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COVID-19 pandemic has brought the need to revisit the conservative management of orthopaedic injuries back into sharp focus. Over the years as trauma and orthopaedics have evolved, operative techniques have been developed, along with refinement of implants and instruments with an aim of transforming contemporary treatment of fractures to provide anatomical or near anatomical alignment of the fractures, stable fixation, with early pain-free range of motion and rehabilitation. In the last five decades or so, the management of most fractures of the extremities has revitalized and refocussed orthopaedic minds on managing many injuries conservatively, which would have otherwise been managed with operative fixations. We revisit the role of conservative orthopaedic management of fractures in the context of COVID-19 and current guidelines.

On the advent of COVID-19 pandemic, it has been acknowledged by the British Orthopaedic Association (BOA) emergency COVID-19 and the National Health Service England (NHSE) guidelines to manage urgent orthopaedic and trauma conditions pragmatically balancing optimum treatment of patients against clinical safety with resource utilization. The current Coronavirus outbreak has refocussed orthopaedic minds on managing many injuries conservatively, which would have otherwise been managed with operative fixations. We revisit the role of conservative orthopaedic management of fractures in the context of COVID-19 and current guidelines.

Keywords: COVID-19, Pandemics, Bone fracture, Conservative treatment

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The development of three major inventions of anaesthesia (1846), antisepsis (1865) and Roentgen discovery of X-rays in 1895, as such advances in operative management of fractures coupled with asepsis have been the key in the modern orthopaedic principles of managing injuries. In late 1960s, the AO group of surgeons from Switzerland popularized the principles and techniques of various fracture fixation by several metallic implants. Since then, the operative management of the fractures have evolved significantly across the globe, to the extent that it has now become a panacea. However, the current pandemic situation has exposed us to the situation faced by Sir R Jones in the midst of chaos of World War-I, with limitations posed by the shortage of resources both personnel and equipment but the need to manage orthopaedic injuries in a safe manner whilst protecting patients including staff. Hence, conservative management of the fractures, wherever possible has since been highlighted by the current BOA (and other national guidelines), especially adopting non-operative strategies of the limb injuries with an aim of reducing burden on the National Health Service (NHS) wherever it is possible and safe. Paediatric orthopaedic trauma guidelines provide similar emphasis on managing children with non-operative strategies with an aim to minimize long-term consequences and by prioritizing conditions which need emergent operative intervention (supracondylar humerus fractures with neurovascular compromise) [Table 1]. It is obvious from this table that a majority of paediatric injuries can be adequately managed with conservative treatment.

Articular and peri-articular fractures may provide a challenge, since principles of fracture fixation (anatomical reduction, rigid fixation, early range of joint motion) and avoidance of post-traumatic arthritis are not possible with conservative management in most of these injuries [Table 2] and hence operative management may be required, at a later stage. Meanwhile, the fractures with neurovascular compromise (fractures around the knee, supracondylar fractures, shaft femur fractures with acceptable angulation and displacements) and dislocations (Reducible dislocations, unstable fractures) should be considered for operative management.
complementary traditional techniques of skeletal traction, splintage, with an aim to best manage fracture to restore function and availability of future reconstruction surgery in such injuries with the current restraints may be therefore deemed necessary. However, there are certain absolute indication for the surgery of fractures and dislocation, even in the pandemic times (Table 2), which are also the contraindications for conservative management. The aim should be to minimise risk of viral transmission by avoiding Aerosol Generating Procedures (AGP) and minimising risk of infection with appropriate use of Personal Protective Equipment (PPE). These principles are critically engrained in our current orthopaedic response to the pandemic.

Conclusion

Conservative, non-operative therapeutic approach may thus provide an alternative in non-obligatory fractures in the current COVID-19 pandemic (and perhaps later on as well). It may serve as a route for us to manage orthopaedic injuries till we tide over the peak of the pandemic and resume conventional surgery. Perhaps the Coronavirus crisis has given us this unique opportunity to rethink and revisit traditional methods of treating fractures and the tolerance to operate every limb fracture must be risen. We must realize that all the fractures do not always need operations and the conservative management still has a certain place in our armamentarium of fracture management, in an evolving world!

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Declaration of competing interest

None.

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