Ruptured corpus luteum cyst of the ovary following non-perforated acute appendicitis. Three case reports

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Summary

Three cases of ruptured corpus luteum cysts of the ovary secondary to non-perforated acute appendicitis are reported.

Key words: Corpus luteum hemorrhage; Ovarian hemorrhage; Appendicitis.

Introduction

Ruptured corpus luteum cyst (RCLC, ovarian hemorrhage) is one of major causes for acute lower abdominal pain in young women and is occasionally associated with lethal massive intraabdominal hemorrhage [1-5]. It is often difficult to diagnose RCLC, correctly distinguishing it from ectopic pregnancy, acute appendicitis, pelvic inflammatory diseases, and other diseases with acute lower abdominal pain. Patients with RCLC of the right ovary are sometimes subjected to laparotomy following a misdiagnosis of acute appendicitis. In this paper rare cases of RCLC secondary to acute appendicitis are reported.

Case Report

We present 3 patients with RCLC secondary to non-perforated acute appendicitis out of 9 patients with atypical acute appendicitis who were referred to us by surgeons between 1994 and 1997 (Table 1). The 3 patients first complained of acute right lower abdominal pain, then of left or mid-lower abdominal pain. Transabdominal ultrasonographic examinations revealed increased fluid collection in the cul-de-sac and pericecal region of all 3 patients. Aseptic intraabdominal hemorrhage was confirmed by culdocentesis in the 3 patients. From ultrasonograms and peritoneal fluid findings, patients 1 and 2 were diagnosed with RCLC of the left ovary following non-perforated acute appendicitis, and patient 3 with right ovarian RCLC complicated by non-perforated acute appendicitis. The 3 patients were treated by surgical removal of both the inflamed appendix and the ruptured ovarian cyst. Pathological examinations of the excised tissues confirmed the preoperative ultrasound diagnosis.

Discussion

The etiology of idiopathic ovarian hemorrhage, which occurs without injury or blood coagulopathy, is still unknown. We have seen RCLC sometimes complicated with ectopic pregnancy or aborting intrauterine pre-

Table 1. — *Three patients with ruptured corpus luteum hemorrhage following non-perforative acute appendicitis*

Patient	Age (y)	Culdocentesis and findings	Ultrasonographic findings	Ultrasound diagnosis
Patient 1	24	Positive Bloody No leukocytosis	Pericecal fluid collection Retrouterine blood collection Collapsed corpus luteum cyst of the left ovary	Acute appendicitis Corpus luteum hemorrhage of the left ovary
Patient 2	18	Positive Leukocytosis Slightly bloody Aseptic	Retrouterine purulent fluid collection (100-180 ml, estimated) Collapsed corpus luteum cyst of the left ovary	Acute appendicitis Corpus luteum hemorrhage of the left ovary
Patient 3	22	Positive Bloody Leukocytosis Aseptic	Pericecal abscess and fluid collection Retrouterine blood collection (Ruptured ovary was not identified)	Recurrent appendicitis Pericecal abscess Suspected right ovarian hemorrhage

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gnancy but not with normal intrauterine pregnancy [1-5]. These facts indicate that a certain acute endocrine disorder may be a cause or trigger of RCLC. In patients 1 and 2 RCLC of the left ovary occurred within 24 hours following acute appendicitis. This suggests that some inflammatory bioactive substances stimulated by a nonperforated appendicitis may lead to a certain endocrine reaction causing rupture of the corpus luteum cyst.

RCLC has been generally classified into three types: exogenous RCLC, mainly caused by injury; endogenous RCLC, complicated by any blood coagulopathy; and idiopathic RCLC of unknown causes, although no etiologic classification of ovarian hemorrhage has been established internationally [6]. RCLC following systemic inflammation such as acute appendicitis may be classified as a novel clinical entity that is etiologically different from idiopathic RCLC.

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