Correspondence

Prevalence of group G & group C streptococci at an Indian tertiary care centre

Sir,

Group C and G streptococci (GCS and GGS respectively) are normal inhabitants of human nasopharynx, skin and genital tract. However, they are now emerging as an important cause of invasive infections and their large colony forming strains resemble Group A streptococci (GAS) in terms of virulence. The role of this group of β-haemolytic streptococci (βHS) in invasive and non invasive infections is relatively undocumented in our country. We report here the prevalence of GGS and GCS at an Indian tertiary care centre.

During a five year period, from January 1996 to December 2000, we studied the prevalence of GGS and GCS in various body samples from outdoor and admitted patients, received in the clinical bacteriology laboratory of the All India Institute of Medical Sciences (AIIMS), New Delhi. Of the 529 isolates of βHS recovered from all the samples (n = 2,19,934), 69 (13%) were GGS and 9 (1.7%) were GCS. Respiratory tract was the most common source of GGS (64 isolates), followed by soft tissues (4) and reproductive tract (1). GCS was less common, being isolated from peritoneal fluid (1), respiratory tract (5) and soft tissues (3). It was observed that the 64 isolates of GGS accounted for a significant proportion (21%) of total βHS (299) isolated from the respiratory tract during the same period. The rate of GGS and GCS positive throat cultures vary from 1-25 per cent in various studies. However, invasive GGS and GCS infections are now increasingly being reported and they usually have respiratory tract as a portal of entry. We also isolated a small number of isolates from sterile site and soft tissues. Serious infections and complications like toxic shock like syndrome, necrotising fasciitis, rheumatic fever, pneumonia, cellulitis, septicaemia, meningitis and arthritis, once believed to be exclusively from Group A streptococcus (GAS) are now confirmed to be from GGS or GCS as well. This may be due to acquisition of GAS like virulence factors by GGS and GCS through interspecies gene transfer. A few studies done in India have also highlighted the role of GGS and GCS in pyoderma, uterine, pulmonary and throat infection. Brahmadathan et al. have concluded that there might be a correlation between a high prevalence of non GAS in throat and their role in development of pyoderma.

In many centres, GAS antigen screening or DNA hybridization test has replaced throat cultures as only those patients having GAS in throat are treated. This may predispose patients with a positive GGS or GCS throat culture to sequelae or serious infections. In view of the high rate of isolation of GGS from throat in our study, we conclude that all β haemolytic streptococci from throat cultures must be grouped and the clinical practice of ignoring GGS and GCS, unless isolated from sterile fluids must be abandoned.

All the isolates of GGS and GCS in our study were sensitive to penicillin, erythromycin, amikacin and ciprofloxacin. However, in vivo, GGS and GCS are less likely to respond to penicillin and also have a variable sensitivity to erythromycin. Prompt institution of combination therapy is now recommended to treat many of these infections.

Purva Mathur, Arti Kapil* & Bimal Das
Department of Microbiology
All India Institute of Medical Sciences
New Delhi 110029, India
*For correspondence: e-mail: artikapil@yahoo.com


References


