QUESTION 23 - ID
A 32-year-old man has a splenectomy following a motorcycle accident. Which of the following organisms is most likely to cause overwhelming post-splenectomy infection in this man?
A. *Streptococcus pneumoniae.*
B. *Neisseria meningitidis.*
C. *Staphylococcus aureus.*
D. *Escherichia coli.*
E. *Haemophilus influenzae.*

ROLE OF THE SPLEEN
- Neutrophils in spleen ingest circulating bacteria, especially unopsonised organisms
- Spleen contains nearly half the body's total immunoglobulin-producing B cells
- So, spleen clears bacteria from circulation and also stimulates the production of opsonising antibody
- This is particularly important in the clearance of encapsulated organisms

POST-SPLENECTOMY SEPSIS
- This is a fulminant and rapidly fatal illness
- Incidence estimated to be 1/175 patient years in children and 1/400-500 patient years in adults
- More common if co-existing immunocompromised

BACTERIAL PATHOGENS
- Encapsulated organisms
- Most common is *Streptococcus pneumoniae* (>50% of infections, >50% of deaths)
- Other organisms include *Neisseria meningitides* and *Haemophilus influenzae*
- Some other uncommon organisms that may be associated with asplenia are Capnocytophaga canimorsus (from dog bites) and Bordetella holmesii (mainly in immunocompromised)

SYMPTOMS
- Need to be cautious in asplenic pts with fever
- PSS can follow minor URTI or LRTI
- Can also develop without antecedents
- Intractable rigors
- High fever
- Rapid manifestation of complications of baceraemia (such as petechiae, purpura, hypotension)

EXAMINATION
- Acutely unwell
- Tachycardia, hypotension
- May find source of sepsis (eg: otitis media, pharyngitis, sinusitis, pneumonia)
- DIC

MANAGEMENT
- ICU
- Fluid resuscitation, often need inotropes
- Empirical antibiotics:
  - Vancomycin 1g bd
  - Ceftriaxone 2g daily
Year 2004 Paper two: Questions supplied by Megan

PREVENTION
- Pneumococcal (every 5 yrs), meningococcal and H. influenzae vaccinations
- Early oral antibiotics for fever vs. daily prophylaxis
- Daily prophylaxis is debatable in adults

Answer is A – S. pneumonia most common pathogen in post-splenectomy sepsis.