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Streptococcus agalactiae bloodstream infection in non-pregnant adults: single-centre experience of an emerging clinical problem

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Background: Streptococcus agalactiae, commonly referred as group B Streptococcus (GBS), is a major pathogen in neonates and pregnant women. In recent years, a growing number of invasive GBS infections in non-pregnant adults has been reporting. However, the significance of GBS disease in this setting has not been clearly defined.

Material/methods: Retrospective study of all adult (≥18 years) patients diagnosed of GBS bloodstream infection (BSI) at our 1420-bed tertiary teaching hospital, over 4-year period. Pregnant and peri-partum cases were excluded. Underlying conditions, clinical severity at BSI onset, BSI complications and outcomes were analysed. Patients with GBS BSI were further compared with adults diagnosed of Staphylococcus aureus (SA) and Enterococcus spp. (E) BSI over the same study period in our hospital, matched at a ratio 1:1:1 by sex, age, and Charlson comorbidity index.

Results: Twenty-eight non-pregnant adults with monomicrobial GBS BSI were identified: 15 (53.6%) were male, median age was 63.5 (IQR 51-79) years, median Charlson 5 (IQR 4-6). BSI was classified as community-acquired, healthcare-associated and nosocomial in 61%, 25%, and 14% of cases, respectively. At BSI onset 29% of patients presented with severe sepsis/septic shock and 35.7% had a Pitt score ≥ 2 . BSI source was unidentified in 4 cases, in the others it was deemed to be abdomen (27%), skin and soft tissues (21%), respiratory tract (18%), genitourinary tract (14%) and central venous catheter (4%). Echocardiography was performed in 14 (50%) patients yielding infective endocarditis (IE) in 3 (21.4%). Clinical response at 7 days after index blood-cultures was observed in 21 (75%) patients, 28-day mortality rate was 21%. Comparison of patients with GBS, SA and E-BSI is showed in the Table. Although the proportion of patients studied with echocardiography was significantly lower in the GBS cases, the rate of IE was relevant in this group.

Conclusions: We found that GBS BSI in adult non-pregnant patients is associated with poor outcome and ruling out IE seems to be advisable in this setting. A large multicentre study could be helpful to confirm these findings.

	GBS n=28 (%)	SA n=28 (%)	E n=28 (%)
Age (median, IQR)	63, 51-79	61, 49-79	67, 50-76
Male sex	15 (54)	17 (61)	16 (57)
Charlson index	5, 4-6	5, 4-8	5, 4-8
Community acquired-BSI	17 (61)	16 (57)	11 (39)
Severe sepsis-septic shock	8 (29)	8 (29)	5 (18)
Unidentified source	4 (14)	8 (29)	4 (14)
Abdomen	8 (29)	1 (4)	8 (29)
SSTI	6 (21)	4 (14)	2 (7)
Lung	5 (18)	2 (7)	0
Genitourinary tract	4 (14)	1 (4)	3 (11)
Central-venous-catheter	1 (4)	10 (36)	8 (29)
Infective endocarditis	3 (11)	4 (14)	3 (11)
	3/14 (21)	4/24 (13)	2/22 (14)
All-cause mortality at 28 days	6 (21)	2 (7)	2 (7)