Deep endometriosis is associated with the highest level of perceived stress: effect of surgical treatment

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Impact of endometriosis on women’s life

Painful symptoms and infertility could negatively affected the quality of life and mental health of women with endometriosis

- Physical wellbeing
- Emotional wellbeing
- Social wellbeing
- Stress

Mental health support
Although all types of endometriosis can often produce pain, the deep infiltrating endometriosis lesions commonly associated with severe pain and discomfort, and it can severely alter a patient’s quality of life.

Women with endometriosis and chronic pelvic pain reported higher levels of perceived stress and low quality of life scores.

Siedentopf et al. 2008
Petrelluzzi et al. 2008
The present study aimed to investigate the amount of perceived stress in a group of women with different forms of endometriosis, before and after surgery, according to the location of the lesions and the severity of pain.

A group of patients (n = 98) aged 36±8 years (mean age ± SD) with chronic pain and suspected endometriosis referred to our center was included in the study.
MATERIALS AND METHODS

✓ 1° visit

- clinical evaluation
- complete medical history
- evaluation of painful symptoms (dysmenorrhea, dyspareunia, and nonmenstrual pelvic pain) using VAS
- ultrasound examination

✓ Evaluation of perceived stress

An Italian version of a validated questionnaire on stress perception, the perceived stress scale (PSS), was administered to each patient during the visit
### PSS score

**Perceived Stress Scale**

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way.

- **Name**
- **Gender (Circle):** M F Other
- **Age**
- **Date**

<table>
<thead>
<tr>
<th>Question</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the last month, how often have you been upset because of something that happened unexpectedly?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>In the last month, how often have you felt that you were unable to control the important things in your life?</td>
<td>0</td>
<td>1</td>
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<tr>
<td>In the last month, how often have you felt nervous and &quot;stressed&quot;?</td>
<td>0</td>
<td>1</td>
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<tr>
<td>In the last month, how often have you felt confident about your ability to handle your personal problems?</td>
<td>0</td>
<td>1</td>
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<td>In the last month, how often have you felt that things were going your way?</td>
<td>0</td>
<td>1</td>
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</tr>
<tr>
<td>In the last month, how often have you found that you could not cope with all the things that you had to do?</td>
<td>0</td>
<td>1</td>
<td>2</td>
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</tr>
<tr>
<td>In the last month, how often have you been able to control irritations in your life?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>In the last month, how often have you felt that you were on top of things?</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<td>4</td>
</tr>
<tr>
<td>In the last month, how often have you been angered because of things that were outside of your control?</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?</td>
<td>0</td>
<td>1</td>
<td>2</td>
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</tr>
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The PSS is a widely used psychological instrument for measuring the global perception of stress; it is a measure of the degree to which situations in one's life are appraised as stressful.

The questionnaire includes 10 direct queries about current levels of experienced stress easy to understand.

The score is divided into four categories (range 0-40 points):

- 0-6: low level of stress
- 7-19: medium level of stress
- 20-25: high level of stress
- ≥ 26: very high level of stress
✓ Surgical strategy consisted of the laparoscopic excision of all visually suspected endometriotic lesions performed by surgeons with experience in laparoscopic radical resection of endometriosis. Endometriosis was confirmed by histology.

**Surgical findings**

- OMA = 34
- mix OMA and peritoneal = 23
- mix OMA and DE = 21
- DE = 20

**2° visit one month after surgery**

✓ evaluation of painful symptoms (VAS)
✓ PSS score
RESULTS

When evaluated in all patients, PSS score showed a significant decrease after surgical treatment (P<.0001)
According to the different forms of endometriosis, women with DE or DE+OMA had the highest PSS levels, which significantly decreased in both groups after surgery.

Women with OMA or OMA+peritoneal endometriosis presented lower PSS than patients with DE and there were no significant changes of PSS after surgical treatment.
The group of women with severe dysmenorrhea before surgery decreased from 45 to 11 after surgery, whereas those with a low pain score increased from 20–49.
The group of women with severe pelvic pain and dyspareunia also showed a decreasing trend. Women with moderate pain did not show significant changes after surgery.
when pain symptoms were analyzed by score intensity, the changes of PSS were significant when VAS was highest, suggesting a strong relationship between pain and perception of stress.

The most symptomatic women after surgery reported pain relief, improving feelings of depression and stress perception, suggesting a positive role of surgery on stress perception.

Endometriosis is a chronic disease and different forms of endometriosis are associated with different levels of stress perception, suggesting a correlation between the severity of the disease and the intensity of the stress.

The assessment of stress evaluation in patients with endometriosis should be part of the clinical management, in particular for those patients with the most severe forms.
KEEP CALM AND DON'T STRESS

Thank you for your attention!