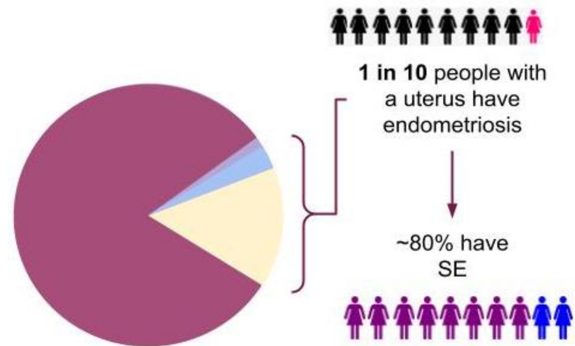
Superficial Endometriosis

Patient Information Series – What you should know, what you should ask.

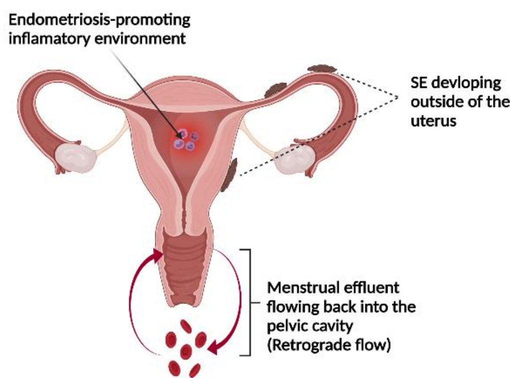
What is a superficial endometriosis?

Superficial endometriosis (SE) is the most common form of endometriosis, comprising approximately 80% of all endometriosis diagnoses. SE forms as a shallow lesion along the peritoneum (membrane that lines the abdominal cavity). Like other forms of endometriosis, SE may lead to dysmenorrhea (painful menstruation), dyspareunia (pain during intercourse), dysuria (pain while urinating), and infertility.



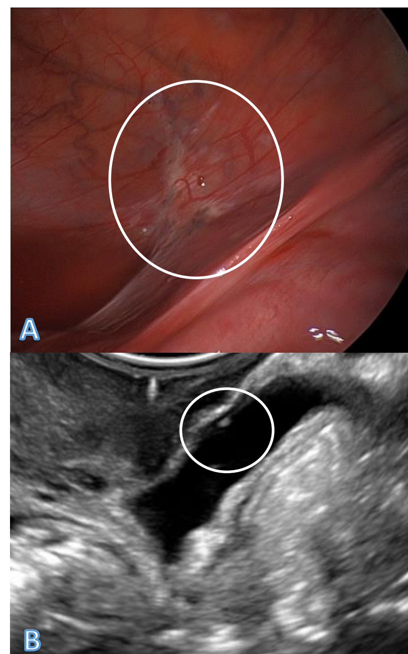
What causes endometriosis – How does it start?

The origin of endometriosis, including SE, is currently controversial and complex. The most widely adopted theory remains "retrograde flow", where menstrual blood flows back into the pelvic cavity, allowing cells to implant and grow into lesions. However, this theory has been criticized, as most, if not all people assigned female at birth (AFAB) experience retrograde flow. Recent studies propose a multifaceted origin, suggesting that it is possible that the environment cells are exposed to during retrograde flow, such as an inflammatory or an immune deregulatory milieu, promotes implantation and growth. Other theories include embryonic origins (Müllerian), where endometriosis may develop during embryonic development or dynamic cells which are able to conform to an embryonic state (coelomic metaplasia). Regardless of origin, it has been postulated that the varying forms of endometriosis may have individual and unique beginnings.



How is SE diagnosed?

The current gold standard for endometriosis diagnosis remains diagnostic laparoscopy, followed by histological confirmation. The process involves a small incision near the belly button, then gas is used to inflate the abdomen and a laparoscope (camera) is inserted in order to visualize the abdomen. Alternative diagnostic techniques and modalities include magnetic resonance imaging (MRI) and ultrasound (US), allowing for a less invasive yet equally effective diagnosis for some endometriosis subtypes like deep endometriosis and ovarian endometriomas. However, limitations remain for SE due to the shallow nature of the disease type, making it difficult to visualize using US. Fortunately, some advancements are being made, including a procedure called saline-infusion sonoPODography, where fluid can be infused into the pelvis to see more subtle small lesions including SE. In order to diagnose SE definitively at present, current strategies primarily rely on laparoscopy.



