

## **Benzathine Penicillin Prophylaxis: Is it effective in recurrent lower limb cellulitis?**

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**Introduction** Recurrent cellulitis of lower limbs carries significant morbidity and frequent hospital admissions. Benzathine penicillin is utilized for prophylaxis as it is sensitive to the predominant organism (streptococcus) which causes cellulitis.

**Objective:** To evaluate the effectiveness of four weekly intramuscular injections of 1.2 million Units (MU) of Benzathine penicillin and the causes of treatment failure

**Method** All patients under the care of the university surgical unit, teaching hospital Jaffna, on monthly Benzathine penicillin 1.2 MU intramuscular injection for more than 12 months were included for the analysis. Data were obtained from patients and clinic records through interviewer-administered questionnaires. Data were analyzed with SPSS 20 and Paired t test.

**Results** A total of 163 patients were included in this study and 63.2% were males. The mean age was 64.4 years and 44.6% of patients had lymphoedema on clinical examination. The mean duration of injection was 51.6 months. About 13 patients (8%) had prophylaxis failure and 158 reported improvements in quality of life. It was noted that during the pre-prophylaxis period the average number of infective episodes per patient-year was 2.4, the average number of admissions per patient-year was 1.7, and the mean hospital admission

days per patient-year was 13.9. During the prophylaxis, average infective episodes were 0.09 per patient-year with the average number of admissions of 0.05 per patient-year and mean hospital admissions of 0.3 days per person-year. All the values are statistically significant ( $p < 0.001$ ). In addition, a statistically significant association was found between prophylaxis failure and the presence of dermatitis ( $p = 0.035$ ). No significant correlation was observed between prophylaxis failure and comorbidities such as diabetes mellitus, ischemic heart disease, varicose veins, chronic kidney disease, body mass index, body surface area, or gender of the patients.

**Conclusion** Benzathine penicillin 1.2 MU intramuscular injections, given at 4 weekly intervals was effective in our population when compared to the pre prophylaxis period. The presence of dermatitis was found to be a major reason for prophylaxis failure.