

Escherichia coli Pyomyositis (ExPEC) is a rare clinical syndrome that is the most common cause of urinary tract infections, the second-most frequent cause of neonatal bacteremia and meningitis, and is the leading cause of adult Invasive ExPEC Disease (IED) in adults.

IED is defined as an acute illness consistent with bacterial infection that is microbiologically confirmed either by the isolation and identification of *E. coli* from blood or other normally sterile body sites, or by the isolation and identification of *E. coli* from urine in a patient with signs and symptoms of invasive disease (presence of systemic inflammatory response syndrome (SIRS), sepsis or septic shock, and no other identifiable source of infection.¹

There is little definitive research available about ExPEC or IED, with the majority of research being highly constrained either by geography, time period, or patient population, making epidemiology about the disease difficult to successfully gather, assess, and report. What research does exist indicates that pyomyositis should be suspected in all immunocompromised patients complaining of muscle pain and may exhibit signs of localized muscle infection.²

Additionally, the incidence of community-acquired ExPEC bacteremia increases with age, particularly in persons aged 65+. It is estimated that 40,000 patients die of IED annually, in particular from *E. coli* sepsis. Older adults who develop healthcare-associated infections are believed to be at greatest risk of mortality from IED.

References

¹U.S. National Library of Medicine. (2021, September 21). *Study to Collect Information About Invasive Disease Caused by Extraintestinal Pathogenic Escherichia Coli-2 (EXPECT-2)*. <https://clinicaltrials.gov/ct2/show/NCT04117113#armgroup>

²Sharma, U., Schwan, W. R., & Agger, W. A. (2011). Escherichia coli pyomyositis in an immunocompromised host. *WMJ 110*(4), 182–184. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4441203/>