International Journal of Current Advanced Research
ISSN: O: 2319-6475, ISSN: P: 2319-6505, Impact Factor: SJIF: 5.995
Available Online at www.journalijcar.org
Volume 6; Issue 12; December 2017; Page No. 7880-7882
DOI: http://dx.doi.org/10.24327/ijcar.2017.7882.1246

Research Article

COMPLEX ENDOPELVIC MASS SIMULATING A GYNECOLOGICAL TUMOR

Duati R., Cotti E., Pellegrino F., Tralli G and *Campioni P

Department of Morphology, Surgery and Experimental Medicine, University of Ferrara, Ferrara, Italy

A R T I C L E I N F O

Article History:
Received 10th September, 2017
Received in revised form 25th October, 2017
Accepted 23rd November, 2017
Published online 28th December, 2017

Key words:

Endopelvic mass, gynecological tumor, MRI, ultrasound

A B S T R A C T

A 47 years old woman, with previously hysterectomy for uterine fibromatosis (5 years ago), arrived to our hospital to perform a gynecological exam with transvaginal ultrasound, which documented a inhomogeneus neoformation (42 x 30,5 mm) with poorly vascolarized hypo-anecogenous contents at the level of the vaginal fornix. Therefore, a Magnetic Resonance of the pelvis is required for a better tissutal characterization of the formation.
The endopelvic masses in women are often a diagnostic problem. In this case report we show an unusual mass and try to define a diagnostic iter for the characterization of the endopelvic masses. Furthermore we show the importance of a correct preoperative management with ultrasound and MRI.

INTRODUCTION

A 47 years old woman, with a previously hysterectomy for uterine fibromatosis (5 years ago), arrives to our hospital to perform an ultrasound exam, which documents a inhomogeneus neoformation (42 x 30,5 mm) with poorly vascolarized hypo-anechoic contents in the vaginal fornix. Therefore, a pelvis MRI is performed for a better characterization of neoformation.

The MRI shows a roundish lesion with complex structure, with maximum axial diameter of 55 mm and cranium-caudal extension of 45 mm in the vaginal fornix. It presents a fluid content with multiple hypointense endoluminal coarse tissue extensions in the T2w images, the bigger tissue extension (33 mm of diameter) is located on the right-anterior side of the formation. The fluid component of the formation is in the space where the uterus and the fallopian tubes were previously. The left ovary is correctly located under the fork between the internal and external iliac artery, while the right ovary is hardly recognizable, but after a careful assessment it looks to be contained inside the fluid component of the formation. As the findings look ambiguous, the woman is subjected to surgery.

DISCUSSION

Ultrasound (US) is the first-line imaging study of women with suspected adnexal masses. Combined with clinical assessment and the serum level of CA-125, US is used to place adnexal masses into one of three categories to define further investigation and management:

- A benign mass
- A malignant mass with or without signs of peritoneal metastasis
- An indeterminate mass [1].

It's very important to define if an endopelvic mass is benign or malign because the management change drastically, and the psychological impact for the woman is very strong. Women with malignant adnexal masses require radical surgery by a specialist surgeon with expertise in gynaecological oncology [2, 3], whilst benign masses may be either managed conservatively or undergo resection under the care of a general gynaecologist. Magnetic Resonance is very useful to detect the characteristics of adnexal masses (solid, hemorrhagic, fatty and fibrous content), so often can reduce the surgeries or significantly contribute to preoperative planning for an indeterminate mass at the ultrasound. On MRI, the sensitivity for the ovarian masses is 97.7% and specificity is 73.1%. The diagnostic accuracy is 92.1%. The masses with uterine origin have a sensitivity of 73.1% and diagnostic accuracy 99.1% [4]. So it's important to do an algorithmic approach to the pelvic masses:

1. T1 'bright' masses containing T1 high signal intensity
2. T2 solid masses either with predominant signal similar to skeletal muscle, T2 'dark' solid masses, or higher than muscle, T2 'intermediate' or mixed signal solid masses
3. Complex cystic or cystic-solid masses

Back to our case, we found a complex cystic-like mass with a tissue extension inside the fluid in a post-hysterectomy woman. This tissue extension appears iso/hypointense in T1w sequences and hypointense in T2w sequences.

