

- Prenatal diagnosis / Miscarriage

Blood examination after a miscarriage could reveal cause

Danish researchers say test could point to genetic anomaly and pave way for preventive treatments

South China Morning Post · 9 Jun 2023 · B9

A blood test taken after a miscarriage that occurs as early as week five of pregnancy can help explain why it occurred, and in some cases lead to preventive treatments, Danish researchers say.



One in 10 women experience pregnancy loss, with the number even higher in countries where pregnancies increasingly occur later in a woman's life.

Danish gynaecologist Henriette Svarre Nielsen and her team of researchers recently published a study in the British journal *The Lancet* showing that a blood sample taken from the mother soon after a miscarriage as early as the fifth week of pregnancy can determine whether the fetus had a chromosome anomaly.

In Denmark, such tests are usually only offered after a woman has had three miscarriages, and only if they occurred after the 10th week of pregnancy.

"This is 2023. We are way beyond just counting as the criteria" to investigate why somebody may be prone to pregnancy loss, Svarre Nielsen of Hvidovre hospital near Copenhagen, said.

Now, as part of a continuing study, all women who have miscarried and visited the Hvidovre hospital emergency room are offered the blood test.

More than 75 per cent of them have accepted so far.

"For me, it was obvious I would do it. It helps you understand," said one woman who spoke on condition of anonymity, as she had not revealed her pregnancy loss to all of her family and friends.

The blood test is immediately sent to the hospital lab. The fetus' DNA is then isolated, sequenced and analysed to see if it carries a chromosome anomaly, which is the case in about 50 to 60 per cent of miscarriages.

Doctors can then determine whether some of the anomalies are more serious than others.

"They would also be able to predict the risk" of future miscarriages, lab technician Lene Werge explained, showing a DNA sample with extra copies of chromosome 21, which is linked to Down syndrome.

If no anomalies are found, doctors launch a meticulous search for answers.

"We can start to ask the question, 'Is it this? Is it this? Is it this?'" Svarre Nielsen said.

If an explanation is found, doctors can determine the risks and devise a treatment plan.

Launched in 2020, the project – dubbed COPL, for Copenhagen Pregnancy Loss – is ongoing and expected to yield a unique database on a wide range of illnesses thanks to the large cohort: some 1,700 women so far.

“We will have good data background to actually answer questions properly about pregnancy loss, reproduction, but also women’s health in general,” Svarre Nielsen said.

A doctor with more than 20 years’ experience, Svarre Nielsen specialised early on in reproductive health and is keen to develop treatments.

“Pregnancy loss is very common, 25 per cent of all pregnancies end in a pregnancy loss,” she said.

“And even though it’s been so common for many, many years, the only focus has been on emptying the uterus after the loss.”

She said enough effort had not been made to find explanations or support the mental health of couples after a miscarriage.

Rikke Hemmingsen, who had three miscarriages before giving birth to two children, wished the project could have been around to help her.

The project gives me hope that fewer women have to go through what we went through

RIKKE HEMMINGSEN

“We can use the losses for something else. So the project gives me hope that fewer women have to go through what we went through,” she said.

“It makes all the grief and all the sadness of every pregnancy loss matter.”

Pregnancy loss is often not discussed publicly, and when it is, the reactions can be awkward.

“Everyone saying ‘this is normal’ does not make it more normal, or more or less sad to the one it happens to,” Hemmingsen said.

The taboo can also make it harder for a couple to get proper treatment. “We need to start talking more openly about it. Because otherwise, I would not be able to tell people that there are specialists ... who can help you,” the 39-year-old said.

According to Svarre Nielsen, the study’s findings could ultimately help prevent 5 per cent of the 30 million miscarriages seen worldwide annually.