



## COMPLICATED SKIN AND SOFT TISSUE INFECTION CAUSED BY ISOLATED VIRULENT ESCHERICHIA COLI IN PREVIOUSLY INFECTED FILARIASIS

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### KEYWORDS :

#### Background:

*E. coli* is the most important species encountered as a human pathogen. *E. coli* are Gram-negative, facultative, rod-shaped bacteria that naturally inhabit the gastrointestinal tract. *E. coli* can cause infection, particularly within the urinary tract. They are also associated with skin infections in regions in close proximity to the rectum, particularly with incontinent individuals. Individuals undergoing surgical procedures associated with the gastrointestinal tract and lower regions of the spine are also at risk of contracting infection. Cellulitis is an acute spreading infection of the skin, extending till subcutaneous tissues. In United States as reported by the SENTRY Antimicrobial Surveillance Program and the CDC's Guidelines for Prevention of Surgical Site Infection out of 5873 cases studied, 422 were *E. coli* isolated cases. Skin and soft tissue infections (SSTI) secondary to *E. coli* bacteraemia have been reported exclusively in immunodeficient patients.

#### Case Report:

A 62-year male with hypertension since 5 years on regular medication, left leg filariasis since 3 years, underwent fasciotomy 1 year back, as comorbidities presented with fever since 8 days, pain, swelling, multiple ulcers over the left leg gradually progressing extending up to hip since 8 days, breathlessness since 2 days. On arrival, the patient is tachypneic Pulse: 126/min, BP: 80/60 mmHg, SpO<sub>2</sub>: 75% on room air, RBS: 114 mg/dl, Temp: 100.6° F. Cardiovascular, Respiratory and Abdominal and neurological Examination was normal. The patient is intubated immediately, started on inotrope support, sent blood c/s, swab c/s from ulcer sites, and routine investigations ( ABG, CBC, ESR, RFT, LFT, S/E, PT, INR, APTT) were done. Treated with IV Fluids, empirical antibiotics ( piperacillin + tazobactam, linezolid ), Wound debridement and MgSO<sub>4</sub> dressing done regularly by surgeons. 2 units PRBC, 16 units platelets, 10 units FFP transfusions done, SLED done in view of severe metabolic acidosis, deranged RFT and decreased urine output. Swab c/s showed isolated *E. coli* growth sensitive to only tigecycline and colistin and started on both the antibiotics and stopped empirical antibiotics. Patient progressively improved, no further fever spikes, gradually tapered and stopped inotrope support. patient was extubated. As the patient showed persistently high BP and started on antihypertensives, but patient persistent to have decreased urine output and deranged RFT, hence continued with dialysis weekly twice. Patient got discharged and on follow-up.

#### Investigations: At the time of Admission: ABG:

pH: 7.2, pO<sub>2</sub>: 90, pCO<sub>2</sub>: 17, HCO<sub>3</sub><sup>-</sup>: 6.6, lactate: 52, TC: 25950, Hb: 6.1, PLT: 11000, ESR: 55, Serum Creatinine: 3.5, Serum Urea: 140 mg/dl, Na<sup>+</sup>: 139, K<sup>+</sup>: 5.4, Cl<sup>-</sup>: 102, Mg<sup>2+</sup>: 1.6, Ca<sup>2+</sup>: 8.6, Liver function tests: AST: 533, ALT: 159, ALKP: 115, Total Bilirubin: 4.4, Serum Albumin: 2.3, ECG and Echocardiography were normal. HIV, HBsAg, HCV: Non Reactive, USG. Abdomen and Pelvis: grade II Renal Parenchymal Changes, AV Doppler of left lower limb: no significant arterial stenosis and no evidence of Deep Vein Thrombosis.

#### At the time of Discharge:

TC: 9.6, PLT: 153000, Hb: 10.2, Serum Creatinine: 2.2, Serum Urea: 62.2, Na<sup>+</sup>: 138, K<sup>+</sup>: 3.7, Cl<sup>-</sup>: 102, Liver Function Tests: Normal,

#### Discussion & Conclusion:

This is a rare case of Complicated Skin and Soft tissue Infection (SSTI) of previously complicated filariasis of left lower limb caused by virulent *Escherichia coli* that is resistant to all the routine empirical antibiotics. Most cases of cellulitis are caused by group A streptococci, including other beta-haemolytic streptococci, *Staphylococcus*

#### REFERENCES

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