

Title: Boxer's Fractures; A One Time Event or an Indicator For Future Hand Trauma?

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Introduction

Fractures of the 5th metacarpal neck, or boxer's fracture, is an extremely common hand injury. It is usually caused by an individual striking an object with their hand. Despite the pain and disability this causes, anecdotally it appears to be a recurring injury in some individuals. The purpose of this study was to determine the recidivism rate for boxer's fractures and identify predictors of reinjury.

Methods

All 5th metacarpal neck fractures at a single institution over a 5-year period were identified from an internal database and retrospectively reviewed. Patient demographics and injury details were collected. Imaging was reviewed to confirm correct diagnosis.

Results

129 patients were identified with 5th metacarpal neck fractures. Age range was 8 to 88 years old with an average age of 30.4 years old. The most common mechanism of injury was punching something (88, 68.2%), followed by mechanical fall onto the hand (17, 13.2%). Only one person (0.8%) had boxing as a mechanism of injury. For the 88 patients who punched something, 53 (60.2%) punched a wall, followed by 16 (18.2%) punching another person in an altercation.

Of the 129 patients, 49 were students at the time of injury, 44 were employed, 14 were retired, 21 were unemployed, and 1 was incarcerated. No patient had an occupation of boxer, fighter, or professional athlete. 16 patients (12.4%) were documented to be intoxicated at the time of injury. 29 patients (22.5%) had a documented previous boxer's fracture at the time of consultation, of which all were from punching something/someone.

Conclusions

In our small cohort of patients, the rate of recidivism for boxer's fractures was high at around 22%. The one predictor for recidivism was a mechanism of punching something/someone. Knowledge of this relationship for reinjury may change how hand surgeons counsel their patients when seen for their first boxer's fracture in order to prevent a second occurrence.