



## The Epidemiology of Lower Extremities Injuries in Iranian Population

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### Dear Editor-in-Chief

Traumatic injuries are a major public health problem considered as the fourth reason of death among people (1). The most common traumatic injuries include the fractures and the lesions of the soft tissue, muscles, ligaments and tendons of the upper and lower extremities (2).

In this study, the epidemiology of the lower extremities traumatic injuries was evaluated. Lower extremities include proximal femur, femoral shaft, distal femur, patella, proximal tibia, diaphyseal tibia, fibula, distal tibia, ankle, talus, calcaneus, metatarsus, and toes (3-5). Although, the importance of the issue is well known, but epidemiological studies for assessing these injuries in different societies are limited. Furthermore, the epidemiology of these injuries in different countries is different and does not match with each other. Even in a given country, the statistics are not the same in urban and rural communities.

Knowing the prevalence and epidemiology of these injuries and their reason in each community can be helpful in planning for preventive and therapeutic proceedings. Therefore, this study was aimed to evaluate the epidemiology of lower extremities injuries in Iranian population.

This study was performed on 685 hospitalized patients in Shafa Yahyaieian Orthopedics Hospital

in Tehran. Patients demographic features, the information about the mechanism of injury in soft tissues, bones and joints which obtained using clinical examination and imaging including radiography, CT scan, MRI and sonography also the findings during the surgery were recorded in the information form. Independent *t*-test, Mann-Whitney test, Chi-square and Fisher Exact test were used to compare data. From 685 patients who had lower extremity fractures 500 (73%) were male. This may be due to the higher outside activities of men; also, they use motorcycle and do sport more than women do. There are gender differences in post injury pathogenesis due to sex steroids (6, 7).

In the current study, the injuries and fractures were mostly seen in third (21.35%) and fourth (17.11%) decade of life, which can be due to the young population of our country. The prevailing mechanism of lower extremities trauma was falling from the standing position (34%) and after that direct trauma was at the second stage (17%). There were not any significant relation between the age groups ( $P=0.06$ ), the sex ( $P=0.47$ ) and the mechanisms of injury ( $P=0.4$ ) and the pelvic injury. There was a significant correlation between the age and the femoral injury ( $P=0.02$ ).

In addition, there was a significant relation between the sex and the knee injuries ( $P=0.005$ ). A significant relation between the sex ( $P=0.001$ ), age ( $P=0.01$ ) and the mechanism of injury ( $P=0.001$ ) and the prevalence of foot injuries was found.

Knowing the prevalence and epidemiology of these injuries and the mechanisms of traumatic injuries in each community can be helpful in planning for preventive and therapeutic proceedings.

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