Corresponding author:* **Campioni P
Department of Morphology, Surgery and Experimental Medicine, University of Ferrara, Ferrara, Italy

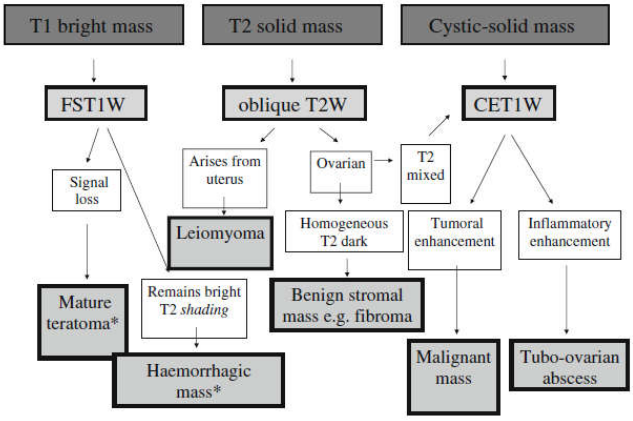

Fig. 1 from ESUR decision tree for MR imaging of the US indeterminate adnexal mass.

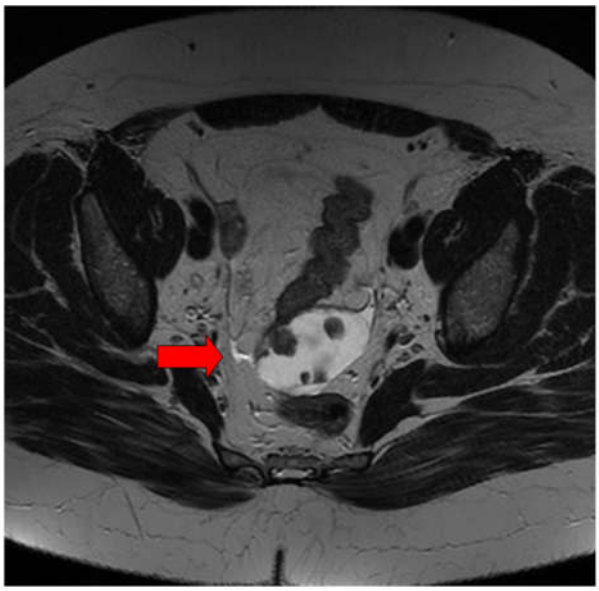

Fig. 2 Axial T2w shows how the fluid takes the form of the uterus and the tubes previously removed

