Duck shooting injuries in Southland, New Zealand

Martin Watts, Ian Densie

Abstract
Duck shooting is a common sport in New Zealand. The opening weekend is anticipated and celebrated, often with significant alcohol intake which is cause for concern, and potentially very dangerous. Hunters are annually warned about the dangers. There have been few duck shooting incidents which lead to injury or death. In the last decade two duck shooters in New Zealand have been killed, while 16 suffered non-fatal gunshot injuries. We present a series of injuries identified during the 2012 duck shooting season in Southland Province.

Case report
We prospectively studied patients attending the Emergency Department (ED) at Southland Hospital (Invercargill, New Zealand) and identified eight patients with injuries as a result of duck shooting activities. Of these, five were male, three female, with an age range from 9 to 72 years.

Discussion
Overall the numbers were small but may be representative, as duck shooting is a common activity with family groups often participating.

There were no injuries from shooters being shot either by other shooters or by themselves. Five injuries occurred while shooting a gun, four of these as a result of recoil of the gun, causing injury to the shoulder, chest, face and indirectly to the scapula. The other shooting injury occurred after a foreign body irritated the eye of a shooter. The three non-shooting injuries occurred as a result of falls while the participants were walking from the shooting areas, the falls resulted in a fractured ankle, a fractured finger and an acromio-clavicular joint dislocation.

Two patients injured were documented as having consumed alcohol at, or around the time of injury. Both cases were adult males who fell when walking from the shooting areas.

It is not unexpected that several injuries resulted from falls. Ducks are hunted in rural areas that usually require travel across unformed paths. The ED frequently sees injuries associated with falls on uneven ground. The small number related to duck shooting is not significant, and a similar pattern might be expected from walking across uneven ground associated with any outdoor activity.

Half of the injuries were due to the recoil effect of the gun. This is in itself a complex subject. There are numerous factors affecting the recoil and potential for injury from this, including the gun, its calibre, length of the stock and its weight, the cartridge used, the number of shots fired and both the physical build and the technique of the shooter involved.
A range of recoil reducing devices are available, from gel recoil pads through to the Beretta Xtrema 2 Kick-Off recoil reducing shot gun. Our study did not identify what guns or safety equipment were used, and was not able to make conclusions about this subject, except to identify that recoil was the most frequent mechanism of injury.

Dramatic injuries such as shotgun wounds are uncommon, but attract media attention and are remembered by those who treat them. Emotional events tend to be recalled with more frequency and clarity than memories not associated with extreme emotions. It is likely that this may be responsible for the perception that serious duck shooting injuries are more common than they actually are. Minor injuries are in fact much more common, less memorable and are not newsworthy.

Shooting injuries are easily preventable by using common sense and following basic safe firearms handling guidelines. However promotion of recoil injury prevention techniques and devices may be beneficial in decreasing less serious but more frequent injuries.

**Author information:** Martin Watts, Emergency Medicine Specialist, Emergency Department; Ian Densie, Medical Research Officer, Quality, Risk and Education Unit; Southern District Health Board – Southland Hospital, Invercargill

**Correspondence:** Dr Martin Watts, Emergency Medicine Specialist, Emergency Department, Southern District Health Board – Southland Hospital, Invercargill, New Zealand. Fax: +64 (0)3 2186890; email: martin.watts@southerndhb.govt.nz

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