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# Severe Injuries from Low-height Falls in the Elderly Population

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## ABSTRACT

**Background:** Falls from low-height can cause severe injuries in the elderly population. This study was conducted to determine characteristics of injuries from low-height falls.

**Methods:** We retrospectively review surveillance data on injured patients who presented to six emergency departments from January 2011 to December 2015. Study subjects were divided into severe group and non-severe group based on severity of injury. The general and clinical characteristics were compared between the two groups and analyzed factors related with severe injuries.

**Results:** Of 1,190 elderly patients, severe group comprised 82 patients (7%). The severe group was 2 years younger than the non-severe group. In the severe group, 61% was men and 34% in the non-severe group. In the non-severe, the injuries more commonly occurred at residential facilities and indoors than those in the severe group. Paid work during injury occurrence was 15%, and the more patients presented with non-alert consciousness in the severe group. The most common regions of major injury were head and neck in the severe group.

**Conclusion:** Paid work, non-alert consciousness, and major injury to head and neck are relating factors to severe injuries in the elderly population.

**Keywords:** Elderly; Falls; Injury; Relating Factors

## INTRODUCTION

Falls are a major cause of injury in all ages,<sup>1</sup> and account for 10% to 15% of emergency department (ED) visits. Generally, falls from higher heights cause more severe injuries.<sup>2,3</sup> In the elderly population, however, even falls due to low-energy mechanisms are associated with higher hospitalization rates, longer lengths of hospital stays, and higher rates of mortality compared with younger adults.<sup>4-6</sup> By 2000, the Republic of Korea had become an aging society, with the elderly population increasing at the fastest rate in the world. According to the Korean Statistical Information Service (KOSIS), elderly people aged 65 or older will account for 14% of the Korean population in 2017 and 20% of the population by 2025. As the elderly population increases, the burden of geriatric diseases is also increasing within the community. In particular, fall injuries in the elderly population will be a major social issue,<sup>5</sup> and lead to increased health care costs.<sup>7</sup>



