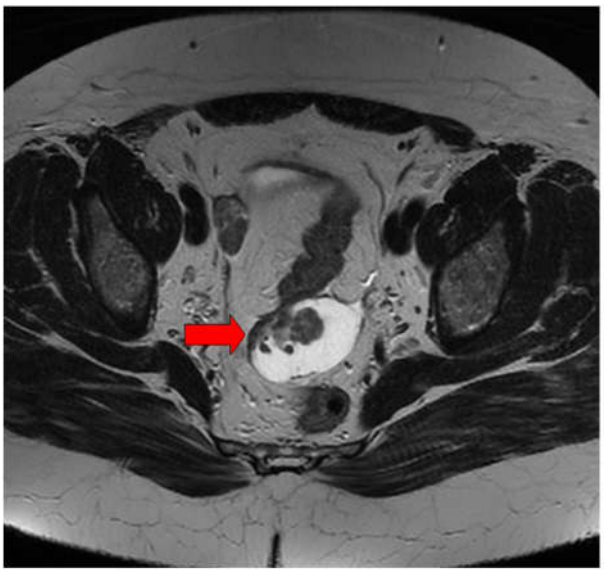

Fig. 3 Axial T2w shows the solid extension of tissue (arrow) inside the fluid

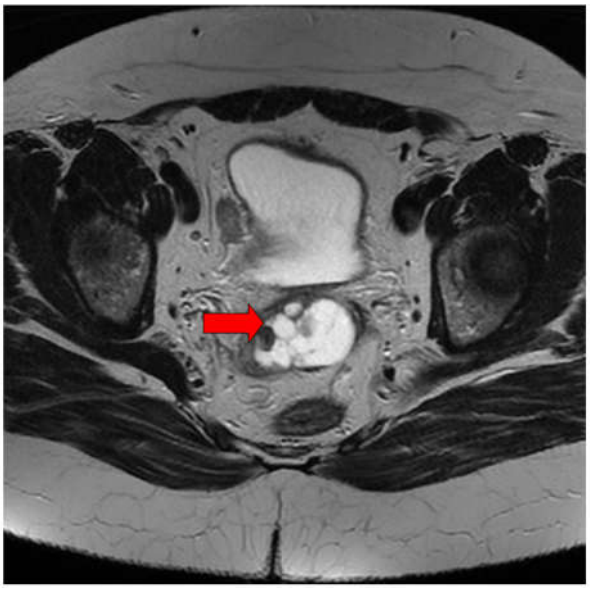

Fig 4 Axial T2w shows the right ovary with some follicles (arrow) collapsed inside the fluid

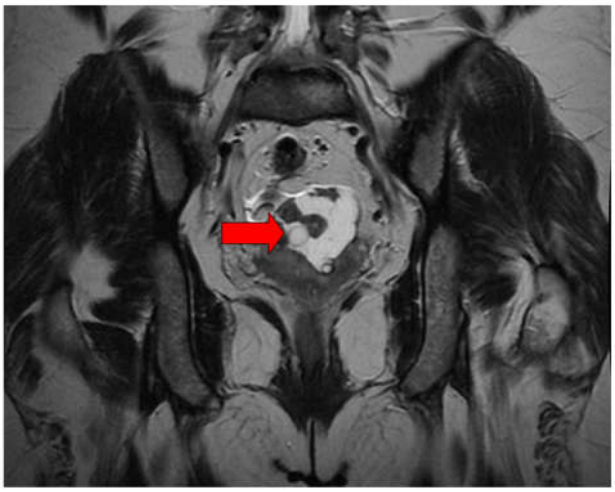

Fig. 5 Coronal T2w shows the right ovary with some follicles (arrow) collapsed inside the fluid

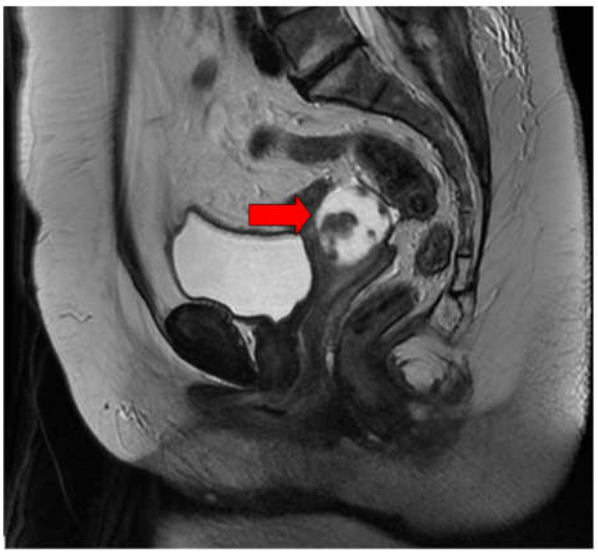

Fig. 6 Sagital T2w shows the fluid formation with inside the tissue extension (arrow)

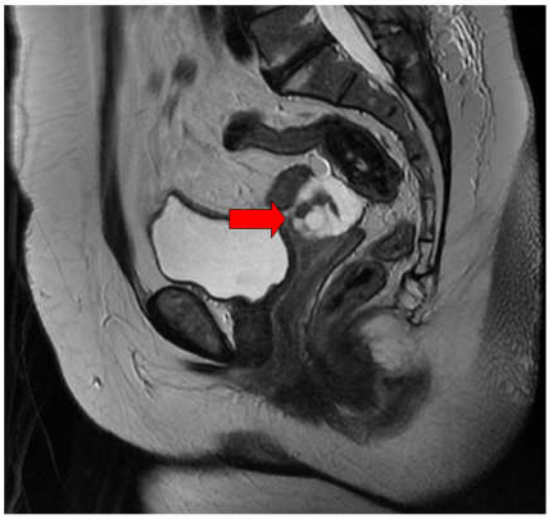

Fig. 7 Sagital T2w shows the right ovary with some follicles (arrow) collapsed inside the fluid

