Epidemiology and Infection

The updated Charlson comorbidity index is a useful predictor of mortality in patients with *Staphylococcus aureus* bacteraemia.

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Supplementary Material

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| Supplementary table S4. Univariate analysis of differences in characteristics of patients with *Staphylococcus aureus* bacteraemia according to categorized classical and updated Charlson Comorbidity Index. | | | | | | |
|  | Classical CCI | | *P* | Updated CCI | | *P* |
|  | ≤ 2  (n=96) | ≥ 3  (n=161) | ≤ 3  (n=168) | ≥ 4  (n=89) |
| Age (years), median (interquartile range) | 79.5 (19.6) | 77.6 (14.2) | 0.4 | 78.9 (15.7) | 77.0 (15.6) | 0.6 |
| Sex: male | 57 (59.4) | 110 (68.3) | 0.1 | 104 (61.9) | 63 (70.8) | 0.2 |
| Origin of bacteraemia: Community acquired | 50 (52.1) | 53 (32.9) | 0.002 | 72 (42.9) | 31 (34.8) | 0.2 |
| Previous invasive procedures | 50 (52.6) | 106 (65.8) | 0.04 | 99 (59.3) | 57 (64.0) | 0.5 |
| Vascular catheter | 48 (50.0) | 100 (62.1) | 0.06 | 94 (56.0) | 54 (60.7) | 0.5 |
| Central vascular catheter | 20 (20.8) | 57 (35.4) | 0.01 | 51 (30.4) | 26 (29.2) | 0.8 |
| Previous urinary bladder catheter | 39 (40.6) | 67 (41.6) | 0.9 | 72 (42.9) | 34 (38.2) | 0.5 |
| Previous admission (30 days) | 24 (25.0) | 63 (39.1) | 0.02 | 53 (31.5) | 34 (38.2) | 0.3 |
| Previous antibiotic treatment (30 days) | 24 (25.0) | 59 (36.6) | 0.05 | 49 (29.2) | 34 (38.2) | 0.1 |
| Immunosuppressant treatment | 14 (14.6) | 42 (26.1) | 0.03 | 28 (16.7) | 28 (31.5) | 0.006 |
| Previous surgery | 13 (13.5) | 30 (18.6) | 0.3 | 29 (17.3) | 14 (15.7) | 0.8 |
| Previous ICU admission | 10 (10.4) | 13 (8.1) | 0.5 | 16 (9.5) | 7 (7.9) | 0.7 |
| Previous mechanical ventilation | 4 (4.2) | 7 (4.3) | 1 | 6 (3.6) | 5 (5.6) | 0.5 |
| Neutropenia | 1 (1.0) | 10 (6.2) | 0.06 | 4 (2.4) | 7 (7.9) | 0.05 |
| Focus |  |  |  |  |  |  |
| Pulmonary | 12 (12.5) | 34 (21.1) | 0.08 | 25 (14.9) | 21 (23.6) | 0.08 |
| Shock at presentation | 23 (24.0) | 41 (25.5) | 0.8 | 38 (22.6) | 26 (29.2) | 0.2 |
| DIC at presentation | 12 (12.5) | 24 (14.9) | 0.6 | 21 (12.5) | 15 (16.9) | 0.3 |
| ARDS at presentation | 14 (14.6) | 35 (21.7) | 0.2 | 26 (15.5) | 23 (25.8) | 0.04 |
| Pitt Bacteraemia Score, median (interquartile range) | 1 (4) | 1 (4) | 0.4 | 1 (4) | 2 (4) | 0.8 |
| Pitt Bacteraemia Score: ≥ 2 | 35 (36.5) | 65 (40.6) | 0.5 | 63 (37.7) | 37 (41.6) | 0.5 |
| Embolic phenomena | 20 (20.8) | 16 (9.9) | 0.02 | 29 (17.3) | 7 (7.9) | 0.04 |
| Persistent bacteraemia | 23 (24.0) | 26 (16.1) | 0.1 | 31 (18.5) | 18 (20.2) | 0.7 |
| Appropriate empirical antibiotic treatment | 70 (72.9) | 110 (68.3) | 0.4 | 124 (73.8) | 56 (62.9) | 0.07 |
| Methicillin resistant *S.aureus* | 24 (25.0) | 55 (34.4) | 0.1 | 48 (28.6) | 31 (35.2) | 0.3 |
| Vancomycin MIC > 1 | 11 (21.2) | 28 (35.4) | 0.08 | 24 (29.3) | 15 (30.6) | 0.9 |
| ICU admission during follow-up | 15 (15.8) | 18 (11.2) | 0.3 | 25 (15.0) | 8 (9.0) | 0.2 |
| Mechanical ventilation during follow-up | 11 (11.6) | 17 (10.6) | 0.8 | 20 (12.0) | 8 (9.0) | 0.5 |
| 30-days mortality | 23 (24.0) | 42 (26.1) | 0.7 | 35 (20.8) | 30 (33.7) | 0.02 |
| a To calculate CCI the following comorbid conditions were mutually exclusive: diabetes with chronic complications and diabetes without chronic complications; mild liver disease and moderate or severe liver disease; and any malignancy and metastatic solid tumour.  Abbreviations: cCCI= classical Charlson comorbidity index; uCCI= updated Charlson comorbidity index. DIC= disseminated intravascular coagulation. ARDS= acute respiratory distress syndrome. MIC= minimum inhibitory concentration. ICU= intensive care unit. | | | | | | |