

Laparoscopic views of Endometriosis

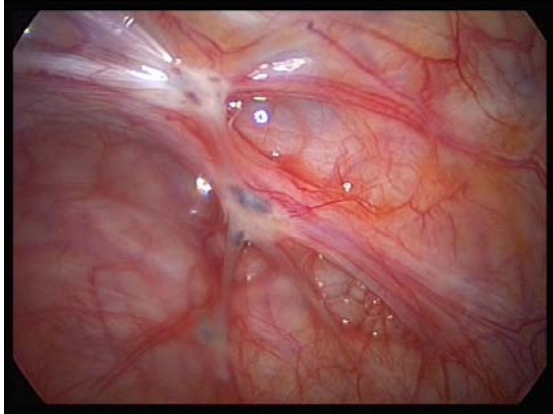
Endometriosis can be a cruel and a devastating disease, causing chronic pain, menstrual disorders and infertility in millions of women. For this reason, it is essential a correct diagnosis is made early so that appropriate treatment can be instituted. For the moment, an absolutely certain diagnosis of pelvic endometriosis can only be made by visualizing the typical and atypical lesions via laparoscopy. At laparoscopy, the disease should be staged and a detailed note of the extent, type and site of the lesions made. The opportunity also presents for a biopsy to confirm the disease histologically, and concomitant laparoscopic surgical treatment can be taken if appropriate.

The variable morphology of endometriotic implants has been described in the revised American Society of Reproductive Medicine (ASRM) Classification of Endometriosis¹. As can be seen in the table below, the visual appearance of pelvic endometriosis is characterized by extreme pleiomorphism. "Classical lesions" (considered hallmarks of the disease) resemble powder burns with scarring of the peritoneum around the implants (puckered bluish-black lesions). The subtle appearances of endometriosis could be red lesions, which could be red flame-like lesions or glandular excrescences, white opacification of the peritoneum, yellow-brown peritoneal patches and circular peritoneal defects of the pelvic peritoneum, uterosacral ligaments or broad ligaments. Ovarian endometriosis could present as superficial implants on the ovary with similar features to the above as well as subovarian adhesions and cystic lesions (endometriomas).

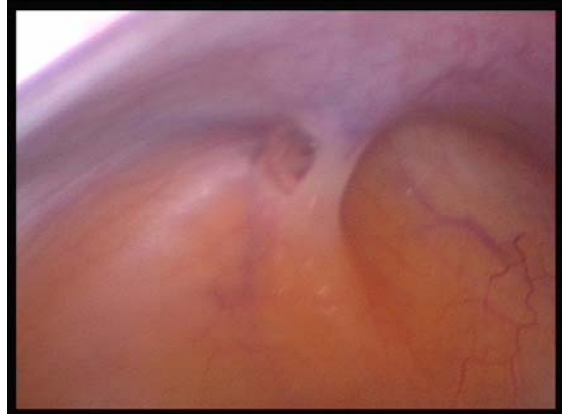
If no evidence of endometriosis is identified, a peritoneal biopsy to rule out microscopic disease should be performed. However, histologic confirmation after laparoscopic diagnosis varies considerably in different studies².

Table. Common laparoscopic appearances of endometriotic lesions.

| Peritoneal Lesions | Ovarian Lesions |
|-----------------------------|--------------------------------|
| Red flame lesions | Superficial implants |
| Red glandular excrescences | Subovarian adhesions |
| Circular Peritoneal defects | Cystic lesions (endometriomas) |
| Powder-burn lesions | |
| White scars | |
| Yellow lesions | |
| Brown lesions | |
| Clear lesions | |



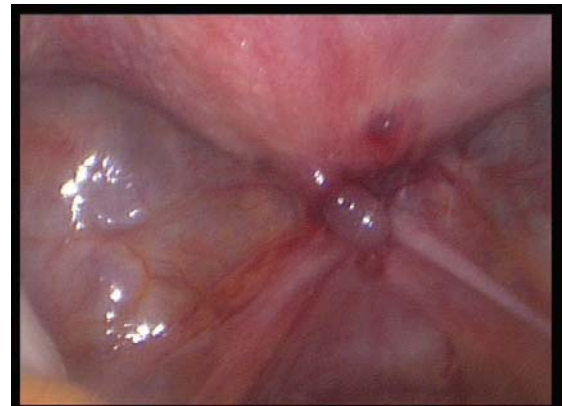
Picture 1. Powder-burn or gun-powder lesions have been described as "classical". This picture shows a combination of white scar, powder-burn and a peritoneal window.



Picture 2. A peritoneal window. Circular defect seen on the pelvic peritoneum.



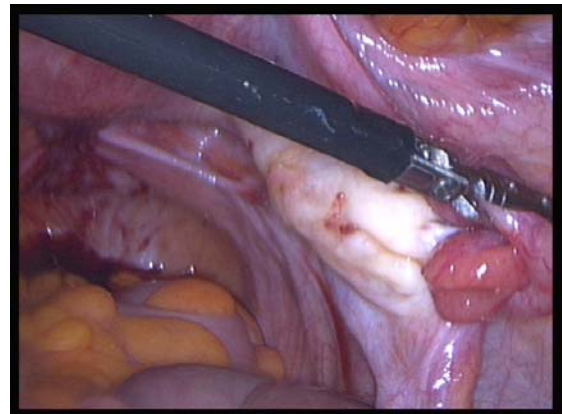
Picture 3. Red lesions – a flame-shaped one below a glandular excrescence. Could this be an early endometrioma?



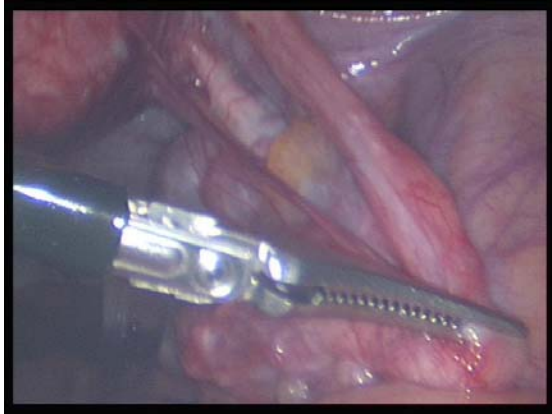
Picture 4. Clear Lesion. Biopsy shows a dilated vesicle with stroma and vascularization.



Picture 5. Endometrioma. A small cyst arising from the left ovary. The left tube is adherent to the ovary and pelvic wall with some adhesions to the uterus. A posterior uterine myoma is also noted.



Picture 6. A superficial right ovarian implant. These implants can have similar features as those elsewhere on the peritoneum.



Picture 7. Ovarian adhesions. The right ovary is almost totally buried in these adhesions which were initially thought to be due to infection but showed endometrial-like stroma and glands on histology.

References

1. American Society for Reproductive Medicine. Revised American Society for Reproductive Medicine classification of endometriosis: 1966. *Fertil Steril* 1997;67:817
2. Marchino GL, Genarelli G, Enria R *et al.* Diagnosis of pelvic endometriosis with use of macroscopic versus histologic findings. *Fertil Steril* 2005;84:12-15.