



**CMACE EMERGENT THEME BRIEFING**

**#1: Genital Tract Sepsis**

**September 2010**

**SAVING MOTHERS' LIVES 2006-08: Briefing on genital tract sepsis**

During the 2006 – 2008 triennium, sepsis was the leading cause of direct maternal deaths, accounting for 26 direct deaths and a further 3 deaths classified as 'Late Direct'<sup>1</sup>. Whilst maternal mortality is declining overall, maternal deaths due to sepsis have risen in recent triennia, particularly those associated with Gp A streptococcal infection (GAS):

	2000-2002	2003-2005	2006-2008
Rate / 100,000 maternities	0.65	0.85	1.13
Numbers* (all organisms)	13	21	29
Numbers* (GAS)	3	8	13

\*: Direct and indirect maternal deaths together

**This alert is being published in advance of the full Saving Mothers Lives (SML) report because of the significance of the facts and findings relating to deaths due to genital tract infection.**

The main reason for the rise in maternal mortality from sepsis in this triennium is the increased number of deaths due to community-acquired beta-haemolytic streptococcus Lancefield Group A (*Streptococcus pyogenes*) (GAS). Death and serious illness from pregnancy related sepsis are still very rare, however. Thus awareness of the potential for genital tract infection to follow a fulminating and sometimes fatal course is low, amongst both pregnant women and their healthcare workers.

There was a clear seasonal pattern to these deaths, with most occurring between December and April, often preceded by sore throat or other URTI. An associated factor was women of BME origin (12 deaths, 6 of whom were asylum seekers or recent immigrants; 3 had sickle cell disease or trait) but obesity was not a contributory factor in this triennium, in contrast to previous findings. About a third of the deaths occurred before 24 weeks completed gestation (mostly due to GAS) and, overall, only 55% of the babies in affected pregnancies were live born. Most of the deaths occurred in the postpartum period; more than half following lower segment Caesarean Section. Seven women died from sepsis that developed after vaginal delivery, illustrating how healthy women with uncomplicated pregnancy and delivery can become critically ill and die in a very short time.

**Sepsis in pregnancy is often insidious in onset but can progress very rapidly. In the postpartum period the risk of serious sepsis should not be overlooked, particularly in the earlier gestations. Early recognition, urgent transfer to hospital and prompt, aggressive treatment is necessary to save lives. Whilst presentation may be atypical, tachypnoea, neutropenia and hypothermia are all ominous signs. Diarrhoea is a common symptom of pelvic sepsis and the combination of abdominal pain and abnormal or absent foetal heart rate may signify sepsis rather than placental abruption.**

<sup>1</sup> Maternal death occurring more than 6 weeks after delivery

Sepsis is complex, and incompletely understood. It is often difficult to recognise and manage, and presents a continuing challenge. Some deaths will always be unavoidable but better training, a structured approach, earlier recognition, good care in both community and hospital settings may help in future to save some lives. Prompt investigation and treatment, particularly immediate intravenous antibiotic treatment and early involvement of senior obstetricians, anaesthetists and critical care consultants, is crucial.

Appropriate antibiotic prophylaxis is crucial in the following clinical scenarios:

- Periabortion;
- Preterm and / or prolonged rupture of membranes;
- Caesarean Section (perioperative);
- Anal sphincter tear (3<sup>rd</sup> or 4<sup>th</sup> degree) repair.

Adequate management of genital tract sepsis entails:

- Early recognition and prompt management of genital tract sepsis<sup>2</sup>;
- Clear clinical leadership with a multidisciplinary clinical approach;
- Careful documentation of both signs and treatment;
- Adequate doses of appropriate systemic antibiotics, started promptly;
- Fluid balance to be carefully managed;
- A collaborative approach where necessary: laparotomy, with or without hysterectomy, is a difficult decision but can save lives. Where possible, a general surgeon should be involved.

**Since GAS, the single largest contributor to maternal deaths due to genital tract sepsis in this triennium, is predominantly a community-acquired infection, the importance of antenatal education programmes to raise awareness of good personal and perineal hygiene cannot be overstated. Furthermore, clinical guidelines on the recognition and management of sepsis in pregnancy should be developed and implemented as a matter of urgency.**

All pregnant and recently delivered women need to be informed of the risks, signs and symptoms of genital tract infection and how to prevent its transmission. Advice to all women should include verbal and written information and should stress the need to seek advice early if concerned as well as the importance of good personal and perineal hygiene. This is especially necessary when the woman, her family or close contacts have a sore throat or upper respiratory tract infection.

*'Streptococcal sore throat is one of the most common bacterial infections of childhood. All of the mothers who died from Group A streptococcal sepsis either worked with, or had, young children. Several mothers had a history of recent sore throat or respiratory infection and some of these women also had family members, especially children, with sore throats suggesting that spread from family members is a further risk factor for developing life-threatening sepsis. Therefore, all pregnant or recently delivered women need to be advised of the signs and symptoms of infection and how to take steps to prevent its transmission. Women in these circumstances should also be encouraged to seek urgent medical advice from their GP or maternity services if they feel at all ill.'*

Source: Saving Mothers Lives, 2006-2008

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<sup>2</sup> Following 'Surviving Sepsis' guidelines ([www.survivingsepsis.org/guidelines](http://www.survivingsepsis.org/guidelines))