SECRET WOMEN'S BUSINESS

Treatment and prevention best practice is always changing as the new research comes in. Here's the latest news for several of the major health conditions facing women today and MiNDFOOD's checklist to help you stay healthy.

ENDOMETRIOSIS

Associate Professor Caroline Gargett, renowned for her work on endometriosis and endometrial-related infertility and cancer, sheds light on the latest developments regarding the disorder.

Despite it affecting some 176 million women worldwide, there is no cure for endometriosis. For many, this means they may experience pain and symptoms throughout their reproductive lives.

In a UK study published in *Lancet* this year, surveyed women with endometriosis and health professionals identified "finding a cure for endometriosis" as the number one priority for future endometriosis research. Number two was to find out what causes it.

Improving diagnosis is another pressing issue. This is partly because the condition can generally only be diagnosed through a surgical procedure called a laparoscopy.

Endometriosis is a menstruation-related disorder. In the 21st century, girls and women will menstruate up to 400 times during their reproductive life. This is much higher than our grandmothers, who commenced menstruation later, had more children, may have breastfed longer and reached menopause earlier. Even so, the rate of endometriosis has not really changed in the past five decades, ranging from six to 10 per cent.

For many women, the onset of endometriosis likely occurred when they first got their period, but doctors are reluctant to use surgical methods in teenage girls to obtain a diagnosis. Because of this, it can take seven to 10 years to identify. Also, in trying to find out the causes behind pelvic pain and menstrual disorders, women will often need to see numerous doctors, adding to the delay in diagnosis. A simple non-invasive diagnostic test is urgently needed.

DELAYED DIAGNOSIS

During the delay to be diagnosed, endometriosis can, if left untreated, become worse. Some women will require extensive surgery to remove lesions, or will later find that they experience problems with fertility.

The study on the top 10 endometriosis priorities in the UK also showed that maximising or maintaining fertility in women with endometriosis is a key concern. Women with endometriosis would also like to see better non-surgical ways to manage pain, symptoms and infertility; and more effective approaches to managing the emotional and psychological impact of living with the disorder.

Endometriosis may affect a woman or teen's family life, relationships, ability to work or attend school and participate in social activities. In some women, the disease may be linked to depression.

Not every woman with endometriosis will have trouble falling pregnant. Many women will successfully have children, before and/or after their diagnosis. For those who do experience infertility, IVF conducted soon after the surgical removal of lesions is recommended, as lesions return in 75 per cent of women within five years.

30 PER CENT OF WOMEN WITH ENDOMETRIOSIS WILL EXPERIENCE INFERTILITY

NEW RESEARCH

The identification of stem/progenitor cells in the human endometrium – the highly regenerative lining of the uterus – has fundamentally changed our understanding of how the endometrium functions. Crucially, it also provides clues on how endometriosis might develop, potentially offering new ways of developing treatments that focus on cells involved in the disease formation, which may offer a long sought-after cure.

The cells help regulate the function of the lining of the uterus, which regenerates itself each month as part of the menstrual cycle. When an embryo does not implant, the upper layer of the lining is shed and leaves the body as menstrual blood via the vagina. The endometrium regrows from remaining tissue the next month.

Some of this menstrual blood flows backwards into the pelvic cavity (the area outside of the uterus) via the fallopian tubes, a process known as retrograde menstruation. Endometrial stem/progenitor cells are shed in menstrual blood, and may reach the pelvic cavity via retrograde menstruation. Hudson Institute researchers' hypothesis is that, in women with endometriosis, these cells may have different properties that enable them to survive longer in the pelvis, where they go on to form lesions or patches of endometrial tissue. If this is correct, drugs may be developed that target these cells during menstruation to prevent the establishment of endometriosis.

Other exciting research includes a US breakthrough this year which showed that the epithelial cells in endometriosis lesions from 26 per cent of patients with deep infiltrating endometriosis harboured mutations in key genes that are normally associated with cancer. The patients did not have cancer – and deep infiltrating endometriosis lesions very rarely transform into cancer – suggesting these genetic mutations are not sufficient to cause cancer, but rather, may play a role in enabling endometriosis to develop.

In another recent discovery, a clinical trial of an oral gonadotropin-releasing hormone antagonist reduced endometriosis-associated pain in participants after six months. However, it has associated side effects and can't be used in the long term. It has been submitted to the US Food and Drug Administration as a new drug application and, if approved, will be the first new treatment for more than a decade to manage endometriosis-associated pain in the US.

Another recent US study also showed that washing out the fallopian tubes with a solution called ethiodised oil could improve pregnancy rates in women experiencing endometriosis-infertility.