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eP104 - Outcome in patients with community-onset bacteraemia and septic shock: pathogen species and infection sites are associated with mortality

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Introduction

We evaluated the influence of the causative pathogen and infection site on 30-day mortality from septic shock related to community-onset bloodstream infection (Co-BSI).

Methods

A 7-year prospective cohort database was used. We included all consecutive Co-BSI episodes with septic shock admitted to a large university tertiary care hospital. Co-BSI was defined as either healthcare-associated or community-acquired BSI. A stepwise forward logistic regression analysis with death at 30 days as the dependent variable was made.

Results

During the study period 582 episodes of septic shock occurred in patients with Co-BSI. 211 (36.3%) patients had a solid organ or haematological malignancy. The most frequent infection sites were urinary tract (27.5%); respiratory tract (16.3%) and unknown focus (14.8%). Escherichia coli (43.5%) was the most common isolate, followed by Streptococcus pneumoniae (9.6%), Klebsiella species (9.3%), Staphylococcus aureus (8.1%) and Pseudomonas aeruginosa (7.0%). In 65 (11.2%) episodes the empirical antibiotic treatment was inappropriate. The 30-day mortality rate was 33.7%. **Table 1** summarizes the results of the multivariate analysis on factors associated to mortality.

Conclusions

In patients with septic shock in Co-BSI appropriate empirical therapy is the main modifiable prognostic factor. Some characteristics of the infectious process, as selected sources (non-catheter related endovascular) and causative microorganism (S. aureus and P. aeruginosa) also exert a strong prognostic effect. These findings suggest that there is still room for optimising management of the source and of S. aureus and P. aeruginosa BSI for improving outcomes in this setting.

Table 1	Survivors N= 386	Exitus N=196	Multivariate OR (95%)
<50	77 (19.9)	27 (13.8)	Reference
50-64	98 (25.4)	50 (25.5)	-
65-79	143 (37.0)	56 (28.6)	-
>=80	68 (17.6)	63 (32.1)	6.87 (3.39-13.91)
Healthcare associated BSI	137 (35.5)	103 (52.6)	1.44 (1.14-1.83)
Ultimately or rapidly fatal underlying disease (McCabe)	162 (42.0)	123 (62.8)	1.94 (1.22-3.09)
Liver cirrhosis	34 (8.8)	34 (17.3)	2.99 (1.58-5.66)
Haematopoyetic stem-cell transplantation	7 (1.8)	9 (4.6)	4.75 (1.40-16.15)
Focus			
Urinary tract	118 (30.6)	42 (21.4)	Reference
Unknown	43 (11.1)	43 (21.9)	-
Biliar	48 (12.4)	16 (8.2)	-
Respiratory tract	59 (15.3)	36 (18.4)	-
Catheter	29 (7.5)	6 (3.1)	0.29 (0.09-0.88)
Intraabd	42 (10.9)	26 (13.3)	-
Endovascular (no catheter)	10 (2.6)	14 (7.1)	3.62 (1.23-10.65)
Skin	6 (1.6)	6 (3.1)	-
Others	31 (8.0)	7 (3.6)	-
Inappropriate empirical antibiotic treatment	31 (8.0)	35 (17.3)	2.70 (1.47-4.95)
S. aureus	19 (4.9)	28 (14.3)	3.81 (1.74-8.37)
P. aeruginosa	19 (4.9)	22 (11.2)	2.56 (1.18-5.57)

References

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