World Journal of Pharmaceutical and Life Sciences
WJPLS
www.wjpls.org
SJIF Impact Factor: 5.088

# ENDOMETRIOSIS ON CESAREAN SCAR

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**Article Received on 20/06/2018** **Article Revised on 10/07/2018** **Article Accepted on 02/08/2018**

## ABSTRACT

Parietal endometriosis is a rare disease. It can occur on all scars, most often during surgical procedures with hysterotomy. It affects 0.03 to 0.8% of caesarean section scars. The local graft of endometrial cells after opening the musculo-aponeurotic spaces is the most likely pathophysiological mechanism to explain endometriosis on Caesarean section scar. The diagnosis was strongly evoked by clinical examination and confirmed by pathological examination. The surgical treatment must be sufficiently wide to prevent recurrence. We report a new case in a 30-year-old woman who presented a painful mass on a Caesarean section scar that was performed 3 years ago.

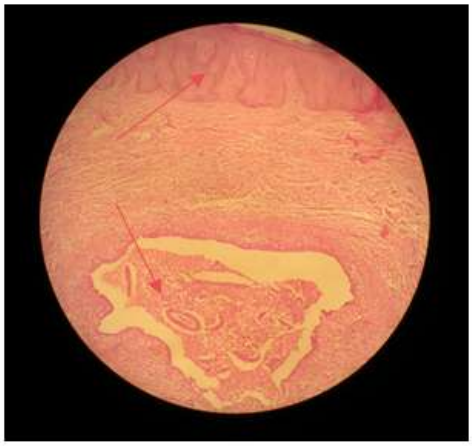
## INTRODUCTION

Endometriosis affects 8-15% of women with genital activity,[1] defined as the ectopic implantation of endometrial tissue outside the uterine cavity. This pathology is also found on abdominopelvic scars: episiotomies, uterine surgery scars, caesarean scars or a laparoscopic trocar orifice. Its incidence after caesarean section varies from 0.03 to 0.4 %.[2] The diagnosis is relatively easy in women aged 20-40 years with a catamenial symptomatology. On the other hand, in menopausal women, this diagnosis is exceptional.[3] We report a case of endometriosis on caesarean section scar in a young woman of 30 years. We would like to discuss the clinical characteristics of the patients, the treatment and the evolution of these lesions from a review of the literature.

## OBSERVATION

His is a 30-year-old woman who had a Caesarean section 3 years ago, consulted for cyclic pelvic pain and a nodule appeared on the right end of the caesarean's scar. These pains have evolved for 1.5 years and have intensified in recent weeks. The palpation of the objective abdomen a painful nodule, just on the caesarean scar, of hard consistency, 4 cm in diameter, fixed in relation to the deep and superficial planes. The rest of the examination is normal. The parietal ultrasound showed a parietal image above the scar of Pfannenstiel, hypoechogenic, homogeneous, ovoid, well limited and 33.2 × 24.2 mm.

A pelvic MRI confirmed the presence of a parietal nodule, on the scar of the caesarean section of 3.5 cm of major axis. The large surgical excision en bloc carrying the skin and the nodule in toto and part of the aponeurosis. The operative sequences are simple. The histological analysis confirms the diagnosis of endometriosis showing dilated glands filled with macrophage debris, coated with a cylindrocellular epithelium, associated with a cytogenic stroma (FIG).



**General view at low magnification:** foci consisting of a cytogenic stroma surrounding simple glandular structures lined with an endometrial-like cylindrocellular epithelium associated with the cutaneous epithelium.

## DISCUSSION

Endometriosis is defined as the implantation of functional endometrial tissue outside the uterine cavity. Parietal endometriosis, for example, involves incisional incisions (consecutive to gynecological and obstetric surgery), largely the majority, and spontaneous endometriomas. It is estimated that parietal endometriosis complicates between 0.03 and 0.8% of caesarean sections.[4] Indeed, a history of caesarean section was found in 44.5% of cases in the series of

Steck and Helwig,[5] Daye and al. Report that it is a complication of scars type Pfannenstiel.[6]

Among the many advanced theories that attempt to explain the ectopic development of endometrial tissue outside the uterine cavity, three have been of significant value in recent epidemiological studies since the initial publication of Sampson.