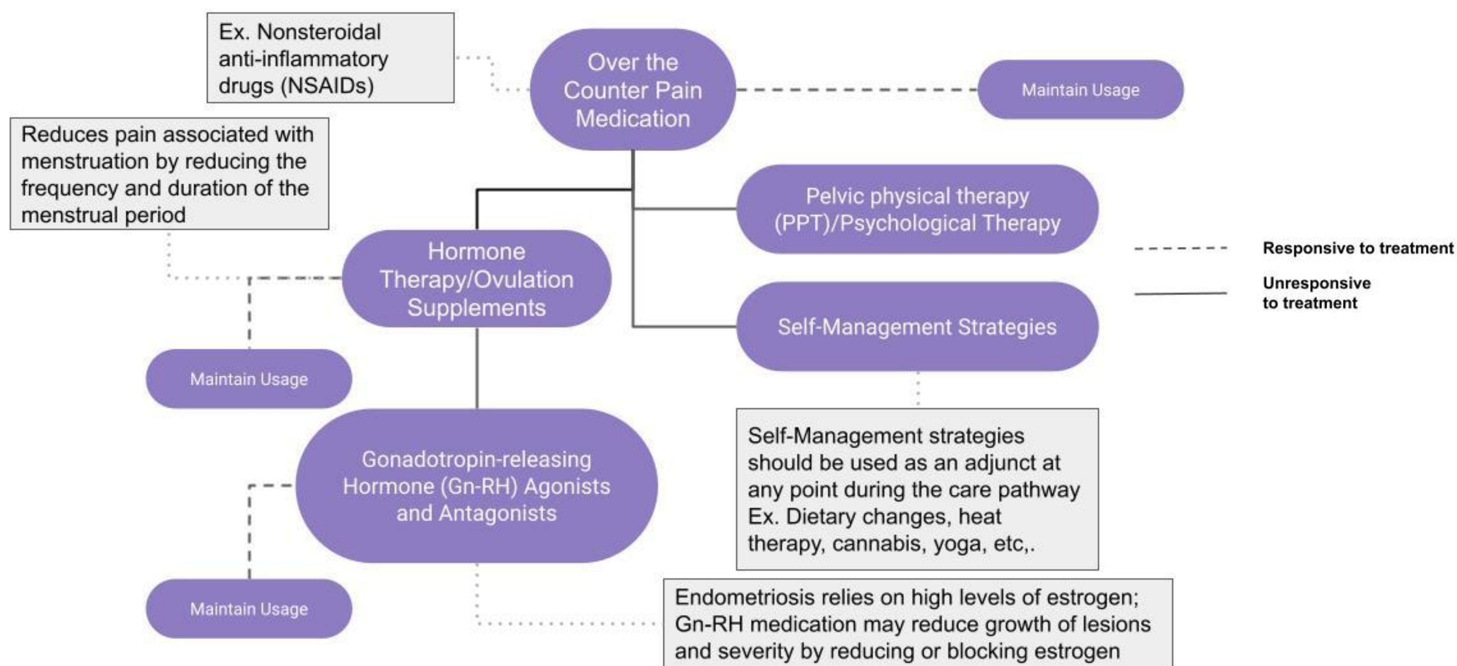
What does SE look like?

To the right, *Figure A* depicts SE through laparoscopy. Lesions can be typically seen along the outside wall of the uterus/peritoneum, and can either be red, black, or white/clear. Laparoscopy is typically limited to direct visualization, where the clinician investigates the entire pelvic environment section by section.

Comparatively, *Figure B* is a transvaginal ultrasound (TVS) image of SE. When evaluating SE through ultrasound, the clinician will be looking for hyperechoic (bright) areas or projections, which typically reflect as small bumps, as seen on the right. In order to identify these regions, the clinician can perform the "jiggle test', which involves oscillating the probe to reveal any abnormalities.

What are the treatment options for SE?

There is currently no cure for endometriosis, although several forms of medication, therapy, surgery, and self-management strategies allow for symptom improvement and an improvement in quality of life. Although surgical treatment through additional small incisions during laparoscopy may be recommended, non-invasive treatment strategies may be depicted by the flow diagram below. Two important treatment principles include 1) understanding all mechanisms of pelvic pain and 2) patient autonomy in choice of treatments. The reality in many people is the necessity to use more than one category of option at a time (e.g. NSAIDs, physical therapy, hormone therapy, and surgical therapy).



Self-Management Strategies

Dietary Changes
Heat Therapy
Social Activities
Sleep
Physical Exercise
Yoga
Cannabis
Social Support
Managing Work and Academics
Educating Self and Support
Relaxation & mindfulness
Acceptance & Commitment Therapy
Adopting Positive Attitude

Future for SE diagnosis?

Currently, efforts are in place to develop and improve diagnostic modalities in order to diagnose SE quickly and less invasively. New techniques, such as SonoPODography, will involve filling the pelvic cavity with fluid in order to improve contrast and in turn, allow for diagnosis of SE using US. Similarly, biomarkers are currently being studied and searched for worldwide, furthering the hope of a new diagnostic modality for SE and endometriosis in its entirety.

What other questions should I ask?

- What treatment best suits my disease type and symptoms?
- How does my treatment regime affect my quality of life?
- Do you feel comfortable with the treatment or diagnostic modality used/provided?
- What other options are available?
- What support is available to me (community, family, friends, etc,.)?
- What fertility-based treatment options are available to me, if desired?

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