Big Ovarian Tumor Mimic Malignancy Differential Diagnosis With ROMA: A Case Report
以ROMA協助鑑別診斷卵巢瘤: 個案報告

中國醫藥大學附設醫院 婦產部 袁嘉駿 葉聯舜*

Introduction

For premenopausal women, a very elevated CA125 level (eg, .200 U/L) should be considered malignancy*1. With other clinical pictures like malignancy, accurate pre-operative diagnosis seems more difficult to make. An addition of HE4 to CA125 improved the sensitivity and specificity over that of CA125 alone for the risk assessment of a malignancy in patients with a pelvic mass.

Case Report

A 40-year-old female, gravida 0, with uterine myoma and ovarian cyst since 32 y/o presented in our hospital initially because of acute severe abdominal pain. Ultrasonography showed left pelvic mass 7x6/7x7cm(multilocular, RI: 0.31/0.8) and right abdominal mass 14x10cm(unilocular, no flow found.), both with low-level echogenicity. Both CA-125 (2408.3 U/mL) and CA-199 (1295.9 U/mL) was extremely high. Abdomen-pelvic CT revealed a 13.8cm right ovarian cystic lesion with irregular contour hematoma inside and suspected enhanced soft tissue component, and 8.4cm left ovarian cystic lesion with several septum. ROMA(the risk of ovarian malignancy algorithm) was 9.2% (HE4: 48.3 pml/L & CA-125: 2037.2 U/mL). After well informed, we performed bilateral ovarian cystectomy with small incision initially and carried on procedure after cystic content was aspirated. The frozen section and final pathology both supported bilateral endometriotic cyst.

Discussion

There are several methods for diagnosis of ovarian cancer. Ultrasonography which including lots of parameters is a tool we most used. Color Doppler was also use for check flow in the cyst. Besides, image study like CT and MRI can also provide information for diagnosis. Serum markers are often used, too. As above mentioned, this patient with very high CA-125 should consider malignancy. Additionally, when these modality applied to this case, all showed that it tends to be malignancy. However, another marker discussed recently is HE4(human epididymis protein 4). Combine with CA-125, we can obtain ROMA value. The ROMA value was 9.2% with this patient and supported that it's probable a benign lesion.

Conclusion

ROMA is a good diagnostic tool for differential diagnosis for an ovarian tumor mimics malignancy. With HE4(human epididymis protein 4) and CA-125, we can use following equations to obtain ROMA value(where ln is the natural logarithm):

*Premenopause PI = – 12.0 + 2.38*ln(HE4) + 0.0626*ln(CA125)*
*Postmenopause PI = – 8.09 + 1.04*ln(HE4) + 0.732*ln(CA125)*
*ROMA (%) = exp(PI)/[1 – exp(PI)]*100*

Because of it's high specificity compared with CA125 only, it can provide much accurate pre-operative diagnosis. And that let onco-gynecologist take proper procedure for each patient with big ovarian tumor which is hard to distinguish from malignancy and to achieve less harm to patient.

*1
ACOG Committee Opinion. The role of the generalist obstetrician-gynecologist in the early detection of ovar- ian cancer. Obstet Gynecol 2002;100:1413–6.