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

Gabriel Burdick BS  
*Wayne State University School of Medicine, gm2620@wayne.edu*

Rami Beydoun BS  
*Wayne State University School of Medicine, rami.beydoun2@med.wayne.edu*

Alexander Pietroski MS  
*Wayne State University School of Medicine, alpietroski@med.wayne.edu*

Jonathan Warren BS  
*Wayne State University School of Medicine, jonathan.warren2@med.wayne.edu*

Bushra Fathima BS  
*Wayne State University School of Medicine, bushra.fathima@med.wayne.edu*

*See next page for additional authors*

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Authors
Gabriel Burdick BS, Rami Beydoun BS, Alexander Pietroski MS, Jonathan Warren BS, Bushra Fathima BS, Trevor Wolterink BS, Michael McIntosh BS, Neethi Siranga BS, and Stephanie Muh MD

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

Rami Beydoun¹, Alexander Pietroski¹, Jonathan Ray Warren¹, Gabriel B. Burdick¹,², Bushra Fathima¹,², Trevor Wolterink¹, Michael James McIntosh¹, Neethi Sriranga¹, Stephanie J Muh²
¹Wayne State University School of Medicine, Detroit, MI, ²Henry Ford Health System, Detroit, MI
gabriel.burdick@med.wayne.edu

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 ± 6.78 days in 2020 vs 8.61 ± 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.