

# Clubfoot management during COVID-19 times: An Indian scenario



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**Received:** 3 December 2021  
**Accepted:** 11 February 2022  
**Published online:** 19 February 2022

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**Competing interests:** None.

**Funding information:** None.

**Citation:** Singhal A, Kapoor A.  
Clubfoot management during  
COVID-19 times: An Indian scenario.  
Journal of Emergency Practice  
and Trauma 2022; 8(2): 86-87. doi:  
10.34172/jept.2022.01.

## Abstract

The coronavirus disease 2019 (COVID-19) pandemic has been universal and swift in its spread. As orthopaedic surgeons, for the most of us this timeframe has reduced our activity to emergency and trauma cases only, with virtual outpatient clinics and no elective surgeries. With some of the common deformity problems including clubfoot etc, which comprises a large number of children in the developing world, the management has been deferred, without any regional and national guidelines being framed. Updated guidelines relating to the management of clubfoot patients, in which parents can safely consult with the orthopaedic surgeon and physical rehabilitation specialists will allow them to cope with this unprecedented situation. We revisit the current scenario and the possible management protocol in the context of COVID-19 pandemic.

**Keywords:** COVID-19, Clubfoot, Ponseti casting, Tenotomy, Telemedicine

## Introduction

The recent coronavirus disease 2019 (COVID-19) outbreak is deemed a global health emergency. In recent weeks, there has been an exponential rise in the number of SARS-COVID-19 cases in India. New policies have been drawn up by the ministry of health for the management of these conditions to pace up the testing and cope with the increasing cases by improving the infrastructure of the health care facilities. With the orthopaedic surgeons on the frontline against COVID-19 and then gradual lifting of the lockdown, there is an increase in the number of trauma cases, which need to be managed by the orthopaedic surgeons whether with or without COVID-19 infection. These have led to the cutback of elective cases, out-patient departments and redirection of the healthcare resources towards the emergency cases.

With changes in the out-patient facilities, there have been certain conditions such as clubfoot where the management has been deferred. At the time of writing, no one can know the real impact of the pandemic on the waiting lists, which is supposed to be huge along with the chances of providing timely and safe out-patients department management. With an estimate of more than 50 000 children born with this deformity every year and with many patients still on the treatment lines, the anxiety

of the parents has been huge and needs to be addressed (1). Updating the previously framed guidelines relating to the management of the clubfoot patients, in which parents can safely consult with the orthopaedic surgeon and physical rehabilitation specialists will allow them to cope with this unprecedented situation. Some of the considerations should be formed in line with evidence-based medicine approach to guide the management.

1) In new-born babies, the casting may be deferred for now till the peak of the COVID-19 is attained to prevent the undue risk of getting exposure when the immunity is already in the developing phase. Further, postponing the casting may not affect the outcomes in such patients, though the number of castings and requirement of tenotomy procedures will increase in due course of time with delay in the treatment (2). In addition, parents can be educated through various videos how to keep the child's feet mobile during this COVID-19 pandemic period.

2) Relapse of the clubfoot presents with additional burden on the already compromised healthcare facilities. Further, relapse is associated with residual deformities, which has been mostly observed with older children, who have completed their casting process and are on foot abduction brace (FAB) (3). The need of educating parents about FAB till 4 to 5 years of age to prevent relapse and supporting



through various resources such as SMS reminders; parent support groups, accessibility to telemedicine outpatient facility and e-Sanjeevani outpatient services are critically important.

3) Children who were on casting treatment, their treatment can be postponed till the favourable conditions allow the restart of the out-patient services. As mentioned above, there have been numerous papers establishing that the Ponseti technique of casting is effective in older patients up to 10 years of age (2-5).

4) Children who have already completed their casting treatment and require a tenotomy procedure to proceed further with the use of FAB, early consideration should be given for the timing and location of the tenotomy procedure. Further, casting older children with more underlying adipose tissue can be more challenging and without careful molding and application, casts may be more likely to slip. In addition, older children may be more challenging when performing a tenotomy under local anaesthetic and when introducing the FAB and settling them in to the orthosis.

4) Accelerated protocol of Ponseti casting can be pondered upon in near future, citing a large number of waiting lists and more cases expected in near future (6).

5) Elective procedures such as tendon transfers do not need to be given any preference. Prioritization of surgery to children can be decided later on depending on the greatest need, though most of these cases do not have any change in the long-term outcome. Till that time foot and ankle stretching exercises should be done in collaboration with physical rehabilitation therapists to keep the feet flexible and simultaneously maintaining the muscle power.

We are all aware that the present time is challenging, but managing the available resources in the best possible way is the need of the hour. In addition, with the social distancing rules still in place in light of the ever increasing number of COVID-19 cases, it is better to defer the

treatment wherever required and utilize other means of communication as mentioned above in cases where treatment can be continued on a remote basis.

#### Authors' contributions

AS conceptualized the study and wrote the manuscript. AK did the review of literature, proof reading and editing of the manuscript.

#### Ethical issues

Not applicable.

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