Case report

Sledging related spinal injuries and fracture patterns: a report on five cases

S Basu, N K Makwana, R Khazim

Abstract

The cases are reported of five patients who presented to The Queens Medical Centre, Nottingham after a sledging accident. All five patients presented consecutively during the first weekend in 1997 having sustained the accident in the same public park. The mechanism and subsequent fracture type is described for each. These injuries are preventable, and increasing public awareness of the risk of sledging in public places may reduce the incidence.


Keywords: sledging; spine; fracture; injury

Sledging is a popular sport during the winter. Unfortunately, it is associated with a high incidence of musculoskeletal injuries. Sloan et al. reported on 101 patients with various sledging related injuries seen in one accident and emergency department over an eight day period. Spinal injuries are rare but they account for a significant number of patients with long term morbidity. The factors leading to such injuries, the mechanism, and the outcome have not been previously reported. We report on five patients who sustained a spinal injury while sledging, and discuss these factors.

Case reports

Five patients, aged 15–38 years, with a spinal injury following a sledging accident were admitted to the Queens Medical Centre during the first weekend of January 1997. Of 2617 admissions to the emergency department over an eight day period. Spinal injuries are rare but they account for a significant number of patients with long term morbidity. The factors leading to such injuries, the mechanism, and the outcome have not been previously reported. We report on five patients who sustained a spinal injury while sledging, and discuss these factors.

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chances of meeting an obstruction. It was interesting to note that, although snow was on the ground soon after Christmas in 1996, the injuries occurred three or four days later. Time and use could have made the slopes firmer and more slippery than at first, resulting in the generation of greater speeds. The high speeds achieved may have been a significant factor in the number of spinal injuries observed. Spinal injuries caused by sledging are uncommon and the mechanism of injury is poorly defined. Our study suggests that the main mechanical force is an axial compression/flexion one, predominantly involving the thoracolumbar region. They may be complicated by spinal canal compromise or instability requiring spinal surgery with instrumentation. In our study, the average hospital stay was six days. Sledging injuries have significant economic implications, and increasing public awareness and the designation of suitable slopes without obstructions may reduce the incidence.

Contributors: S B initiated the study and participated in data collection, analysis, and writing of the paper. N K M initiated the study and research and participated in data collection, analysis and writing of the paper. R K initiated the study, developed the core issues, and participated in analysis of the data and editing of the paper.


**Take home message**

Sledging can result in significant spinal injury. Increasing public awareness, sledging on designated slopes without obstructions, and the use of suitable equipment may prevent serious injury.
Commentary

It is interesting that the study included five spinal injuries from one weekend when the previous papers by Silver and Sloan et al suggested that spinal injuries were rare. The authors suggest that the slope may have been to blame. It is my belief that the climatic changes over the last decade have resulted in lower snowfall which has affected injury rates in two ways. Firstly, as noted in the study, fewer people own appropriate sledges and more use is made of inappropriate sledding materials. Secondly, and perhaps more importantly, the lower snowfall results in inadequately covered slopes where every bump and ridge remains exposed. Inadequately covered slopes are inherently more dangerous but are eagerly sledged on by snow starved budding tobogganists.

NEIL TOWNSHEND
Broadway, Wors

BASM Merchandise 1999

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