Understand the pathophysiology of colorectal neoplasia in

• Recognize Streptococcus bovis (SB) bacteremia as a potential indicator of colorectal cancer.
• Understand the pathophysiology of colorectal neoplasia in the presence of SB.

Case Discussion

• A 72-year-old female arrived to the hospital with acute onset polyarthralgia.
• PMH: type 2 diabetes mellitus, stage 3 chronic kidney disease, hypertension, and anemia.
• No past colonoscopies
• ED vitals: 100.9°F, tachycardic, SpO2 99% on room air
• Labs: hemoglobin 9.9 g/dL, WBC 15.0 x 10^9 cell/dL, CRP 13.3 mg/L and ESR 19 mm/hr.
• X-ray of the right wrist showed chondrocalcinosis and Arthrocentesis of knee: cloudy specimen, WBC 32,395 cells/µL (75% neutrophils) and calcium pyrophosphate dihydrate crystals.
• Admitted for sepsis with pseudogout and received broad spectrum antibiotics. ANA and rheumatoid factor were negative.
• Blood cultures returned positive for SB.

Results

• CT abdomen and pelvis showed asymmetric mural thickening of the ileocecal valve.
• TTE showed concern for a 3 x 4 mm mobile mass on the medial tricuspid leaflet not seen on subsequent TEE.
• Colonoscopy showed multiple 7-13 mm polyps in the ascending and descending colon, a 4-7 mm polyp in the distal sigmoid colon, a 15 mm polyp in the mid-sigmoid colon and a 7 cm cecal mass.

Histopathology of the cecal mass revealed tubulovillous adenoma with high grade dysplasia/carcinoma in situ with a single focus showing desmoplastic changes.

Subsequently, a laparoscopic right hemicolectomy with a repeat colonoscopy and sigmoid polypectomy were done.

Histopathology: right hemicolecetomy specimen revealed a well-differentiated adenocarcinoma invading the submucosa with clear margins, and focal adenocarcioma in a tubulo-villous adenoma in the sigmoid polyp specimen.

She was discharged home with a PICC line to complete a four-week course of ceftriaxone.

Outpatient follow up with gastroenterology, oncology, and colorectal surgery was arranged.

Discussion

• SB are gram-positive cocci with the ability to enter the systemic circulation by bypassing the hepatobiliary reticuloendothelial system.
• Infective Endocarditis from SB can be attributed to its unique adherence ability. Possible mechanisms: special cell wall proteins, collagen-binding proteins, and extracellular matrix proteins, biofilm production.
• Association of SB and colon malignancies: causative vs incidental?
• The proinflammatory state in the colon increases cytokine production (IL-8, IL-6, IL-1, and TNF), along with cell-wall specific protein kinases which promote the progression of pre-neoplastic tissue into true cancer.
• Early detection of stage 1 rectal cancer followed by curative surgery carries an excellent prognosis with up to 90% long-term survival rates.
• This case highlights the importance of early diagnostic colonoscopy in patients with SB bacteremia followed by definitive management.

References


Figure 1: Cecal mass opposite ileocecal valve
Figure 2: Sigmoid colon polypt with central ulceration
Figure 3: Cecum - Invasive cancer into submucosa with stromal response