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Correspondence



Trauma surgery in the era of monkeypox: Evidence, priorities and the way forward – Correspondence

Dear Editor,

The impact of the coronavirus disease 2019 (COVID-19) on surgical care and practice has been profound and widespread. Several studies have shown that the COVID-19 pandemic has caused significant disruptions in surgical care provision and priorities by increasing viral transmission risks and causing personal protective equipment (PPEs) supplies and healthcare workforce shortages [1]. In addition, it also led to unprecedented changes in surgical education, research, and training [2]. Whilst there have been major concerns regarding the impacts of COVID-19 healthcare crises on the delivery of surgical and trauma care, little has been discussed about the potential impact of the re-emergence of human monkeypox (MPX) on surgery.

The MPX virus belongs to the Orthopoxvirus genus and Poxviridae family. It is often considered a self-limiting infectious disease with clinical symptoms similar to smallpox, which lasts 2–4 weeks and is rarely fatal (3%–6%) [3]. The disease is transmitted through direct contact with infected individuals, animals, or contaminated materials (fomites). Transmission through respiratory secretions and droplets is possible to happen in case of prolonged face-to-face contact [4]. Pregnant women can also transmit the virus to the fetus via the placenta leading to congenital monkeypox. Apart from the typical manifestations of MPX, adverse pregnancy outcomes have been associated with this disease, including spontaneous pregnancy loss and stillbirth [5]. In the current MPX outbreak, most cases report physical contact with the contagious rash, cutaneous or mucosal lesions, and objects contaminated with infected blood, bodily fluids, or sores [4]. On these grounds, the MPX transmission can occur in hands-on aspects of the clinical routine, including surgical care. Therefore, MPX, declared as a global health emergency on 23 July 2022, has a major potential to impact the provision of surgery and trauma care globally.

Maintenance of emergency surgical services, including major trauma, constitutes a major priority for healthcare systems [1] as trauma is a significant cause of death, accounting for approximately 9% of global mortality [6]. Timely and specialized trauma care is associated with a reduction of 15–32% in trauma-related mortality [6]. Although trauma care has been drastically affected in the past couple of years due to the COVID-19 pandemic, its provision was not restricted in contrast to elective surgery [7].

The key challenges that trauma surgery faced during the COVID-19 pandemic can serve as a lesson for trauma surgeons and healthcare workers in countries with increasing MPX cases. Disproportionate needs and often testing speed have led to every trauma patient being treated as an infected patient to prevent transmission among healthcare workers [7]. The latter has been quite challenging due to the recurrent shortage of PPEs [8]. Blood and blood products have also been scarce due to restrictions on blood donors and the modified transfusion protocols [7,

8]. Common trauma procedures, such as early tracheostomy, have been restricted, leading to longer ICU/Hospital stays, long on-ventilator periods, and complications such as pneumonia [7]. Specialized Acute Care Surgery (ACS) personnel has also been redeployed to ICUs reducing further the capacity to treat trauma patients [7]. Priority-based treatment of trauma patients and reduced time for preoperative evaluation of high-risk trauma patients to limit the virus's in-hospital transmission further diminished access to trauma surgery [8].

The same shortcomings can result in failure to provide adequate trauma care during the emerging MPX outbreak. The development of the situation urges additional MPX - specific safety measures to minimize the virus's preoperative, operative, and postoperative transmission risks from patient to patient. Areas of the healthcare professionals' bodies that are not covered by gloves or long-sleeved clothing can be the point of contamination. Contaminated surfaces in the operating room (OR), surgical and non-surgical equipment, and objects such as bed linens can act as fomites infecting healthcare personnel and trauma patients whose condition is often unstable [4]. Infection can deteriorate postoperative complications like fever, thrombosis, dyspnea, and hypoxia, increasing morbidity and mortality in trauma wards [8]. The same leads to increased healthcare expenditure, which can put an aberrant burden on healthcare systems that are still trying to recover from the ramifications of COVID-19. Therefore, it is critical to put together a trauma surgery response to MPX. The principal goals of this response should be to mitigate the spread of MPX in trauma wards, maintain the usual operating volumes and treat non-infected and infected patients alike, leaving no room for disease-associated discrimination.

Prevention and early diagnosis strategies can help curb this outbreak in the community and in trauma departments. Developing MPX - specific isolation and treatment protocols is essential for in - hospital care [9,10]. Adequate provision of PPEs coupled with MPX - tailored hygienic training can benefit healthcare workers, patients and informal caregivers, if their presence is allowed [10]. Early postoperative showers can also be considered as a hygienic measure, in the light of recent evidence emphasizing their safety and contribution to patients' satisfaction [11]. Regular diagnostic assessment before and after surgery is crucial as well.

At a broader level, trauma surgeons and surgical societies should advocate to international health bodies such as the United Nations, the World Health Organization, the International Federation of Red Cross, and the Red Crescent Societies (IFRC) in favor of collective efforts for control of the outbreak. In this regard, surgeons should emphasize the detrimental effects of the outbreak on surgical care. Coordinating with local and national authorities and international financial institutions such as the World Bank for adequate provision of trauma centers with PPEs should also be a priority. Programs such as the Emergency Financing Facility (PEF) played a special role during the COVID-19

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pandemic [12]. Thus, these efforts must continue during the MPX outbreak.

Overall, emerging infectious outbreaks challenge the provision of trauma care globally. The continuum of trauma care is a major health priority. The risk of trauma care disruption amidst the MPX outbreak urges for development of strategies to prevent and mitigate the spread of the disease at the hospital, community, and organizational level.

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