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PRACTICE GUIDELINES

Guidelines for prevention and control of group A streptococcal infection in acute healthcare and maternity settings in the UK

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Summary Hospital outbreaks of group A streptococcal (GAS) infection can be devastating and occasionally result in the death of previously well patients. Approximately one in ten cases of severe GAS infection is healthcare-associated. This guidance, produced by a multidisciplinary working group, provides an evidence-based systematic approach to the investigation of single cases or outbreaks of healthcare-associated GAS infection in acute care or maternity settings.

The guideline recommends that all cases of GAS infection potentially acquired in hospital or through contact with healthcare or maternity services should be investigated. Healthcare workers, the environment, and other patients are possible sources of transmission. Screening of epidemiologically linked healthcare workers should be considered for healthcare-associated cases of GAS infection where no alternative source is readily identified. Communal facilities, such as baths, bidets and showers, should be cleaned and decontaminated between all patients especially on delivery suites, post-natal wards and other high risk areas. Continuous surveillance is required to identify outbreaks which arise over long periods of time. GAS isolates from in-patients, peri-partum patients, neonates, and post-operative wounds should be saved for six months to facilitate outbreak investigation. These guidelines do not cover diagnosis and treatment of GAS infection which should be discussed with an infection specialist.

Introduction

The overriding trend over the last century has been one of dramatic decline in severe GAS infections. However, the last three decades have witnessed periodic upsurges in Europe and beyond.[1] The reasons for these changes are not understood, but might represent evolutionary shifts in circulating strains, driven by population immunity. Current estimates of annual incidence of severe GAS infection range from 2 to 5 per 100,000 population in developed countries, with case fatality rates ranging from 8 to 23%.[1–4] Data collected in 2003-04 as part of a European project recorded a rate of 3.33 cases per 100,000 population in England, Wales and Northern Ireland.[5]

Incidence of healthcare-associated and postpartum GAS infection

Between 5 and 12% of cases of severe GAS infection are found to be healthcare-associated.[1,3–6] UK data in 2003-04 identified 9% of severe GAS infections as being healthcare-associated, most (58%) being post-surgical infections.[5] Between 2 and 11% of all severe GAS infections are associated with recent childbirth, a rate of approximately 0.06 per 1000 births.[5–7] Findings from the 2006–08 triennial report on maternal deaths identified an increase in the numbers of maternal deaths associated with GAS genital tract sepsis from around 1 death per annum in 2000-02 to 4 per annum in 2006–08.[8] Several of these deaths were in women with a recent respiratory tract infection or women with family members with recent history of sore throats. Infection in the mother carries a further immediate risk of infection in the baby.[9,10]

Glossary

GAS	group A streptococcus
HPA	Health Protection Agency
iGAS	invasive group A streptococcus
IPCT	infection prevention and control team (or equivalent)
HCW	healthcare worker
OH	Occupational Health
PPE	personal protective equipment
SIGN	Scottish Intercollegiate Guidelines Network
STSS	streptococcal toxic shock syndrome
SUI	serious untoward incident

Outbreaks of GAS in acute care settings

A review of healthcare-associated invasive GAS infections in Ontario between 1992 and 2000 identified one in 10 cases as being linked to an outbreak.[6] Hospital outbreaks of GAS infection can escalate rapidly, be prolonged and result in both patients and healthcare workers (HCWs) being infected.[6] The national reporting system for significant health protection incidents in England (HPA Incident Reporting Information System) identified 10 outbreaks of the GAS infection in hospital settings during 2008 and 2009 combined. Surgical, obstetrics and gynaecology, and burns units are most commonly involved in hospital outbreaks, although outbreaks have been seen in a wide range of different hospital settings.[6] Investigation of these outbreaks has identified a range of transmission routes: colonised HCWs to patients, environmental sources to patients, and patient-to-patient transmission. Patients with both community and healthcare-associated GAS infection have initiated hospital outbreaks with secondary cases typically arising within one month of the index case although longer intervals have been documented.[6] In HCWs, throat colonisation is the most common source, although skin, vaginal and rectal colonisation have also been linked to outbreaks.[6,11]