Available online at www.sciencedirect.com

ScienceDirect

Taiwanese Journal of Obstetrics & Gynecology 52 (2013) 588–589

www.tjog-online.com

Research Letter

Primary fallopian tube carcinoma and ectopic pregnancy: A rare co-occurrence

Jin-Yi Tong [a], Wen-Chao Sun [a,*], Qiao-Yun Li [b], Yue-Yue Deng [a], Juan Li [a]

[a] Department of Gynecology, The First People's Hospital of Hangzhou, Nanjing Medical University, Hangzhou, China
[b] Department of Pathology, The First People's Hospital of Hangzhou, Nanjing Medical University, Hangzhou, China

Accepted 22 May 2013

Primary fallopian tube carcinoma is a rare gynecologic malignancy; conversely, tubal ectopic pregnancy is relatively common. Tubal carcinoma can be identified accidentally during surgery performed for ectopic pregnancy [1]. Surgery is not a routine procedure to screen for rare tubal carcinomas during ectopic pregnancy, although both medical conditions have well-established guidelines. Suitable diagnostic strategies are based on case studies and not on high-grade evidence. We present a case of primary fallopian tube carcinoma coinciding with an ectopic pregnancy in the same fallopian tube.

A 35-year-old woman presented with lower abdominal pain associated with 52 days of amenorrhea. Her medical history revealed one live birth and one spontaneous abortion in the first trimester. On examination, her vital signs were stable (pulse 100 beats/minute; blood pressure 113/77 mmHg). A physical examination revealed right lower quadrant tenderness without rebound. A bimanual examination was remarkable for a right adnexal mass with cervical tenderness. Transvaginal ultrasonography showed a complex right adnexal mass of $8.7 \times 6.6 \times 6.0$ cm^3 in size, with an anechoic area of fluid in the pelvic cavity. Her human chorionic gonadotropin level was 17,072.5 IU/L and hemoglobin was 70 g/L. Electrolyte (Na^+, K^+, and HCO^{3-}) and liver function tests (bilirubin and alanine and aspartate aminotransferases) were normal.

A provisional diagnosis of right tubal pregnancy was made and confirmed by subsequent laparoscopy. There was 1000 mL of blood and clots in the pelvic cavity. The ampullary segment of the right fallopian tube showed a dilated segment of $5 \times 3 \times 2$ cm^3 in size, with extrusion through the mucosa and active bleeding. The uterus, ovaries, and left tube appeared normal. A total right salpingectomy was performed to avoid a recurrent tubal pregnancy. The specimen was sent for pathologic examination and the final pathologic analysis confirmed the existence of a tubal pregnancy (Fig. 1A). A serous papillary carcinoma (well differentiated) was an incidental finding in the same fallopian tube (Fig. 1B and C). The tubal mucosa was involved and exhibited a papillary pattern. The tubal wall was not involved. As the patient declined to undergo a second operation and her husband supported her in this decision, we elected not to perform further surgery. The patient was discharged.

Primary fallopian tube carcinoma is an uncommon malignancy, accounting for approximately 1% of female genital cancers [2]. Primary fallopian tube carcinoma most frequently occurs in women between 50 years and 69 years of age, with a median age of 55 years [3]. Primary fallopian tube carcinoma, which occasionally occurs in women of reproductive age, coinciding with an ectopic pregnancy in the same fallopian tube is extremely rare. Few reports have described such co-occurrence [1]. The difference is that fallopian tube carcinoma was observed by laparotomy in the previous report, whereas it was demonstrated by diagnostic laparoscopy in the case described here.

Approximately 4% of primary fallopian tube carcinomas are diagnosed pre-operatively [3]. More often, primary fallopian tube carcinoma is first appreciated by a pathologist on histopathologic examination. In most cases, surgery is performed for suspicion of a benign or malignant ovarian tumor rather than tubal carcinoma, until pathology clarifies the correct diagnosis [4]. The case presented here suggests that the diagnosis of primary fallopian tube carcinoma may also be established when performing surgery for an ectopic pregnancy.

Laparoscopy is widely used by gynecologists and is regarded as the gold standard for the diagnosis of ectopic

* Corresponding author. Department of Gynecology, The First People's Hospital of Hangzhou, Nanjing Medical University, No. 261 Huansha Road, Hangzhou, Zhejiang 310006, China.
E-mail address: attendingsun@sina.com (W.-C. Sun).

