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Exploratory Laparotomy for Severe Dowry-related Spousal Violence Injuries in a Young Woman

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ABSTRACT

This case report highlights the severity of dowry-related intimate partner violence in Terai, Nepal. A 24-year-old married female presented with multiple stab injuries to the abdomen and a cut-throat injury inflicted by her husband under the influence of alcohol due to dissatisfaction with dowry demands. Successful management involved exploratory laparotomy, anterior abdominal wall repair, cholecystectomy, and neck injury repair. However, on the third postoperative day, due to persistent pain and feeding difficulties, the patient was referred to a tertiary care center, where a re-exploratory laparotomy revealed missed diaphragmatic injury and bowel herniation requiring further repair. This case underscores the need for high clinical suspicion and early specialist referral in complex trauma scenarios. It also highlights the role of cultural and societal factors in intimate partner violence and the need for a multidimensional approach involving healthcare, legal, and social services.

Keywords: Abdominal trauma; dowry; intimate partner violence; Nepal; stab injury

INTRODUCTION

Intimate partner violence (IPV) is a global issue, particularly affecting women in Nepal with 27% experiencing IPV and spousal violence rising from 14% in 2016 to 17% in 2022.[1,2] Over half of these women sustain injuries like cuts and bruises.[2] Dowry-related violence, involving physical, emotional, and economic abuse, is driven by patriarchal norms that view women as commodities.[3] Early marriage and son preference further reinforce these increasing women's vulnerability to IPV and limiting their ability to seek help[4]

This case report details the clinical journey of a young married woman severely injured by dowry-related IPV, including surgical management and outcomes. It highlights sociocultural factors contributing to IPV, stresses the need for timely specialist referral, and context-specific guidelines for better recognition and management.

CASE REPORT

A 24-year-old married woman presented to the emergency department of a private hospital at Terai region, Nepal, with alleged history of physical assault by her husband. As per the initial account provided by the patient's brother, who had brought her to the hospital, she had sustained multiple stab injuries to the abdomen as well as a cut-throat injury inflicted by her husband. She underwent exploratory laparotomy which included repair of anterior abdominal wall of neck injuries. However, on day 4 postoperatively she complained of continued pain over the abdomen mainly over the left hypochondrium and had difficulty in feeding. She was kept under observation till day 10. As there were no signs of improvement, she was then referred to a tertiary referral hospital in Kathmandu. On arrival she was conscious, oriented, and hemodynamically unstable. Her vital signs included a pulse rate of 120/min, blood pressure of 90/70 mm Hg, respiratory rate of 20/min, and oxygen saturation of 99% on 13 liters/min reservoir mask oxygen. Pallor was noted on the lower palpebral conjunctiva, skin, and palms. The Glasgow Coma Scale (GCS) score was 15/15. There were signs of respiratory distress. Examination of the neck revealed U-shaped sutured incised wound extending from the right mastoid to the left mastoid anteriorly (Figure

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1). On abdominal examination, a surgically closed midline laparotomy incision with tension suture extending from the xiphisternum to the suprapubic region with two drains in lumbar region was noted. A separate stab wound was present in right hypochondrium. Chest examination revealed thoracostomy tube draining dirty purulent collection with decreased air entry bilaterally, more so on the left side. Rest of the systemic examinations were unremarkable.

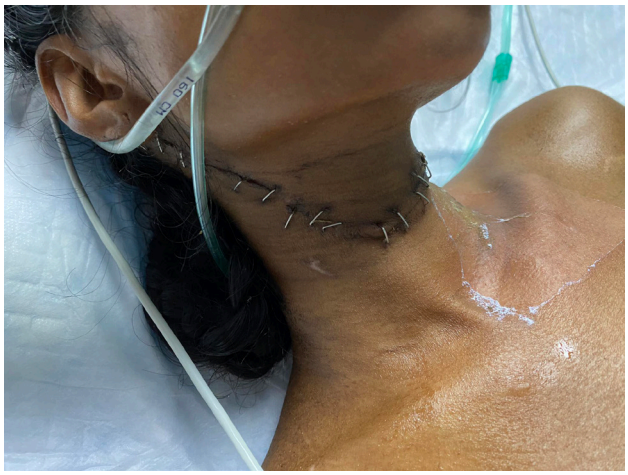

Figure 1. Neck showing a surgically sutured incised wound extending from the right to left mastoid, indicating the cut throat injury. The wound edges are healing post surgical repair.

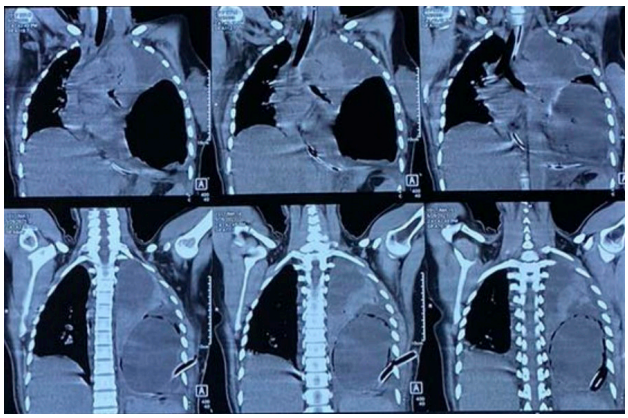

Figure 2. A contrast CT scan of the chest and abdomen shows a significant defect in the left hemidiaphragm with herniation of the stomach, bowel, and the left lung collapse.

