Multilocus Sequence Typing of Two Strains of *Burkholderia pseudomallei* from Melioidosis Patients in the Philippines

**INTRODUCTION**

Melioidosis is an infection caused by gram-negative bacillus, *Burkholderia pseudomallei*, that is common in Thailand and Northern Australia. However, the prevalence in the Philippines is still unknown. To understand the epidemiology of melioidosis, it is imperative to know the dynamics of its infectious agent. One of the widely used methods to establish *B. pseudomallei* endemcity is through a genotyping technique called multilocus sequence typing (MLST). MLST harnesses the discriminating power of multiple housekeeping genes or markers to differentiate bacterial isolates.

**METHODOLOGY**

**CLINICAL PRESENTATION**

**64/MALE**

Psoas Abscess
Clinical specimen: ABSCESS

**57/ FEMALE**

Pneumonia
Clinical specimen: BLOOD

**DNA EXTRACTION**

**BLOOD AGAR**

MAC CONKEY AGAR

ASHDOWN AGAR

B. PSEUDOMALLEI-SPECIFIC TTSS-1 PCR REAL-TIME ASSAY

**MLST**

**RESULTS**

<table>
<thead>
<tr>
<th>SPECIMEN</th>
<th>PHENOTYPIC</th>
<th>SUSCEPTIBILITY PATTERN</th>
<th>STRAIN NAME</th>
<th>SEQUENCE TYPE (ST)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psoas Abscess</td>
<td>Gram negative</td>
<td>White Colonies</td>
<td><em>B. pseudomallei</em></td>
<td>Excellent</td>
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</tbody>
</table>


**CONCLUSION**

This paper presents current data showing both phenotypic and molecular features of two (2) clinically-isolated strains of *B. pseudomallei*. Phenotypic data showed white colonies and light pink colonies on Blood Agar and MacConkey Agar respectively and wrinkled purple colonies on Ashdown's agar. On the other hand, amplification of housekeeping genes or molecular markers and its subsequent MLST showed that one of the isolates (UMSS strain) is part of an already established group of *B. pseudomallei* strains. In contrast, the other isolate (St. Luke's strain) is a new ST that is a part of a rather interesting group of *B. pseudomallei*, which has a relatively diverse host interaction and seems to share a common place of origin.

Although this paper reports typing of only two (2) *Bp* strains, the findings here suggest that more MLST should be done on more *Bp* clinical samples to better understand the distribution and epidemiology of melioidosis in the Philippines.

**REFERENCES**


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