

FATAL ACCIDENTAL PENETRATING INJURY IN A PEDAL CYCLIST

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Abstract;

Accidental penetrating wound over the abdomen is an unusual event, but may be encountered in case of accidental fall over the projected ends of railings, spikes of garden walls or from falling against broken glass.

In the case being discussed here, a pedal cyclist got accidental penetrating wound over the abdomen by a broken bicycle pedal, causing traumatic rupture of the left common iliac artery and consequently leading to death of the individual.

Keywords: Penetrating wound, pedal cyclist, accidental injury, fatal injury.

Introduction:

Penetrating wounds of the abdomen may be produced by a cutting or a stabbing instrument by a firearm, by the horns or claws of an animal or by fall on a sharp projecting point. A single wound may result injuries to more than one organ¹.

Accidental penetrating wounds may occur when a person falls on a pointed weapon or object. There will be corresponding cut or tear over the covering clothing's. The weapon or the object is always present at the place of occurrence, often in situ in the body².

Case report: A 22 year old man was brought to Mandya Institute of Medical Sciences mortuary with history of accidental fall over the deformed / broken bicycle pedal (Fig1). According to the

history, the person was riding the bicycle with his son in inebriated state. In an attempt to lift his son who had fallen off the bicycle, the deceased accidentally fell on the broken pedal, which resulted in a punctured wound over his left side of the abdomen, later on leading to the death of the cyclist.

On post mortem examination the following findings were observed:

External examination:

1. A penetrating wound measuring $4.5 \times 2 \times 6$ cms was present over the left iliac fossa 6 cms away and above from the left anterior iliac spine. (Fig-2).
2. Abrasion measuring 3×2 cms present over the back of left elbow.

Internal examination:

On dissection of the abdomen, peritoneum was lacerated (fig-3) below the external injury No.1, and the common iliac artery on the left side was torn just above its bifurcation(fig-4). Peritoneal cavity contained 750 ml of fluid blood mixed with clots.



Fig-1 Deformed pedal

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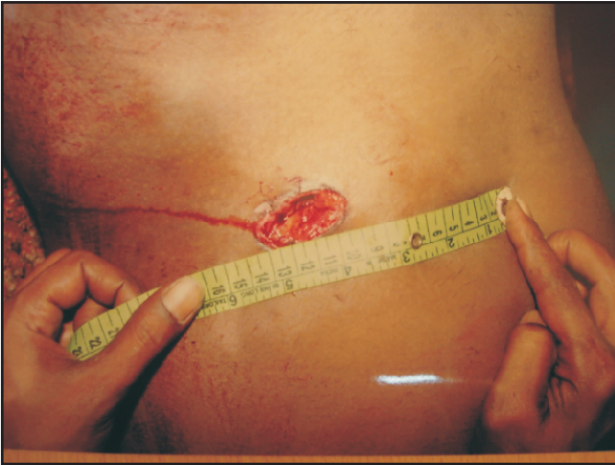


Fig-2 Penetrated wound

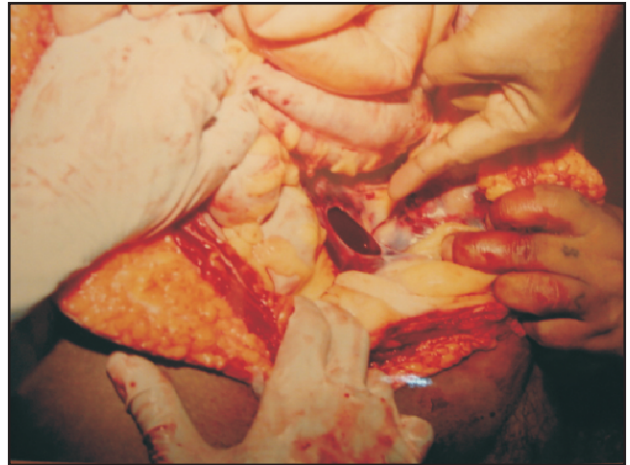


Fig-3 Lacerated peritoneum

Discussion:

An instrument (eg: knife) that has an edge and a point can both incise and stab. Accidental stab and incised wounds tend to be single. These wound typically involve major arteries or veins in the extremities and the neck, but puncture wounds and multiple cutaneous injuries also lead to fatal exsanguination. Alcohol is a factor in adult accidents^{3,4,5}.

Anju Jaiswal et.al, studied pattern of injuries among 43 bicycle riders showed that 91% of bicycle riders sustain injuries due to spokes and 83% had soft tissue injury⁶.

Amputation of the toes was the common injury noted by Subramanyan on 25 children treated with bicycle injuries – in those who hang their legs on either side of the spoke wheel⁷. Mark et al reported 2 cases of common femoral artery injury (non pulsatile haematoma of the femoral artery) secondary to bicycle handle bar trauma.

Very few cases of non-missile penetrating injuries are reported in the forensic literature. The case presented here is unique in terms of mechanism of injury. The individual was seated on the bicycle with his son. In an attempt to lift his son from the ground who had fallen the individual falls accidentally on the broken bicycle pedal which penetrates the abdomen and ruptures the common iliac artery, which turns out to be fatal.

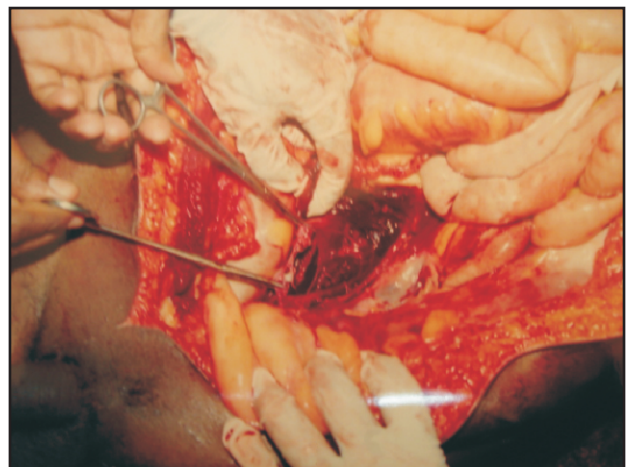


Fig-4 Torn Left common iliac artery

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