The first theory is that of transplantation; It is the implantation of the ectopic endometrial cells in the peritoneal cavity after a reflux of the menstrual blood by the tubes. This theory was described in 1892 and first proposed in 1927 by Sampson. At the time of menstruation, in a retrograde flow, fragments of the endometrium migrate into the peritoneal cavity via the tubes and attach to the peritoneum. The development of an aggression reaction and a local vascularization forms an ectopic tissue causing an inflammatory reaction which the peritoneum is incapable of eliminating.

The second theory, the oldest, is that of coelomic metaplasia. It was proposed by Waldeyer in 1870 and developed by Meyer in 1919. According to this theory, cells in the ovarian germinal epithelium and in the serosal peritoneal leaflet undergo endometriosal metaplasia under the effect of repeated irritation by Infectious, inflammatory or hormonal factors. In fact, the exact stimulus that triggers this endometrial metaplasia is still unknown. This theory would explain the development of endometriosis in women without uterus in the case of Turner syndrome or the rare cases of endometriosis in men under treatment with estrogens.

According to the third theory called metastatic, the dissemination of endometrial cells, their implantation and the ectopic development of the extra-uterine endometrial tissue throughout the body is done by lymphatic, or hematic or both.[7]

For the post-surgical or scar lesions, the hypothesis of a cellular graft in situ during the surgical opening of the musculo-aponeurotic spaces seems likely. The high potential for development of endometrial cells in epithelialized tissue has been shown, particularly in a model of experimental endometriosis obtained by invagination of the endometrium in a caesarean section scar.[8]The clinical picture is often suggestive. Endometriosis of the abdominal wall and especially cicatricial affects women in genital activity between 20 and 40 years.[9]

Classically the lesion is described as a mass appearing in front of a scar that increases in volume and becomes painful cyclically, in concomitance with the rules. The cyclical nature of pain is an important element of guidance, but it is far from essential to evoke the diagnosis. Finally, when the lesion is very superficial, it is possible to observe cyclically a change in the color of the lesion which becomes bluish and can even be fistulating to the skin in the form of a bloody discharge.[10] The ultrasound aspect of endometrioma differs little at the parietal and pelvic level: a rounded, unilocular image with a smooth, regular wall, thick and hypoechoic with a uniform distribution. The vascularization of the lesion studied in Doppler varies during the menstrual cycle.[11] Magnetic resonance imaging (MRI) is more informative: T1 hypersignal may be in favor of intralesional bleeding by iron characterization by hemosiderin deposits. The presence of wall in hyposignal T2 circling the lesion is quite characteristic of endometriosis. MRI can also be used to specify the extent of endometrioma. Finally, the sensitivity and specificity of MRI for the diagnosis of endometrioma are respectively 90 and 98%. It is the examination of choice for the nodules of endometriosis parietal, nevertheless rarely realized in preoperative.[12]

The diagnosis of certainty of parietal endometriosis is pathological. The macroscopic aspect varies according to the period of the menstrual cycle. However, it is conventionally a cystic tumor, with an average size of 3 cm. At the cut, the lesion has a fibrous appearance with central necrotic areas reminiscent of ancient blood.[13] Microscopic examination revealed a cylindrical glandular epithelium of variable size, often of cystic type associated with cytogenic chorion and lymphocytic inflammation. The percentage of these two elements varies with changes in hormonal impregnation. In the proliferative phase the stromal cell population is uniform and associated with proliferation of the glandular epithelium. During the secretory phase, at the level of the chorion, two cell populations are differentiated: large cells and small clear cells resembling predecidual cells and endometrial granulocytes respectively. This aspect is typical of endometriosis but can sometimes be confused with an adenocarcinoma or an adenocarcinoma metastasis.[14]

The treatment of choice consists of complete surgical excision. Recurrences are exceptional. The place of medical treatment by progestins is minor, based on an analogue of LH-RH which allows a temporary reduction of pain. The rates of recurrence after surgery vary from 0 to 15% of studies and appear to be correlated with the surgeon's safety margin. The overall rate of recidivism was 6.2% in our review, but the decline is usually low and often unspecified.[15]

## CONCLUSION

Cicatricial endometriosis must be evoked in front of any mass sitting on the scar of a gyneco-obstetric intervention even after menopause. The complementary examinations are not very specific. They may be able to locate the lesion deeply or eliminate a differential diagnosis. In case of doubt, MRI is the most appropriate examination and must be confirmed by the histological study The treatment is based on a sufficiently wide surgical excision carrying the affected conjunctivo-muscular tissues to avoid the risk of recurrence.

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