**Lumbar puncture performed promptly or after neuroimaging in adult bacterial meningitis: A prospective national cohort study evaluating different guidelines**

Martin Glimåker et al.

Supplement Figure 1. Annual adherence to different guidelines regarding recommendations for prompt lumbar puncture (LP) vs. computerized tomography (CT) of the brain before LP during 2008 to 2015 in 690 patients with available data for evaluation of guidelines.

Supplement Table 1. Odds ratios for mortality during hospital stay and favorable outcome at follow-up after 2-6 months related to adherence to different guidelines.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Mortality** | | | | **Favorable outcome** | | | |
|  | Unadjusted OR | | Adjusted OR1 | | Unadjusted OR | | Adjusted OR1 | |
| *Guidelines* | Not adherence | Adherence  (95% CI) | Not adherence | Adherence  (95% CI) | Not adherence | Adherence  (95% CI) | Not adherence | Adherence  (95% CI) |
| **Swedish** | 1 (ref) | 0.46  (0.25-0.85) | 1 (ref) | 0.48  (0.26-0.89) | 1 (ref) | 1.63  (1.19-2.27) | 1 (ref) | 1.52  (1.08-2.12) |
| **ESCMID** | 1 (ref) | 0.66  (0.37-1.17) | 1 (ref) | 0.68  (0.38-1.23) | 1 (ref) | 1.10  (0.80-1.52) | 1 (ref) | 1.05  (0.75-1.47) |
| **IDSA** | 1 (ref) | 1.08  (0.60-1.93) | 1 (ref) | 1.09  (0.61-1.95) | 1 (ref) | 0.59  (0.42-0.82) | 1 (ref) | 0.59  (0.42-0.82) |

1Adjustment was made for sex, age, typical symptom-triad (fever, headache and neck stiffness), septic shock, and aetiology.

ESCMID = European Society for Clinical Microbiology and Infectious Diseases

IDSA = Infectious Disease Society of America

OR = Odds Ratio

CI = Confidence interval

Supplement Table 2. Distribution of covariates included in the multivariate model (Supplement Table 1) according to adherence to guidelines.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Followed Swedish Guidelines | | Followed ESCMID Guidelines | | Followed IDSA  Guidelines | |
|  | Yes (n=334) | No (n=356) | Yes (n=364) | No (n=326) | Yes (n=394) | No (n=296) |
| Age |  |  |  |  |  |  |
| Median | 61 | 63.5 | 61 | 64 | 61.5 | 63 |
| Range | 17-95 | 18-92 | 17-95 | 18-92 | 17-95 | 18-91 |
| Interquartile range | 48-70 | 48-72 | 47-70 | 49-72 | 47-71 | 49-71 |
| Male/Female, n | 166/168 | 187/169 | 198/166 | 155/171 | 215/179 | 138/158 |
| Triad of fever, headache, and neck stiffness, n (%) | 92 (27.5) | 100 (28.1) | 92 (25.3) | 100 (30.7) | 109 (27.7) | 83 (28.0) |
| Septic shock, n (%) | 28 (8.3) | 25 (7.0) | 32 (8.8) | 21 (6.4) | 36 (9.1) | 17 (5.7) |
| Aetiology, n (%) |  |  |  |  |  |  |
| *S. pneumoniae* | 157 (47.0) | 201 (56.5) | 175 (48.1) | 183 (56.1) | 201 (51.0) | 157 (53.0) |
| *N. meningitidis* | 49 (14.7) | 25 (7.0) | 46 (12.6) | 28 (8.6) | 42 (10.7) | 32 (10.8) |
| Other bacteria/ Unidentified aetiology | 128 (38.3) | 130 (36.5) | 143 (39.3) | 115 (35.3) | 151 (38.3) | 107 (36.2) |

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Supplement Table 3. Odds ratios for 14-day mortality during hospital stay related to adherence to different guidelines.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Mortality** | | | |
|  | Unadjusted OR | | Adjusted OR1 | |
| *Guidelines* | Not adherence | Adherence  (95% CI) | Not adherence | Adherence  (95% CI) |
| **Swedish** | 1 (ref) | 0.41  (0.18-0.95) | 1 (ref) | 0.43  (0.28-0.996) |
| **ESCMID** | 1 (ref) | 0.57  (0.26-1.23) | 1 (ref) | 0.58  (0.27-1.29) |
| **IDSA** | 1 (ref) | 1.00  (0.47-2.15) | 1 (ref) | 1.05  (0.48-2.28) |

1Adjustment was made for sex, age, typical symptom-triad (fever, headache and neck stiffness), septic shock, and aetiology.

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