

## Severe spontaneous hemoperitoneum in pregnancy may be linked to in vitro fertilization in patients with endometriosis

Endometriosis can cause infertility but women with endometriosis who do get pregnant can find that their symptoms improve afterwards. Because of this, doctors treat endometriosis with drugs that are similar to the hormone progesterone. We know that progesterone is an important hormone during pregnancy.

Very rarely, pregnant women suffer from bleeding inside the abdomen. Internal bleeding can be very serious and difficult to diagnose. This is very dangerous to both the mother and the baby. Because bleeding happens without a warning it can be life threatening. The medical term we use to describe this is: spontaneous hemoperitoneum in pregnancy. Essentially, this means bleeding inside the abdomen that happens during pregnancy without a clear trigger. This name is shortened to "SHiP". The first case that was reported in medical journals was the story of a woman who died more than 50 years ago when she died on the way to the hospital. She was pregnant and the bleeding was from a small area of endometriosis behind the uterus. Still cases like this are very few, but there is a recent report from the Netherlands that included 11 cases. All of the 11 women had endometriosis and a few had recurrent bleeding. Women with SHiP tend to be in the second half of pregnancy (more than 20 weeks). They have sudden pain in the abdomen, their hemoglobin (blood test for anaemia) drops which indicated that they are bleeding. At the same time, there is no bleeding from the vagina. Fortunately, it was possible to manage these safely. This shows the benefit of early diagnosis and teamwork. Women with SHiP have changes inside the abdomen that are similar to the changes in the lining inside the uterus. This fits with them having had endometriosis before pregnancy.

We looked at cases that were reported in medical journals. What we found is that in recent years a good proportion of these women also had stimulated IVF cycles. All this seems to link infertility, IVF, endometriosis, and SHiP.

It is important that this does not cause alarm. We need to remember that this complication remains rare. But we think it is important that doctors are aware of it. First, because this can help them to recognize it if they come across it. Second, because doctors may be able to consider a different protocol for IVF. For example, it is sometimes possible to use embryo freezing followed by implantation in a following cycle.

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## **Publication**

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