CASE REPORT

Penetrating Injury to the Gallbladder by a Needle Fish

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Abstract Penetrating abdominal trauma is a major killer worldwide. Various modes and mechanisms of injury have been described in world literature. We describe an unusual case of penetrating intra-abdominal injury caused by a 2-ft-long needle fish at sea. The mode and mechanism of injury is rare and the consequences life threatening. There is paucity in the literature of such trauma and its presentation. This case report describes injury sustained by a fisherman at sea by a needle fish, causing biliary peritonitis from an isolated penetrating injury to the gallbladder. Typically, these fishes are known to jump up to 6 ft above the surface of the water and are voracious carnivores, feeding on smaller fishes in deep sea. The fisherman, having sustained the injury, had blood tinged bile oozing from the wound and attended casualty in severe abdominal pain and nausea. Diagnosis was prompt, and even though the presentation to the casualty was delayed, immediate resuscitative measures and surgery ensured successful management of the patient.

Keywords Gallbladder perforation · Penetrating injuries · Intra-abdominal trauma · Needle fish

Introduction

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The anatomical position of the gallbladder renders it protection from any abdominal trauma; hence, the incidence of gallbladder injury in penetrating or blunt trauma is about 2 %. We describe a rare mode and mechanism of a penetrating injury to the gallbladder by a needle fish in a fisherman at sea (Fig. 1).

Case Report

A 45-year-old male, fisherman by profession, presented 6 h after an odd accident while at sea. He gave a history of being injured by the horn of a 2-ft-long needle fish (Fig. 2), which rose above the water and went through the upper right side of his abdomen (Fig. 1). Since the incident, he noticed exudation of greenish blood-stained fluid from the entry wound and had been having acute abdominal pain and nausea.

Clinical examination revealed an entry wound 4 cm below his costal margin on the right side, draining bile, with localized signs of peritonism in the right upper quadrant. The patient was haemodynamically stable but in agony with pain. The routine biochemical parameters in his blood were normal; an erect chest X-ray did not show any evidence of pneumo-

Fig. 1 Entry wound

Fig. 2 The culprit—needle fish

peritoneum, but bed side ultrasound revealed subhepatic collection of free fluid. On the basis of the mode of injury, bile leak from the wound and the ultrasound findings, the patient was taken up for an emergency laparotomy. The abdomen was opened through a right subcostal transverse incision. There was bile in the peritoneal cavity and minimal venous ooze from the under surface of the right lobe of liver. Remarkably, there was a centimetre long perforation of an otherwise normal-looking gall bladder; the rest of the abdominal viscera were inspected for any injuries and were noted to be normal. Thorough peritoneal lavage was performed, haemostasis secured by manual compression of the right lobe of the liver and cholecystectomy done, to get control of the bile leak. The patient was haemodynamically stable after surgery, and a repeat ultrasound performed post-operatively did not reveal any free fluid or collections in the abdomen. The patient was discharged home without any regular follow-up plans.

Discussion

Penetrating injuries to the abdomen are a common occurrence worldwide. There are various modes and

mechanisms of injury described. In our case report, the fish causing the penetrating trauma is a common sea fish, known to inhabit the Bay of Bengal in the Indian sub-continent. They are known to be able to jump up to 5 ft above the sea level and usually feed on smaller fishes on the surface of the water. Often caught up in the fisherman's net, these are thrown back into the waters. There are folklore about these fishes causing human injuries, but this case report clearly depicts the rare and unusual mode of accident at sea. Isolated gallbladder injury has not been reported in literature. The incidence of gallbladder injury accompanying other intra-abdominal trauma ranges between 0.5 to 8.6 % [1].

A variety of treatment options are available in the management of gallbladder injuries, including the following: expectant observation, drainage cholecystostomy, or extirpation of the gallbladder. Reports from the last two decades indicate that cholecystectomy is viewed as the operation of choice for traumatic injuries to the gallbladder [1]. Our case stands out because of the mode and mechanism of injury. There have been no reports on literature of an isolated perforation of the gallbladder due to a penetrating injury by a needle fish.

References

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