

## TORSION OF BENIGN SEROUS CYSTADENOMA OF THE FALLOPIAN TUBE: A CHALLENGE IN DIFFERENTIAL DIAGNOSIS OF ABDOMINAL PAIN IN WOMEN DURING THEIR CHILDBEARING YEARS — A CASE REPORT

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The differential diagnosis of abdominal pain in women during their child-bearing years is still a challenge. Abdominal pain caused by isolated tubal torsion is extremely rare. In the report, we presented a case of isolated tubal torsion caused by benign serous cystadenoma. A 28-year-old married woman (G0) having lower abdominal pain and nausea was referred to our Emergency Room with suspicion of ovarian mass. Physical examination, transvaginal ultrasound and computed tomography showed a 4-cm right adnexal cystic mass. Other laboratory data were all within normal limits. She was managed by laparoscopic examination due to a lack of improvement in her clinical symptoms and inclusive diagnosis after 48-hours' conservative treatment. Laparoscopy showed isolated torsion of right fallopian tube but the right ovary was normal without torsion. Initially, detorsion was performed but necrotic change of the fallopian tube persisted because of permanent darkened color tube without blood flow redistribution, so salpingectomy was performed 30 minutes later. Final pathology showed benign serous cystadenoma of fallopian tube. The present case is the first case of benign serous cystadenoma with resultant necrotic tubal torsion. We reported this case to emphasize the possible value of early performance of laparoscopy in aiding an accurate diagnosis.

**Key words:** isolated tubal torsion, primary fallopian tube serous cystadenoma

(*Kaohsiung J Med Sci* 17:270 – 273, 2001)

Differential diagnosis of abdominal pain is still a challenge, especially in women during their child-bearing years. The main causes include inflammatory process, abnormal pregnancy and pelvic organ disease[1]. The vast majority of causes of abdominal pain could be easily available using detailed history-taking, careful physical examination, laboratory examination and imaging study[2,3]. However, dif-

ferential diagnosis among these diseases is occasionally very difficult, especially when abdominal pain results from rare diseases. Isolated tubal torsion is extremely rare and previous sterilization is a major contributing factor. In the following report, we presented a case of isolated tubal torsion caused by benign serous cystadenoma.

### CASE PRESENTATION

A 28-year-old married woman (G0) having three-day lower abdominal pain and nausea was referred to our Emergency Room (ER) with suspicion of ovarian mass. Other past and personal histories were unremarkable. Her last menstrual date was sixteen days before without unusual presentation. Physical examinations showed a swelling mass lo-

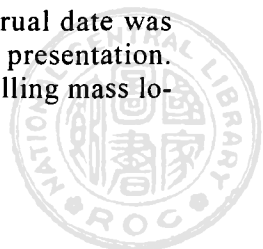
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Received: February 1, 2001

Accepted: April 26, 2001

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cated on the right adnexal area with mild tenderness but without rebound pain. Laboratory data including complete blood counts, electrolytes, and amylase were all within normal limits. Urine hCG test showed negative. Transvaginal ultrasound showed an echo-free cyst on the right adnexal area. The differential diagnosis of symptomatic adnexal cyst in this patient included corpus luteum hemorrhage, ovulation pain, tubo-ovarian abscess, and appendicitis accompanied by other underlying medical or gastro-intestinal diseases. However, the diagnosis of possible adnexal torsion was initially ignored. Based on findings of physical examination, history taking, and laboratory data, on-duty doctors in ER thought there was a low possibility of infectious processes such as tubo-ovarian abscess and appendicitis although such infectious conditions might have been masked by inadequate treatment before admission. The patient was initially treated conservatively including starvation, intravenous fluid replacement, empirical antibiotics of 500mg cefazolin and 80mg gentamycin, and intermittent narcotic pain control. In order to exclude non-genital organ disorders, computed tomography (CT) was performed 24 hours later without any clinical improvement after the conservative treatment. CT showed a 4-cm right adnexal cystic mass without adding any new information. Finally, she was managed by laparoscopic examination due to a lack of improvement in her clinical symptoms and inclusive diagnosis after 48-hours' conservative treatment. Laparoscopy showed isolated torsion of right fallopian tube but the right ovary was normal without

torsion. Initially, detorsion was performed but necrotic change of the fallopian tube persisted because of permanent darkened color tube without blood flow redistribution, so salpingectomy was performed 30 minutes later. Final pathology showed benign serous cystadenoma of fallopian tube lined by single layer cuboidal cells (Fig. 1 & 2). The patient was discharged with cure the next day.

