Selecting pregnant or postpartum women with suspected pulmonary embolism for diagnostic imaging: the DiPEP diagnostic study with decision-analysis modelling

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Plain English summary

The DiPEP diagnostic study with decision-analysis modelling

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Plain English summary

A blood clot in the lung is a potentially fatal complication of pregnancy that can be difficult to diagnose. Symptoms that suggest a blood clot, such as chest pain or breathlessness, are common in pregnancy. Diagnosis usually requires a scan that involves giving a small dose of radiation to the mother and possibly to the baby.

A clinical decision rule uses information from the woman's medical history and examination to estimate the risk that she has a blood clot. Blood tests that are abnormal in people with blood clots can perform a similar role. We wanted to find out whether or not clinical decision rules or blood tests could be used to decide which women with a suspected blood clot should have a scan.

We collected information from 181 pregnant or recently pregnant women with blood clots in their lungs and 259 women without blood clots who had been investigated in hospital for a suspected blood clot. We also collected blood samples from 36 women with blood clots in their lungs or legs, and 247 with no blood clot. We found that the blood clots were very difficult to diagnose without a scan. None of the clinical decision rules or blood tests was able to reliably determine which women had a blood clot. The economic analysis showed that scanning every woman with a suspected blood clot was a worthwhile use of NHS resources. This is because the risks of scanning are very small, whereas the benefits of detecting and treating blood clots are very large.

Clinical decision rules and blood tests should not be used to select which women with a suspected blood clot in pregnancy have a scan. Future research needs to develop new ways of diagnosing blood clots in pregnancy.

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