Bringing to life the

Bacterial Sepsis in Pregnancy

This is the first edition of this guideline.

urpose and scope

The need for a guideline on the management of sepsis in pregnancy was identified by the 2007 Confidential Enquiry into Maternal Deaths.[1] The scope of this guideline covers the recognition and management of serious bacterial illness in the antenatal and intrapartum periods, arising in the genital tract or elsewhere, and its management in secondary care. Sepsis arising due to viral, fungal or other infectious agents is outside the

Risk factors for sepsis identified from the women who died in the 2003-2005 and 2006-2008 triennia are shown in table 1. Many of the women who died had one or more risk factors. Urinary tract infection and chorioamnionitis are common infections associated with septic shock in the pregnant patient.[5]

Evidence level 3

ab e Risk factors for maternal sepsis in pregnancy as identified by the Confidential Enquiries into Maternal Deaths[1,2]

Obesity
Impaired glucose tolerance / diabetes
Impaired immunity/ immunosuppressant medication
Anaemia
Vaginal discharge
History of pelvic infection
History of group B streptococcal infection
Amniocentesis and other invasive procedures
Cervical cerclage
Prolonged spontaneous rupture of membranes
GAS infection in close contacts / family members
Of black or other minority ethnic group origin

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The signs and symptoms of sepsis in pregnant women may be less distinctive than in the non-pregnant population and are not necessarily present in all cases;[4] therefore, a high index of suspicion is necessary. Clinical features suggestive of sepsis are shown in table 2. Healthcare professionals should be aware of the symptoms and signs of maternal sepsis and critical illness. Disease progression may be much more rapid than in the non-pregnant state. Genital tract sepsis may present with constant severe abdominal pain and tenderness unrelieved by usual analgesia, and this should prompt urgent medical review.[1] Severe infection may be associated with preterm labour. Toxic shock syndrome caused by staphylococcal or streptococcal exotoxins can produce confusing symptoms including nausea, vomiting and diarrhoea; exquisite severe pain out of proportion to clinical signs due to necrotising fasciitis; a watery vaginal discharge; generalised rash; and conjunctival suffusion.

Evidence level 4

I en ta tract seps s s suspected pro pt ear y treat ent w t a co b nat on o dose broad spectru ntravenous ant b ot cs ay be esav n

C ose ouse o d contacts o wo en w t roup A streptococca n ect on s ou d be warned to see ed ca attent on s ou d sy pto s deve op and t e s tuat on ay warrant ant b ot c prop y ax s

Hea t care wor ers w o ave been exposed to resp ratory secret ons o wo en w t roup A streptococca n ect on s ou d be cons dered or ant b ot c prop y ax s

The Health Protection Agency have produced detailed guidelines for the investigation, control and prevention of the spread of group A streptococcal infection in healthcare settings in the United Kingdom.[22]

As well as the specific recommendation for group A streptococcal disease, any baby of a mother found to have sepsis in the peripartum period should be discussed with neonatology colleagues so that prophylactic antibiotic administration to the baby can be considered.[22]

at n ect on contro ssues s ou d be cons dered

Group A β

A ENDIX 1

Diagnostic criteria for sepsis modified from Levy et al (2003)[23] for pregnant women using references 1 and 2 where pregnancy specific parameters are available.

Infection, documented or suspected, and some of the following:
Genera var ab es.
Fever (>38ºC)
Hypothermia (core temperature <36ºC)
Tachycardia (>100 beats per minute)
Tachypnoea (>20 breaths per minute)
Impaired mental state
Significant oedema or positive fluid balance (>20ml/kg over 24 hours)
Hyperglycaemia in the absence of diabetes (plasma glucose >7.7 mmol/l)
In a atory var ab es.
White blood cell (WBC) count >12 x 10 /l (note that a transient leucocytosis is common in labour)
Leucopenia (WBC count <4 x 10 /l)
Normal WBC count with >10 immature forms
Plasma C-reactive protein >7mg/l
Hae odyna c var ab es.
Arterial hypotension (systolic blood pressure <90mmHg mean arterial pressure <70mmHg or systolic blood pressure decrease >40mmHg)
ssue per us on var ab es.
Raised serum lactate ≥ 4 mmol/l
Decreased capillary refill or mottling
r an dys unct on var ab es.
Arterial hypoxaemia (PaO2 (arterial oxygen partial pressure) /FIO2 (fraction of inspired oxygen) <40kPa). **Sepsis is severe if <33.3kPa in the absence of pneumonia or <26.7kPa in the presence of pneumonia.**
Oliguria (urine output <0.5ml/kg/hr for at least two hours, despite adequate fluid resuscitation)
Creatinine rise of >44.2µmol/l. **Sepsis is severe if creatinine l-0.06569v6(R44-10 Tc 0.l/l.mon/1l(s7[illegible]

