

June 2022

## Time-to-Surgery and Short-Term Outcomes of Trimalleolar Ankle Fracture During the COVID-19 Pandemic

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### Recommended Citation

Burdick, Gabriel BS; Beydoun, Rami BS; Pietroski, Alexander MS; Warren, Jonathan BS; Fathima, Bushra BS; Wolterink, Trevor BS; McIntosh, Michael BS; Sriranga, Neethi BS; and Muh, Stephanie MD, "Time-to-Surgery and Short-Term Outcomes of Trimalleolar Ankle Fracture During the COVID-19 Pandemic" (2022). *Medical Student Research Symposium*. 154.

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## **Time-to-Surgery and Short-Term Outcomes of Trimalleolar Ankle Fracture During the COVID-19 Pandemic**

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**INTRODUCTION:** The purpose of this study was to evaluate the impact of the Coronavirus Disease 2019 (COVID-19) pandemic on time-to-surgery, complication rates, and functional outcomes of open reduction and internal fixation (ORIF) for trimalleolar ankle fracture.

**METHODS:** This retrospective cohort study compared patients who underwent ORIF for trimalleolar ankle fracture between April and July of 2020 of the COVID-19 pandemic (COVID group) to a pre-pandemic cohort treated in 2018 (2018 group). Demographic information, fracture characteristics, and surgical outcomes were collected from patients' medical charts.

**RESULTS:** The COVID and 2018 groups consisted of 32 and 100 patients, respectively. The two groups were similar with regards to age, sex, race, income, marital status, and incidence of diabetes ( $p>0.05$ ). The COVID group had a higher incidence of tibiofibular syndesmotic injury ( $p<0.01$ ), comminution of the posterior malleolus ( $p<0.05$ ), and smoking ( $P<0.01$ ). Time-to-surgery was not significantly different between the two groups ( $8.84 \pm 6.78$  days in 2020 vs  $8.61 \pm 6.02$  days in 2018,  $p=0.85$ ). 25% (8/32) of patients in the COVID group experienced one or more postoperative complications compared to 15% (15/100) in the 2018 group ( $p=0.19$ ). Mean VAS pain scores, ankle strength, and ROM in ankle plantarflexion were not significantly different between the two groups at 3 and 6 months postoperatively ( $p>0.05$ ).

**DISCUSSION:** Patients who underwent ORIF for trimalleolar ankle fracture during the early months of the COVID-19 pandemic did not experience prolonged time-to-surgery and had similar outcomes compared to patients treated prior to the pandemic.