

## **Bacterial Profile and Associated Factors with Pus Culture Positivity from Pus Samples**

S. Shiffana<sup>1\*</sup>, S. Subani<sup>2</sup>, S. Ekanayaka<sup>2</sup>

<sup>1</sup>*School of MLT, Peradeniya, Sri Lanka*

<sup>2</sup>*BH Gampola, Gampola, Sri Lanka*

*\*sshiffana@gmail.com*

Introduction: Pus is caused by bacterial infection that can be developed anywhere in the body. Several factors are associated with the prevalence of pyogenic infections caused by bacterial etiologies. The current study aimed to assess bacterial profile of pus culture isolates and associated factors with pus culture positivity. A total of 210 pus culture samples were collected from Base Hospital Gampola over the period from March to June 2023. The ethical approval was obtained from the ethical review committee, National Hospital, Kandy. Following type of samples were included such as wound swab, pus and Lower Vaginal swab (LVS). Collected pus samples were processed to identify the causative bacterial pathogens and antibiogram according to the international guidelines provided by Sri Lanka College of Microbiologists. Frequencies of the variables entered into an excel sheet. Chi-Square test was employed to compare the association between variables. Among 210 pus culture samples, various types of organisms were observed such as Coliforms (75,35.7%), *Staphylococcus aureus* (43,20.5%), *Pseudomonas* spp (29,13.8%), Coagulase Negative Staphylococci (CNS) (14,6.7%) and Gram-Negative Coccobacilli (GNCB) (6,2.9%). Coliform was the most common isolate. 43.84% of coliforms isolated as ESBL while 41.86% were isolated as MRSA. In the present study, a significant relationship ( $p=0.003$ ) was noted between the isolated organisms with IPD and OPD. There was a significant relationship observed ( $p=0.042$ ) between the type of samples and the microorganisms isolated. The current study indicated the significant relationship between age groups and MRSA isolates ( $p=0.034$ ), gender and ESBL isolates ( $p=0.028$ ), type of samples and MRSA isolates ( $p=0.029$ ). There was no significant relationship between ABST patterns of isolates with respect to the defined variables in the current study. The present study revealed the most prevalent pathogen on pus culture samples. This investigation can be used for identifying the high-risk individuals related to pyogenic infections.

**Keywords:** Bacterial profile, Pus culture isolates, Associated factors, Pus samples.

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