POST-TRAUMATIC RUPTURE OF THE OVARIAN CYST – CASE REPORT

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The article reports a very rare case of ovarian cyst rupture in 49-year-old woman who had a multiorgan injury during work in her own rural property. The diagnostic problems of the blunt abdominal trauma are discussed.

Key words: ovarian cyst, blunt abdominal trauma, diagnostic peritoneal lavage, emergency medicine

In situ of newel more effective preventive and safer procedures, the number of work-related injuries – especially secondary to the farm activities – has not been decreasing. One of the most commonly observed complication is a blunt abdominal trauma that occurs for approximately 80% of all the abdominal injuries, commonly coexist with other site lesions (1, 2, 3). According to data obtained from large post-traumatic health centers, the most commonly injured organs are parenchymal ones, i.e., liver (36%), spleen (32%) and kidneys (24%). Furthermore, there are nearly twice as many case reports concerning small intestine trauma as colon trauma (55% vs 35%) (4). Intestinal injury cases are challenging diagnostic problems, and damage to the intestine is usually not evident in classical visualization method including ultrasonography (USG) or various x-ray procedures (1, 3, 4, 5).

A rare clinical case of atypical course of the blunt abdominal trauma is reported below. On the basis of examination and tests, the patient was initially diagnosed as having colonic injury.

CASE REPORT

A 49-year-old farmer woman (PD, case history 22098/07) was brought by air emergency service and reported to the emergency department in the Cardinal Stefan Wyszyński’s District Hospital in Lublin. The patient experienced multiorgan trauma after a farm tractor flipped over on her. The patient sustained a head injury without loss of consciousness, left upper limb trauma, back as well as lumbar-sacral injury. Additionally, as a result of having been run over by one of the tractor wheels the patient suffered blunt abdominal trauma.

On admission in an emergency department the patient’s health condition was serious, but she remained conscious, respiratory and circulatory stable. She complained of thoracic, abdominal and lumbar-sacral pain. It is worth to mention that she was in postmenopausal status for last 4 years, without any hormonal replacement therapy.

The patient was monitored and underwent further treatment with fluids. Her wounds were initially dressed, her bladder was catheterized, laboratory and radiological (thoracic spine X-ray and abdominal ultrasonography) investigations were conducted. Laboratory findings revealed no abnormalities. USG showed the presence of significant amount of free fluid in peritoneal cavity. Mixed echogenicity fluid was found in the rectouterine pouch and between loops of small intestine. Patient’s ge-
neral condition, types of injuries and USG findings scheduled her for computerized tomography (CT) of abdominal cavity. The examination showed the presence of free fluid in the peritoneal cavity. However, lack of no signs of parenchymatous organ damage was detected. On the basis of the clinical picture the patient was assigned to diagnostic peritoneal lavage (DPL). The test was performed under local anaesthesia. The catheter was inserted into an area under navel. Thick bronze inodorous fluid was obtained after drainage. The type of fluid suggested intestinal perforation. Thus the patient was scheduled for laparotomy. An emergency surgical procedure was performed. While operating, peritoneal cavity showed the presence of bronze secretion from ruptured cyst of the left ovary. Moreover, a 5-cm-long mesenteric tear of the small intestine was detected. The cyst, ovary and salpinx were resected leaving only a narrow strip continuous with the sigmoid wall. The right ovary was sampled for histological examination. Interrupted sutures were placed on the damaged mesenteric tear. The peritoneal cavity was drained. Microscopic examination of specimen revealed old hemorrhagic simple ovarian cyst with complete destruction of previous lining cells. The normal histological picture of the right ovary was found. To exclude the risk of secondary ischemia of small intestine perforation, the patient was parenterally fed for 7 days after surgery. The postoperative course was uneventful, no complications related to abdominal organ damage or surgical procedures were recorded. However, an incised haematoma of the lumbar-sacral region required additional treatment and therefore the patient needed a prolonged hospitalization. However, after another 7-day she left the hospital in a good condition.

**DISCUSSION**

In recent years significant changes in treatment of blunt abdominal trauma have been introduced. They resulted from certain improvements in health care system, i.e., opening emergency departments and posttraumatic health centers equipped with modern diagnostic equipment. Owing to the fact that specialists having experience in trauma surgery had been employed, the quality of treatment could be significantly upgraded (1, 6).

Nevertheless, diagnostic procedures in case of blunt abdominal trauma still arouse controversy. Many recent publications object to frequent use of DPL. On the other hand, it is acknowledged that the significance of computerized tomography of abdominal cavity in assigning patients to laparotomy is growing (7). Smith et al. report (4) that on the basis of research conducted at Trauma Department at Liverpool Hospital in Australia, the number of diagnostic punctures into the peritoneal cavity in 2000-2003 decreased 46% compared to the first research period – 1996-1999. However, in many cases, parenchymal organ injuries or intestinal wall damage can lead to death in case of not recognized or late diagnosed (6, 8). Approximately 30% patients are still assigned to receive laparotomy (4). At the same time, it is estimated that the percentage of non-therapeutic laparotomy lies between 5-14% in different health centers (3, 4, 6, 8-11). Alternative treatment for these patients is use of emergency diagnostic laparoscopy. Many European and American trauma centers found that use of laparoscopy in selected patient with blunt abdominal trauma is safe, useful, minimizes non-therapeutic laparotomies, and allows for minimal invasive management of selected intra-abdominal injuries (12, 13).

Our rare case of cyst rupture of the ovary resulting from a multiorgan injury in woman provokes discussion on purpose and therapeutic indication of diagnostic peritoneal lavage. It seems that suspicion of intestinal lesion may determine whether diagnostic puncture into the abdominal cavity should be performed (4). This kind of injury is usually not accompanied by heavy haemorrhage which could be detected using ultrasonography or computer tomography scans of the abdomen, even in the emergency situation when traditional thick slides (5-8 mm) and long table increment in the helicar CT equipment are used (1, 5). However, diagnostic puncture into the abdomen enables to obtain blood or faecal secretion through an implanted catheter, consequently the patient can be scheduled for laparotomy (5). Owing to the diagnostic puncture into the peritoneal cavity the number of the non-therapeutic laparotomy can be reduced in patients whose CT scans showed fluid in peritoneal cavity or no parenchymatous organ damage (2, 4). It is advisable to assign patients to this kind of examination if they sustained pelvic, thoracic, lum-
On the basis of clinical case and data from recent publications, it appears that diagnostic peritoneal lavage along with imaging methods and diagnostic laparoscopy is the investigation of choice for a significant group of patients with blunt abdominal trauma.

REFERENCES


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