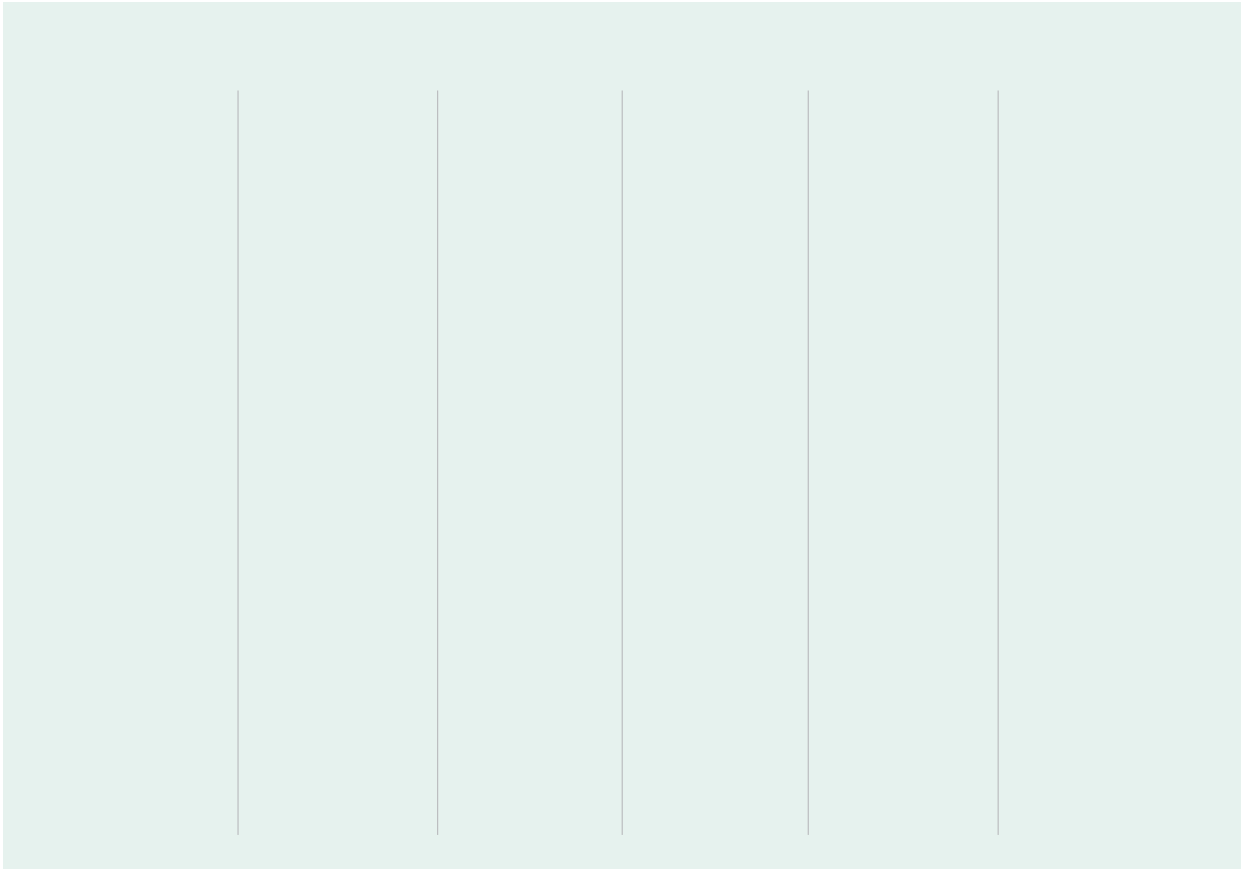
A ENDIX 2

Staphylococcal and streptococcal toxic shock syndrome clinical disease definition.[12,23]

Staphylococcal toxic shock[24]	Streptococcal toxic shock syndrome[12,24]
1. Fever >	

APPENDIX 3

Antibiotic spectra for obstetrics and gynaecology.



Dr Marina S Morgan, 2012

Solid lines represent roughly the proportion of the bacteria sensitive to that antibiotic.
NB: Tazocin may not be effective against some ESBL producing Gram-negative bacteria, and carbapenemase producing organisms will be resistant to carbapenems.

r o r o n on

At least one meta-analysis, systematic review or randomised controlled trial rated as 1++ and directly applicable to the target population; or

A systematic review of randomised controlled trials or a body of evidence consisting principally of studies rated as 1+ directly applicable to the target population and