Strongyloidiasis and Culture-Negative Suppurative Meningitis, Japan, 1993–2015

Technical Appendix

We extracted the data of patients with strongyloidiasis from our cohort, the results of which are shown in the appendix table. The age ranged from 40 to 83 years (median, 57.5 years). All patients were born in or before the year 1960. Among 18 patients with strongyloidiasis, 83.3% (15 patients) were male. Common chief complaints included headache, fever, altered mental status, and nausea and vomiting. Seventeen patients (94.4%) were found positive for HTLV-1 infection. Of 18 patients with strongyloidiasis, 8 (44.4%) presented with culture-positive meningitis, and 10 (55.6%) culture-negative. Culture results were positive for Klebsiella pneumoniae, Streptococcus galloyltyicus, and Streptococcus infantarius.

Technical Appendix Table. Demographic, clinical, and laboratory characteristics of patients with strongyloidiasis, Japan, 1993–2015*

| Characteristic                        | Strongyloidiasis-positive patients (n = 18) |
|--------------------------------------|-------------------------------------------|
| Demographic and clinical characteristics |                                           |
| Age, median (range)                  | 57.5 (40–83)                              |
| Birth year (%)                       |                                           |
| 1910–19                              | 1 (5.6)                                   |
| 1920–29                              | 3 (16.7)                                  |
| 1930–39                              | 2 (11.1)                                  |
| 1940–49                              | 4 (22.2)                                  |
| 1950–59                              | 6 (33.3)                                  |
| 1960–69                              | 2 (11.1)                                  |
| 1970–                                | 0 (0)                                     |
| Male (%)                             | 15 (83.3)                                 |
| Chief complaints (%)                 |                                           |
| Headache                             | 11 (61.1)                                 |
| Fever                                | 8 (44.4)                                  |
| Altered mental status               | 4 (22.2)                                  |
| Nausea/vomiting                      | 4 (22.2)                                  |
| Immunocompromised status (%)         |                                           |
| HTLV-1 infection                     | 17 (94.4)                                 |
| Diabetes mellitus                    | 0 (0)                                     |
| Cirrhosis                            | 1 (5.6)                                   |
| Steroid use                          | 1 (5.6)                                   |
| Mortality (%)                        | 3 (16.7)                                  |
| Type of associated meningitis (%)    |                                           |
| Culture-positive                     | 8 (44.4)                                  |
| Culture-negative                     | 10 (55.6)                                 |
| CSF characteristics                  |                                           |
### Characteristic

| Strongyloidiasis-positive patients (n = 18) |
|--------------------------------------------|
| Neutrophil count (%)                      |
| 500–2,999/mm³                              | 10 (55.6) |
| 3,000–5,999/mm³                            | 2 (11.1)  |
| 6,000–9,999/mm³                            | 2 (11.1)  |
| >10,000/mm³                                | 2 (11.1)  |
| Glucose <40mg/dL (%)                        | 10 (55.6) |

#### Bacteriological characteristics

| Blood culture (%)                           |
|---------------------------------------------|
| Klebsiella pneumoniae                       | 5 (27.8)  |
| Streptococcus galolyticus                   | 4 (22.2)  |
| Streptococcus infantarius                   | 1 (5.6)   |
| Negative                                    | 9 (50.0)  |

| CSF culture (%)                             |
|---------------------------------------------|
| K. pneumoniae                               | 2 (11.1)  |
| S. galolyticus                              | 5 (27.8)  |
| S. infantarius                              | 1 (5.6)   |
| Negative                                    | 10 (55.6) |

*CSF, cerebrospinal fluid; HTLV-1, human T-cell lymphotropic virus type 1.*