China on 17th November 2019 and since then it has affected 2,76,15,676 people worldwide, with 8,98,426 deaths.¹ WHO declared COVID-19 as a public health emergency on 30th Jan 2020 and a global pandemic.² Pakistan reported its first corona virus infected case on 26th Feb. 2020.³ Since then the number of affected people in Pakistan increased exponentially reaching a figure of 2,98,509 confirmed cases on 5th September 2020.⁴

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Novel corona virus is an RNA virus that ranges between 60-140 nm in diameter.⁵ The corona virus family comprises of 4 sub-families namely Alpha, Beta, Gamma, Delta and the transmission of the disease occurs via heavy droplets either sneezed or coughed by the symptomatic patient and inhalation of these droplets or touching the contaminated surfaces or contact with mouth, nose or eyes.⁶ Initially the infected patients are asymptomatic as the incubation period is between 2-28 days.⁷ The virus directly affects the respiratory system and produces worst results in elderly and in patients with co-morbidities like diabetes and hypertension.⁸

The clinical picture of COVID-19 infection varies from mild to moderate pneumonia to severe respiratory distress and acute renal failure.⁹ At the onset, there is fever, dry cough, fatigue, sneezing, malaise, head-ache, cough with sputum and diarrhea.¹⁰ The best diagnostic test is polymerase chain reaction (PCR).¹¹ Samples may be taken from throat, bronchial lavage, endo-tracheal aspirates and naso pharynx swab test.¹² ESR count and CRP are markedly raised and PT and APTT are deranged.¹³ Radiographs show the typical picture of infiltrates on both sides of the lungs with opacities and consolidations.¹⁴ It is a life threatening disease which needs isolation, symptomatic treatment of headache, malaise, fatigue as well as ventilatory support for patients with acute respiratory distress syndrome (ARDS) and shocks.¹⁵

COVID-19 pandemic presents many unprecedented challenges to Orthopaedic community but adequate planning and preparation will enable us to succeed in this crisis. The Orthopaedic surgeons are committed to provide better care to the trauma patients during COVID-19 outbreak. The role of Orthopaedic surgeons to combat COVID-19 outbreak can not be ignored and it is as important as other

specialists who are on front line to treat COVID-19 infected patients. However the Orthopaedic surgeons and their departments must adopt strict protective measures to lessen the spread of this disease and to protect themselves against COVID-19 infection. Major Orthopaedic surgeries should be categorized into Priority A to Priority D depending upon how long the surgery can safely be delayed (table I).¹⁶

All healthcare providers must receive appropriate training to deal with COVID-19 pandemic. Duty rosters must ensure minimum presence of health care providers in hospital but without affecting patient care. The American Academy of Orthopaedic Surgeons (AAOs) advocates the use of E-visits, video conferencing and telephonic contacts to avoid overcrowding and virus transmission in hospitals and clinics.¹⁷ The hospital administration must ensure one-patient-one-visitor policy. Face mask and hand hygiene must be strictly practiced. In-hospital pre and post-op patient stay must be reduced. Post-operative follow up periods should be widened to avoid overcrowding in OPD. Maintaining the health and well being of Orthopaedic residents and fellows are of paramount importance. Therefore face to face teaching of residents and fellows must be postponed and facilities of webinar¹⁸ and e-learning must be utilized to teach and train the trainees.¹⁹ Extreme precautions should be taken while performing Orthopaedic surgeries because body fluids contain the virus particles and using electrocautery, power tools and pulsatile lavage tends to generate potentially infective aerosol.²⁰ Optimum usage of personal protective equipment (PPE) are however, mandatory.

We must use COVID-19 crisis to enhance our skills in imparting knowledge, training and treatment through online resources. But please be ware, how much we are advanced in technology and medicine our Allah has infinite ways to stroke the mankind. No

matter how much we rise and how much we are developed, we must know the fact that one and only "Almighty Allah has full power over everything." He is the most merciful and the most beneficent to all

mankind. We should always seek time to time mercy and help from Almighty Allah till our last breath.

Table I: Prioritization of different Orthopaedic surgeries in COVID-19 outbreak.

Orthopaedic Subspecialty	Priority A: Emergency (within 24 hours)	Priority B: Emergent (within 48 hours)	Priority C: Expedited (within 2 weeks)	Priority D: (within 3 months)	Priority D: (More than 3 months)
	Open fractures	Fracture neck of femur in elderly	Clavicle fracture		
	Fracture neck of femur in young	Intertrochanteric fracture	Scapula fracture		
	Fracture pelvis with bleeding(do it immediately)	Talar neck fracture	Humerus fracture		
	Fracture with vascular injury(do it immediately)	Femur shaft fracture	Radius Ulna fracture		
Trauma	Compartment Syndrome(do it immediately)	Distal femur fracture	Tibia Plateau fracture		
	Joint Dislocation (do it within 6 hours)	Tibia shaft fracture	Ankle fracture		
	Necrotizing Fasciitis (do it immediately)		Pelvis & Acetabulum Fractures		
	Closed fractures but with impending soft tissues compromise		Closure/Flap coverage of open fractures		
	External Fixation of Complex Fractures		Repairable Osteochondral Fractures		
	Closed reduction of cervical facet dislocation (do it immediately)	Cauda Equina Syndrome		Surgical Lumbar Disc Hernia with Radiculopathy	Spondylolesthesis
Spine	Spinal cord injury(SCI)			Surgical Cervical Radiculopathy	
	Epidural Abscess			Cervical Myelopathy	
	Epidural Hematoma				
Orthopaedic Oncology	Spine tumor with cord compression	Impending Pathological Fractures			
Foot & Ankle			Foot Fractures		Ankle Arthroplasty/Fusion
Miscellaneous	Septic Arthritis (do it immediately)				
Shoulder & Elbow					Shoulder Arthroplasty/Elbow Arthroplasty
Adult Reconstruction	Acute Arthroplasty Infection Reduction of Prosthetic Joint Dislocation	Periprosthetic Fractures	Subacute Arthroplasty Infection		Knee Arthroplasty
Paediatric Orthopaedics	Hip fractures/Dislocations(do it within 6 hours) Supracondylar humerus fractures Slipped Capital Femoral Epiphysis Tibial fractures with vascular compromise (do it immediately) Open fractures		Paediatric Fractures Ligament avulsion repair	ACL reconstruction	Spine deformity correction
Hand	Acute Carpal Tunnel Syndrome Pyogenic Flexor Tenosynovitis Digit Replantation Joint Dislocation		Hand Fractures Tendon/Ligament Injuries	Chronic Carpal Tunnel Syndrome Ulnar Nerve Compression	Trigger Finger
Sports Medicine	External Fixation of Knee Dislocation		Tendon Tears Acute Loose Body removal Locked Knee from displaced Meniscus Tear Ligament Avulsion Repairs Complete Acromioclavicular Dislocation	ACL reconstruction Multiligamentous knee Reconstruction Rotator Cuff repair in young patients Recurrent shoulder dislocation stabilization	Cartilage repair/regeneration Chronic Rotator Cuff Repair Superior Labral Repair Tendinitis Surgery

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