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### tytuł rozprawy

# Role of laparoscopic treatment of bowel endometriosis in infertile patients: pain and fertility outcome

## Rozprawa na stopień doktora nauk medycznych i nauk o zdrowiu w dyscyplinie nauki medyczne

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#### **ABSTRACT**

Bowel endometriosis may lead to severe pain symptoms. Surgical treatment, when indicated, improves symptomatology, however it requires highly specialized skills and should be performed in a referral center. In infertile women the decision about the treatment is particularly complex and the role of surgery is controversial because of complications which could impair fertility. Therefore, in the decision-making process, the possible complications of colorectal surgery should be balanced with the potential benefits of the treatment. Strong, evidence-based data about benefits on fertility and pain of bowel resection are lacking and the only data derive from observational studies performed in highly specialized centers.

Therefore, the aim of the present study was to evaluate pain and fertility outcome after laparoscopic treatment of bowel endometriosis in infertile patients performed in a referral center. The results of two studies are reported (Stepniewska et al. 2009, Stepniewska et al. 2010a), the first one focusing on the fertility outcome after surgery and the second one on symptoms and recurrence.

All patients included in these studies suffered from infertility for at least two years and performed evaluation of all infertility factors, so the results reflect a real result in endometriosis related infertility. The decision to include infertile women only has the advantage of avoiding estroprogestins use which could alter the outcome.

In both reported studies three groups of patients were included: women who underwent endometriosis surgery with colorectal segmental resection, women with surgical \_

evidence of bowel endometriosis who underwent endometriosis partial removal without bowel resection, and women affected by moderate or severe endometriosis with at least one endometrioma and deep infiltrating endometriosis but without bowel involvement. Comparison of outcome in those three groups allowed the evaluation of symptoms and fertility related to bowel endometriosis and treatment without possible influence of other endometriosis localizations, which often co-exist, taking part of a complex disease.

Good outcome in terms of pain and pregnancy rate are reported. The influence of bowel endometriosis was observed on both symptoms and fertility as the results differed between the groups with a worse outcome if bowel endometriosis was present, and particularly if in the group of patients with incomplete removal of endometriosis leaving the colorectal nodule. The results are discussed and comparison to other studies is performed.

An important element to consider in endometriosis-associated infertility is that of possible coexistence of adenomyosis, therefore the results of a study describing an innovative uterinesparing of adenomyosis with radio-frequency thermal ablation are reported (Stepniewska et al. 2022). This treatment, initially introduced for avoiding hysterectomy, may represent future perspective for infertile patients.

In the field of deep endometriosis and infertility, the presented results may represent an important milestone, describing the experience of a center with long-time expertise.