

OP 04

Prevalence of asymptomatic bacteriuria and associated factors in type 2 diabetes patients attending the diabetic center, Teaching Hospital, Jaffna

Kalaiagan S^{*1}, Priyanthan J¹, Dhilukshan N¹, Losana.K¹, Gnanakarunyan TJ¹

¹Department of Medical Laboratory Science, Faculty of Allied Health Sciences, UoJ

*sivanesathuraikalaiagan27@gmail.com

Introduction: Type 2 diabetes mellitus (T2DM) is a chronic disease characterized by insulin resistance and hyperglycemia, leading to a high infection risk. Urinary tract infections (UTIs) may impair renal function. Asymptomatic bacteriuria (ASB) is commonly observed in diabetics and may contribute to complications if undetected. This study is important as there is a lack of data in northern Sri Lanka.

Objective: To determine the prevalence of asymptomatic bacteriuria and associated factors in type 2 diabetes patients attending the diabetic center, Teaching Hospital Jaffna.

Methodology: A descriptive cross-sectional study was conducted among 244 T2DM patients without symptoms of UTI, selected through systematic random sampling. Clean-catch midstream urine samples were processed using routine microbiological methods for culture and identification of isolates. Data were analyzed using SPSS version 20, and the chi-square test was used. ($p < 0.05$ is significant).

Results: Out of 244 patients, 63.1% were female and 36.9% male. ASB was detected in 10.7% (26/244), predominantly in females (65.4%). Median diabetes duration was 6.5 years; mean eGFR was 81.6 ml/min/1.73m². The mean age of the participants was 58 years. Out of 26 bacteria isolated, Coliform species (12) were the most common isolates, followed by coagulase-negative *Staphylococcus* (5), *Streptococcus* (3), *Acinetobacter* (3), *Pseudomonas* (1), *Enterococcus* (1), and *Proteus spp* (1). Significant associations were observed between ASB and reduced eGFR ($p = 0.004$) and diabetic nephropathy ($p = 0.036$). No significant associations were found with age ($p = 0.346$), sex ($p = 0.800$), duration of diabetes ($p = 0.973$), HbA1c ($p = 0.513$), fasting glucose ($p = 0.442$), BMI ($p = 0.995$), hypertension ($p = 0.533$), and urine microalbumin ($p = 0.095$).

Conclusion: ASB prevalence was 10.7% and was significantly associated with reduced eGFR and diabetic nephropathy. Findings highlight the need for further studies.

Keywords: Asymptomatic bacteriuria, Type 2 diabetes mellitus, Urinary tract infection