

Tibial Plateau Fractures During Covid-19 In A Trauma Unit. Impact of Lockdown and The Pressures on the Healthcare Provider

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Abstract : The aim of this study was to access the impact of Covid-19 and lockdown on the incidence, injury pattern, and treatment of tibial plateau fractures in a combined rural and urban population in wales. Methods: Retrospective study was performed to identify tibial plateau fractures in 15-month period of Covid-19 lockdown 15-month period immediately before lockdown. Patient demographics, injury mechanism, injury severity (based on Schatzker classification), and associated injuries, treatment methods, and outcome of fractures in the Covid-19 period was studied. Results: The incidence oftibial plateau fracture was 9 per 100000 during Covid-19, and 8.5 per 100000, and both were similar to previous studies. The average age was 52, and female to male ratio was 1:1 in both control and study group. High energy injury was seen in only 20% of the patients and 35% in the control groups ($\chi^2=12$, $p<0.025$). 14% of the covid-19 population sustained other injuries as opposed 16% in the control group($\chi^2=0.09$, $p>0.95$). Lower severity isolated lateral condyle fracturesinjury (Schatzker 1-3) were seen in 40% of fractures this was 60% in the control populations. Higher bicondylar and shaft fractures (Schatzker 5-6) were seen in 60% of the Covid-19 group and 35% in the control groups($\chi^2=7.8$, $p<0.02$). Treatment mode was not impacted by Covid-19. The complication rate was low in spite of higher number of complex fractures and the impact of covid-19 pandemic. Conclusion: The associated injuries were similar in spite of a significantly lower mechanism of injury. There were unexpectedly worst tibial plateau fracture based Schatzker classification in the Covid-19 period as compared to the control groups. This was especially relevant for medial condyle and shaft fractures. This was postulated to be caused by reduction in bone density caused by lack of vitamin D and reduction in activity. The treatment mode and outcome was not impacted by the impact of Covid-19 on care for tibial plateau fractures.

Keywords : Covid-19, knee, tibial plateau fracture, trauma

Conference Title : ICOTS 2022 : International Conference on Orthopaedic Trauma Surgery

Conference Location : Barcelona, Spain

Conference Dates : June 09-10, 2022