Background: Epidemiological studies on tennis injuries are mainly conducted in either elite professional or junior players. Injury patterns might differ in the recreational tennis player. Purpose: To investigate acute injuries in the recreational tennis—playing population with an additional focus on acute injuries that require surgical treatment. Study Design: Case series; Level of evidence, 4. Methods: A retrospective data analysis was conducted among patients who sustained an acute tennis injury between January 2013 and December 2018 and who had treatment administered at a single university hospital. Demographic data, diagnosis, body region of the trauma, injury mechanism, and treatment methods were recorded. Data were evaluated using descriptive statistics. Results: A total of 449 patients sustained 467 injuries (148 female, 301 male; mean age, 43.6 years; range, 8.2-84.4 years). The injuries occurred throughout the year, with an increased prevalence in the summer months. Injuries occurred in the lower extremity in 59%, the upper extremity in 30%, and the head and trunk in 11%. The main reason for an injury was a twist of a specific joint (n = 194) or a fall (n = 102). Harmless contusion or strains were the most common injury (49%). Ankle sprains were the most common serious injury, occurring in 11% of patients. Fractures occurred in 54 cases (12%). Overall, 9% of patients were treated surgically (fractures, n = 13; meniscal tears, n = 8; Achilles tendon ruptures, n = 6), and surgery was advised to another 1% who did not receive surgery at the study hospital. Conclusion: Typical acute injuries in recreational tennis players differ from acute injuries in elite and junior players, with an increased fracture occurrence. The main causes of acute tennis injuries are falls and twists, with 10% of injuries needing surgical treatment, mainly for fractures, meniscal tears, and Achilles tendon ruptures.