http://dx.doi.org/10.1016/j.tjog.2013.10.025

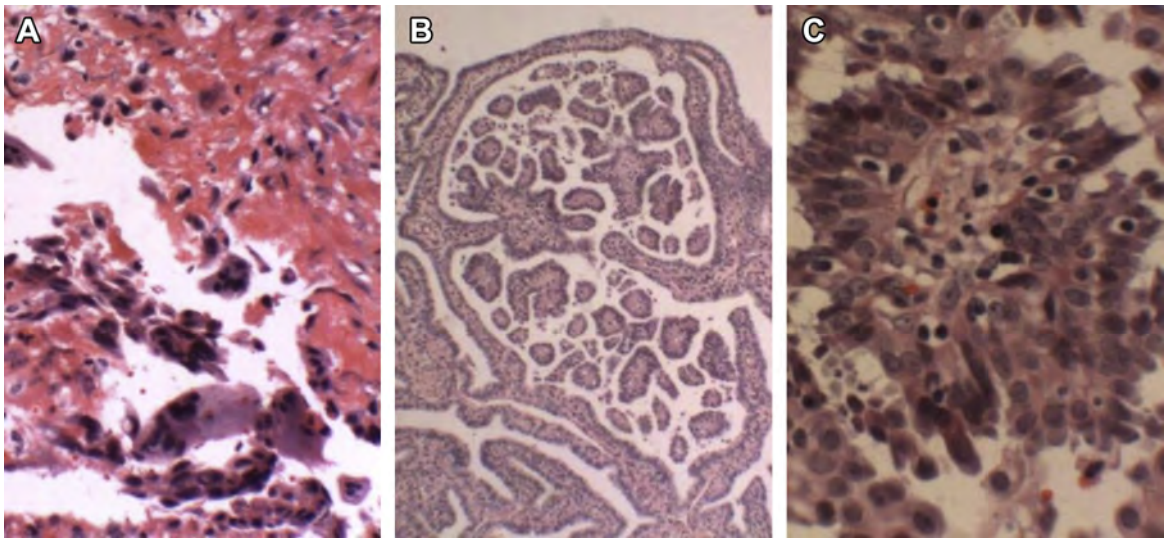

Fig. 1. Photomicrographs of the chorionic villi and fallopian tube. (A) Chorionic villi (upper right) in the ampullary segment of the right fallopian tube; hematoxylin and eosin (H&E) staining, original magnification 40×. (B) Malignant fallopian tube epithelium with hyperplasia and papillae formation; H&E, 20×. (C) Magnified view of the fallopian tube epithelium showing cellular crowding with hyperchromatic, large, irregular, and mitotically active nuclei; H&E, 200×.

pregnancy [5]. It is possible that surgeons will encounter tubal malignancies while performing laparoscopic surgery. Wenzl et al [6] reported that the frequency of unsuspected tubal carcinoma detected during laparoscopic surgery was one in 3687 cases (0.028%). Although unsuspected tubal carcinoma has a low probability of occurrence, a delay in waiting for the final pathologic result can lead to serious consequences. An adequate and thorough staging procedure via laparotomy should be performed as soon as possible to avoid survival influence [2,3]. Examination of an intraoperative frozen section, which is recommended when dealing with a suspicious adnexal mass, has not yet become a guideline for the surgical management of ectopic pregnancy because products of conception can be identified macroscopically with high accuracy. Because of the possible co-occurrence of tubal ectopic pregnancy and tubal malignancy, a prudent recommendation would be to examine intraoperative frozen sections during laparoscopic surgery for ectopic pregnancy. A single case is not sufficient evidence to address this issue and further well-designed studies are needed. However, it is unlikely that such studies will be conducted owing to the rarity of primary fallopian tube carcinoma.

Acknowledgments

We thank Dr Song Xu of Nanjing Medical University for searching for and finding the full text of literature dating back to 1978. We also thank Dr. Ru-Jun Xu of the Department of Pathology at The First People's Hospital of Hangzhou for taking photomicrographs of the histological sections.

References

[1] Carapeto R, Nogales Jr FF, Matilla A. Ectopic pregnancy coexisting with a primary carcinoma of the fallopian tube: a case report. Int J Gynaecol Obstet 1978;16:263–4.
[2] Pectasides D, Pectasides E, Economopoulos T. Fallopian tube carcinoma: a review. Oncologist 2006;11:902–12.
[3] Riska A, Leminen A. Updating on primary fallopian tube carcinoma. Acta Obstet Gynecol Scand 2007;86:1419–26.
[4] Huber-Buchholz MM, Buchholz NP, Staehelin J. Analysis of 23 cases of primary carcinoma of the fallopian tube over 50 years. J Obstet Gynaecol Res 1996;22:193–9.
[5] Ehrenberg-Buchner S, Sandadi S, Moawad NS, Pinkerton JS, Hurd WW. Ectopic pregnancy: role of laparoscopic treatment. Clin Obstet Gynecol 2009;52:372–9.
[6] Wenzl R, Lehner R, Drager M, Jirecek S, Gamper C, Sevelda P. Unsuspected primary tubal carcinoma during operative laparoscopy. Gynecol Oncol 1998;68:240–3.