Severe maternal sepsis in the UK

Sepsis is the leading cause of direct maternal death in the UK. But how prevalent is it? What are the sources of infection? Which organisms cause it? And what are the risk factors? This prospective case-control study sought to find out.

Case reports of peripartum women diagnosed with severe sepsis were collated from all 210 UK obstetrician-led maternity units between June 2011 and May 2012 using the United Kingdom Obstetric Surveillance System. Each unit was required to provide the records of two control women per case too.

There were 365 confirmed cases of severe maternal sepsis out of 780,537 maternities, which gave an incidence rate of 4.7 per 10,000 (95% CI 4.2-5.2). A total of 71 (19.5%) women developed septic shock; and five (1.4%) died.

The most common source of sepsis, found in almost a third of cases (31%), was a genital tract infection. The largest proportion of cases (21.1%) of severe sepsis was found to be caused by Escherichia coli, but there was a strong association between group A streptococcal infection and the onset of septic shock.

There were less than two hours between the first sign of systemic inflammatory response syndrome and a diagnosis of severe sepsis for 16 (50%) women with a group A streptococcal infection, and less than nine hours for 24 (75%) women. Given this rapid progression, the need to administer high-dose intravenous antibiotics to anyone with suspected sepsis within an hour of admission to hospital was emphasised.

The researchers found that women were significantly more likely to develop severe sepsis if they were of black or other minority ethnic origin, primiparous, had a pre-existing medical problem, had a temperature or taken antibiotics in the two weeks prior to diagnosis, or had an instrumental or CS delivery.

They concluded that any signs of severe sepsis in a peripartum woman should be treated as an obstetric emergency; and that follow-up to ensure eradication of the infection is key.

Emma Godfrey-Edwards
Editor, Midwives