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Green Nail Syndrome from Serratia marcescens in a 62-Year-Old Filipino Female

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Introduction & Objectives:

Green nail syndrome (GNS), also known as chloronychia, is an infectious disorder characterized by greenish discoloration of the nail plate, most commonly associated with *Pseudomonas aeruginosa*. However, other microorganisms may occasionally be implicated. We report a rare case of GNS caused by *Serratia marcescens*, a gram-negative bacillus typically unassociated with this condition.

Materials & Methods:

We report the case of a 62-year-old female with a history of hypertension and a seven-year history of non-insulin-dependent diabetes mellitus, maintained on Gliclazide 60 mg once daily and a combination of Linagliptin and Empagliflozin after dinner. She presented with a solitary green discoloration on the right ring fingernail, without associated pain, pruritus, or reported exposure to detergents, trauma, or prolonged moisture.

Results:

Nail clipping analysis revealed a few squamous epithelial cells and rare gram-positive cocci in pairs. However, culture and sensitivity tests demonstrated a heavy growth of *Serratia marcescens*, sensitive to amikacin, cefepime, ceftazidime, ciprofloxacin, gentamicin, trimethoprim-sulfamethoxazole, ceftriaxone, ertapenem, and meropenem; but resistant to cefuroxime, amoxicillin/clavulanic acid, cefoxitin, and cefuroxime axetil. The patient was treated with topical application of distilled white vinegar twice daily for one month and oral ciprofloxacin 500 mg twice daily for 7 days. Marked improvement in nail discoloration and overall nail appearance was noted after treatment.

Conclusion:

This report documents a rare case of green nail syndrome attributed to *Serratia marcescens*, a pathogen uncommonly associated with this condition. It highlights the importance of considering less common pathogens in the differential diagnosis of green nail syndrome, particularly in patients with underlying comorbidities such as diabetes mellitus. Accurate microbiological identification is essential to guide effective, targeted therapy and improve clinical outcomes in atypical presentations.