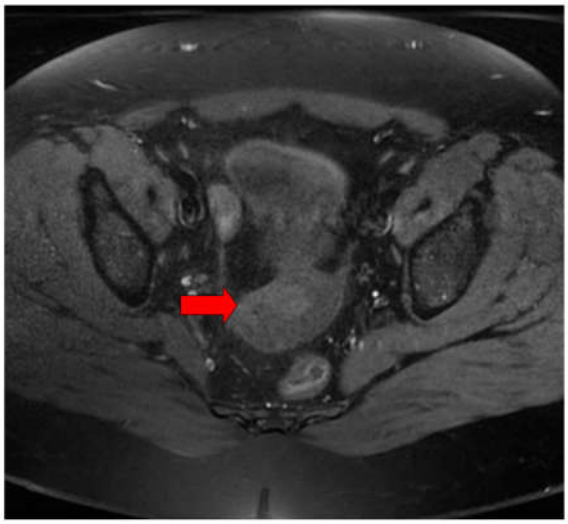

Fig. 8 Axial T1w with fat saturation shows the isointensity of the tissue extension (arrow) inside the fluid

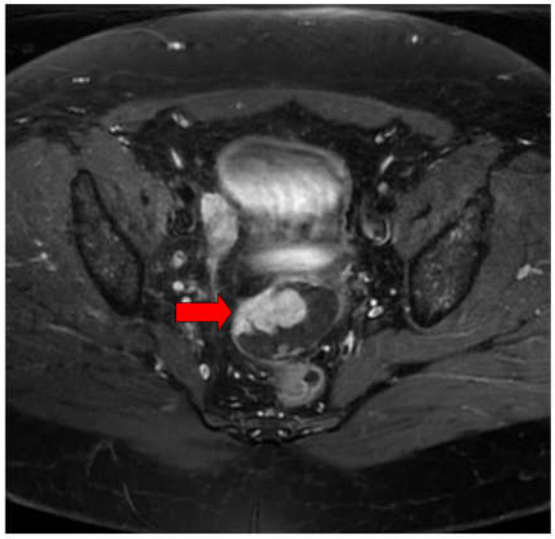

Fig 9 AX T1w with fat saturation and contrast media shows the contrast enhancement of the tissue extension (arrow)

There is no bright mass in the T1w sequences, so we can exclude a mature teratoma or a hemorrhagic mass. The formation is similar to a cystic-solid mass, but the shape that the fluid assumes is not roundish, it takes instead the shape of the uterus and the tubes previously removed, so we can exclude a malignant mass. Furthermore, we also can exclude leiomyoma because uterus has been removed and the ovarian benign stromal mass because we can see that the ovaries don't have any alterations.

So, having excluded the mature teratoma, the haemorragic mass, the leiomyoma, the benign stromal mass and the malignant mass, the only option left in our diagnostic iter is the flogosis. In fact, in T1w with fat saturation and contrast enhancement, the tissue extension becomes bright and the histologic report talks about a salpingitis of a portion of the Fallopian tube left from the previous surgery.

CONCLUSION

Endopelvic masses are very common in women. Usually these masses are benign, so results very important the pre-surgery management. The first line for the management is the ultrasound study but often this is not adequate for the characterization of the masses. In these cases, the MRI with his high sensitivity and specificity, is very useful and can avoid unnecessary surgery.

References

1. Spencer JA, *et al*., (2010). ESUR guidelines for MR imaging of the sonographically indeterminate adnexal mass: an algorithmic approach. *Eur Radiology*; DOI 10.1007/s00330-009-1584-2
2. Engelen MJ, Kos HE, Willemse PH *et al*., (2006). Surgery by consultant gynaecologic oncologists improves serviva in patients with ovarian carcinoma. *Cancer* 106:589-598
3. Earle CC, Schrag D, Neville BA *et al*., (2006). Effect of surgeon specialty on processes of care and outcomes for ovarian cancer patients. *J Natl Cancer Inst* 98:172-180
4. Amit Nandan Dhar Dwivedi, Shivi Jain, Ram Chandra Shukla, Madhu Jain, Arvind Srivastava, Ashish Verma (2012). MRI is a state of art imaging modality in characterization of indeterminate adnexal masses. *J. Biomedical Science and Engineering*, 2013, 6, 309-313 http://dx.doi.org/10.4236/jbise.2013.63A039

****