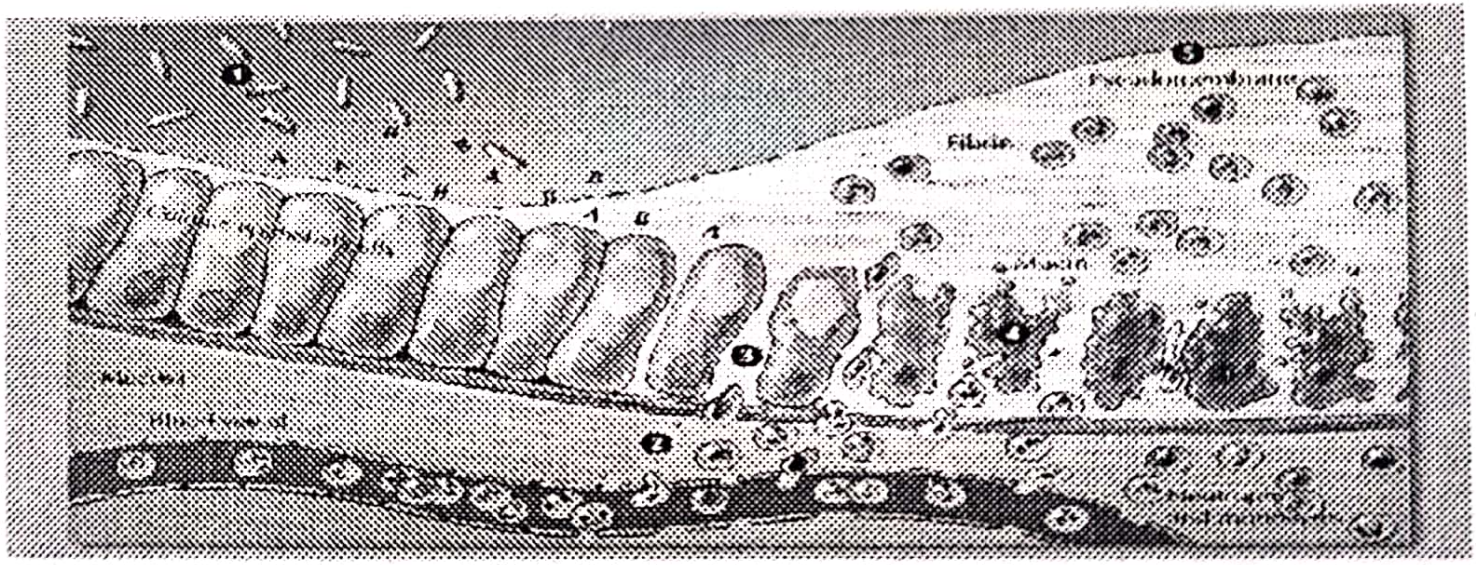
Clostridium difficile SGD

A chronic diabetic had to go for repeated dialysis due to renal failure. He was receiving third generation cephalosporins for the last ten days. He developed inflammation of colon.



1. What is the disease and its mode of transmission?
2. What are the toxins produced by the organism and pathogenesis of this disease?
3. What are clinical findings of the disease?

KEY

1. Antibiotic-associated pseudomembranous colitis
2. Organism carried in **gastrointestinal tract** in approximately 3% of general population & up to 30% of hospitalized patients. Antibiotics suppress drug-sensitive members of normal flora, allowing *C. difficile* to multiply. **Exotoxins A and B produced . C** *difficile* rarely invades intestinal mucosa. Both exotoxin A and exotoxin B are enzymes that glucosylate (add glucose to) a G protein **(GTPase).** Main effect of exotoxin B is to cause depolymerization of actin, resulting in loss of **cytoskeletal integrity**, apoptosis & death of enterocytes.
3. Non bloody diarrhea, Neutrophils in stool in about half of cases, Fever & abdominal cramping, **Pseudomembranes** (yellow-white plaques) on colonic mucosa.