## DISCUSSION

The present case is interesting in several ways. There were no specific symptoms and signs in patients with isolated tubal torsion, whether or not it was accompanied by ovarian torsion. In this case, the possibility of adnexal torsion was neglected initially. This unnecessary delay resulted in destruction of affected organs. Although we strongly emphasize that these dangers seemed those created by the acts of omission[4,5], such events occur repeatedly in clinical practice. By contrast, spontaneous detorsion of the adnexal torsion can occur, although to date there have been no estimates of the "true" incidence of detorsion. It is too easy to overlook the possibility of adnexal torsion with the resultant eventual destruction of these organs[5]. Furthermore, ultrasound might fail to identify torsion of fallopian tube and/or ovary preoperatively[6]. Neither computed tomography nor magnetic resonance imaging was sensitive or specific in the diagnosis of adnexal torsion. In addition, there were no report about iso-

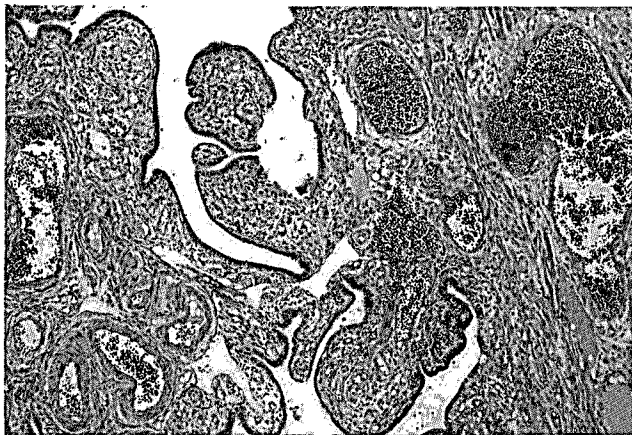


Fig. 1. Ciliated and cuboidal cell (serous cell) covering the epithelial layer of the fallopian tube presents a picture of serous cystadenoma. Congestion and hemorrhage is also noted (H & E, 10X)

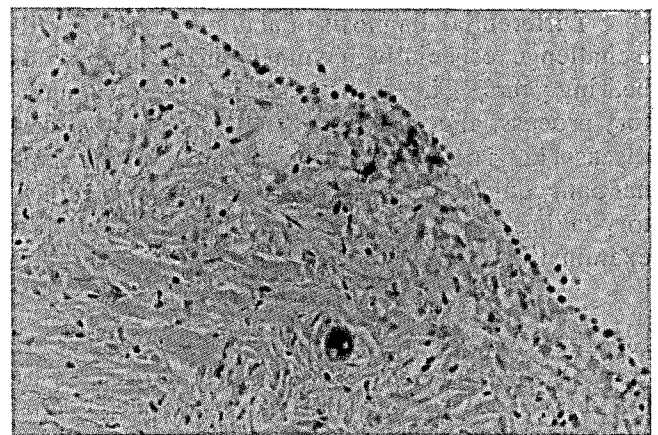


Fig. 2. The fallopian tube is lined by single layer cuboidal cells, which further confirmed its benign characteristic (H & E, 20X)

lated tubal torsion caused by benign serous cystadenoma of fallopian tube. Finally, laparoscopy is a good diagnostic tool for uncertain abdominal conditions and is a minimally invasive procedure[7] although the operation-related risk should be considered[8]. In fact, we had experience of using laparoscopy to manage a patient with isolated tubal torsion before [8]. We conclude that early application of laparoscopy is not only useful for accurate diagnosis of abdominal pain but that it can also possibly lead to an immediate and successful management in these patients.

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# 良性輸卵管腺瘤扭轉造成正值生育年齡 婦女急性腹痛：需要鑑別的少見診斷 —病例報告

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正值生育年齡婦女的急性腹痛，仍為一大挑戰，而腹痛由單獨的輸卵管扭轉引起更為少見。我們報告一個由良性輸卵管腺瘤造成扭轉的病例。這是一位二十八歲剛結婚的婦女，因為疑似卵巢腫瘤引起腹痛及想吐所以送到本院急診室來。經過詳細的身體，陰道超音波，腹部電腦斷層檢查，證實右邊有四公分的腫塊，但是實驗室的血液，尿液檢查均在正常範圍

內。經過四十八小時的留觀，病況並未改善。所以安排腹腔鏡從新審識這位婦女，發現單獨輸卵管扭轉。我們試著將此扭轉的輸卵管復位，但是壞死的組織仍舊，最後我們只好切除此側輸卵管。病理報告證實由良性輸卵管腺瘤扭轉造成壞死。我們報告此病例強調利用腹腔鏡輔助診斷的重要性。

(高雄醫誌17: 270 – 273, 2001)

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收文日期：90年2月1日 接受刊載：90年4月26日

索取抽印本處：王鵬惠醫師 台北榮民總醫院婦產部  
台北市北投區112石牌路二段201號

