

How Much Do Coping Skills Affect the Physical Function of Tibial Plateau and Ankle Fracture Patients?

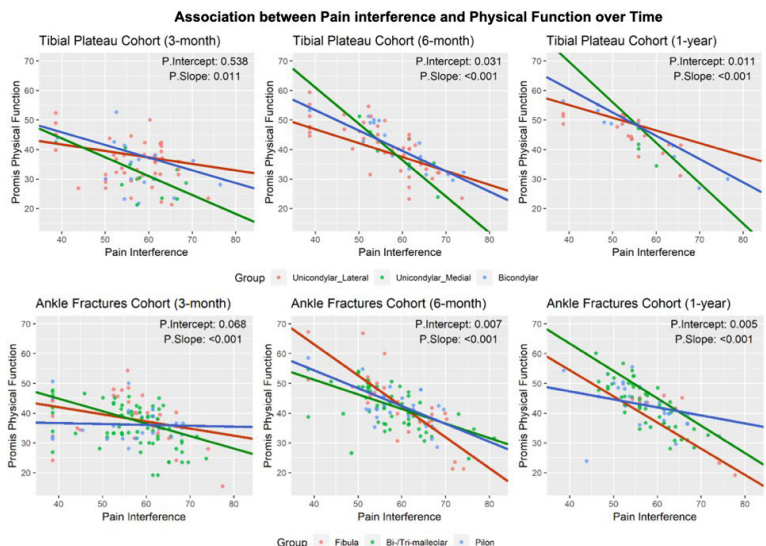
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Purpose: Our purpose was to examine the effect of patient “coping skills” measured by PROMIS (Patient- Reported Outcomes Measurement Information System) pain interference (PI) on physical function (PF). Our hypothesis was that PI adversely affects PF scores after operative fixation (ORIF [open reduction and internal fixation]) of orthopaedic injuries and that this association decreases with time.

Methods: Patients undergoing ORIF of an isolated tibial plateau or ankle fracture from 2014-2018 at a tertiary referral center with routine healing were included. The plateau cohort was divided into medial unicondylar (41B1-3.2), lateral unicondylar (41B1-3.1), and bicondylar (41C) groups. Similarly, the ankle cohort was divided into isolated fibula (44A1,B1,C1), bi/ trimalleolar (44A2-3, B2-3, C2-3), and pilon (43C) fracture groups. Patients with follow-up <6 months, polytrauma, malunion, nonunion, and infection were excluded from analysis. The PI and PF scores at 2 weeks, 6 weeks, and 3, 6, and 12 months were collected. Linear regression was used to compare the PI and PF association at these time points.

Results: 70 tibial plateau and 134 ankle fractures were included in the study. There was no difference in the ankle or tibial subgroups with respect to age, BMI (body mass index), ASA (American Society of Anesthesiologists) class, Charlson Comorbidity Index, tobacco use, or follow-up. There was no difference in PF scores between subgroups of the ankle or plateau cohort at any time point. PI adversely affected PF scores for each subgroup of the tibial plateau and ankle cohorts and this association increased with time as seen by increasing slopes at 3, 6, and 12 months (Figure). PI had a significantly negative effect on PF scores of medial tibial plateau and isolated fibula fractures compared to the other subgroups in their cohort (P <0.001 at 3, 6, and 12 months).

Conclusion: Contrary to our initial hypothesis, PI adversely affects PF, but this adverse interaction increases with time. Isolated fibula fractures and medial tibial plateaus PF scores were disproportionately affected by PI. Psychosocial interventions directed towards these at-risk groups may optimize their perceived PF.



The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device he or she wishes to use in clinical practice.

POSTER ABSTRACTS