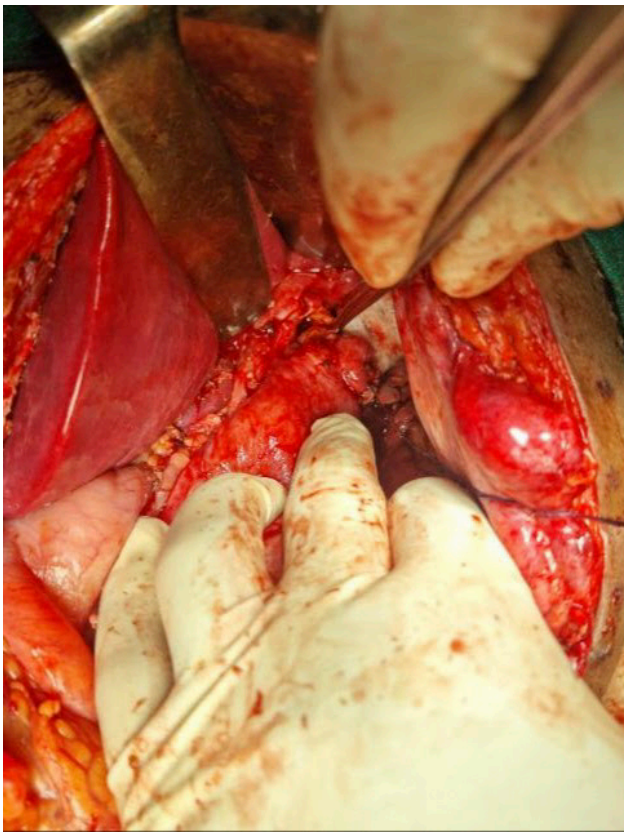

Figure 3. Per-operatively, a defect in left diaphragm and esophageal rupture is visible.

Baseline blood investigations revealed anemia (hemoglobin 7.8 g/dl), leukocytosis (TLC 17,900/cumm), and deranged liver function tests. Imaging included a chest X-ray showing a homogenous opacity on the left with collapsed left lung. A contrast-enhanced CT scan of the chest and abdomen revealed a large defect in the left hemidiaphragm with herniation of the stomach, bowel, and collapse of the left lung (Figure 2). There was a hematoma and laceration in the right lobe of the liver involving segments IV, V, and VI. A diagnosis of "Multiple stab injuries to the abdomen with grade IV liver laceration and left diaphragmatic hernia secondary to alleged dowry-related intimate partner violence" was made. The patient subsequently underwent re-exploratory laparotomy on postoperative day 14. Per-operatively, a defect in left diaphragm about 15 cm, with herniation of gastric fundus, part of small bowel and spleen into the thoracic cavity was seen (Figure 3). Fundus of stomach was gangrenous and there was seropurulent collection in the left thoracic cavity. About 2 cm perforation was also seen in intraabdominal part of esophagus. Pleural cavity was cleaned, diaphragmatic defect and esophageal perforation was repaired. After

debridement of gangrenous part of fundus, the wall of stomach was also repaired. Abdominal wound was closed over two tube drains. Post-operatively, the patient was managed with IV fluids, antibiotics and parenteral nutrition. She was discharged on postoperative day 22.

DISCUSSION

This case highlights the importance of maintaining a high index of clinical suspicion and conducting thorough secondary and tertiary surveys to identify missed injuries in complex polytrauma cases. A patient underwent emergency laparotomy and repair, but persistent symptoms postoperatively raised suspicion for missed injuries. A missed diaphragmatic rupture was identified, emphasizing the need for timely radiologic imaging in follow-up to prevent complications such as bowel herniation and strangulation. Occult diaphragmatic injuries are to be specifically looked for in cases of left-sided thoracoabdominal injuries.[5] A delayed or missed diagnosis can result in herniation and strangulation of bowel.[5] Early imaging aids diagnosis just like in our patient.

The identification of missed diaphragmatic rupture with bowel herniation on CT scan justified the decision for re-exploratory laparotomy. When managing penetrating abdominal injuries, factors to consider include injury severity, associated injuries, and patient stability. Initial steps involve resuscitation and diagnostics.[6] During complex surgeries like trauma laparotomies, injuries can potentially be overlooked. Hence, in patients with persistent symptoms or clinical concerns, re-look surgeries may be warranted for definitive repair. This decision-making regarding operative versus non-operative management must be individualized based on factors like hemodynamic status, peritoneal signs, clinical judgement, and imaging findings.[6] Surgery is recommended for patients with specific signs, while stable patients may be managed non-operatively.[6]

A tertiary care center with a strong referral system is crucial for addressing the physical and mental health consequences of IPV, ensuring that patients receive comprehensive, multidisciplinary care.[7] This system helps identify patients who require specialized care and ensures appropriate treatment.[7] Providers should offer appropriate care responses, including referrals, to improve patient outcomes.[8] A multidisciplinary approach is essential for comprehensive trauma care involving specialties like radiology, orthopedics, neurosurgery, cardiothoracic, and critical care.[9] Tertiary care centers with specialists ensure patients receive the appropriate care from trained professionals.[9]

In the present case, the polytrauma scenario and dowry-related violence context were unique, and the intent could not be conclusively established due to the absence of witnesses and conflicting narratives. Cooperation between healthcare providers and legal authorities is essential for protecting the patient's interests, and forensic evidence, such as injury patterns, can aid in reconstructing possible events.

The case report highlights the need for context-specific guidelines for early IPV-related trauma cases, training emergency room physicians, emphasizing trauma evaluations, multidisciplinary approach, policy-level changes, and addressing sociocultural factors perpetuating violence. It emphasizes high suspicion for trauma injuries, referral to higher centers, and definitive injury repair to prevent complications. Public health lessons include healthcare, legal reforms, and cultural change to tackle domestic violence. Coordinated efforts between medical, legal, governmental, and non-governmental organizations can effectively address this sociomedical issue.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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