Question 25 – January 20

A 66 year old woman has been diagnosed with scleroderma approximately 8 years ago. She presents to you now with progressive complaints of bloating and abdominal pain particularly after meals. She's noticed diarrhea in the past but this significantly improved with a cycling of antibiotics for documented small intestinal bacterial overgrowth. This was discovered a little over 1 year ago after a glucose hydrogen breath test revealed a greater than 20 ppm rise in breath hydrogen by 2 hours. She has been on 4 different antibiotics which she takes every month for 2 weeks followed by a 2 week off cycle and then 2 weeks on a different antibiotic. She has been on these cycled antibiotics for about 13 months with a significant improvement in her weight, reduction in diarrhea and improvement in nutritional parameters. Attempts to discontinue them after 4 months of therapy were unsuccessful. However over the last 2 months she's noticed progressively worsening abdominal pain, fatigue, bloating and has started to lose weight again. She has been adherent to the cycled antibiotics and actually her primary care physician had changed 2 of them in case resistance was an issue. This did not improve the problem. He also checked a C. difficile PCR and this was normal.

Her other GI complaint includes gastroesophageal reflux disease documented by erosive esophagitis on EGD that is fairly well controlled with proton pump inhibitor therapy taken twice daily. Because of the severity of the reflux disease she was considered for a laparoscopic antireflux procedure but the surgeons were significantly concerned that dysphasia would occur and lead to further weight loss and malnutrition.

Because of the reflux disease there has been some progression of her lung disease with a slight decline in her diffusion capacity however this appears to have stabilized over the last 6 months.

Her only other significant past medical history is a history of glaucoma and migraine headaches.

She is a nonsmoker and nondrinker. Her family history is remarkable for breast cancer and coronary artery disease but no other family member has scleroderma.

Her physical exam reveals a blood pressure of 140/90 mmHg, pulse 80 bpm, respiratory 18 bpm, temperature 38.7°C.

As expected her physical exam is suggestive of scleroderma with sclerodactyly, expected facial changes, skin fragility with telangectasias. The cardiovascular exam is normal but the lung exam reveals some diffuse fine crackles bilaterally. The abdominal exam reveals slight distention, modest tympany, hypoactive bowel sounds, no organomegaly and no bruit. There is diffuse discomfort on deep palpation that she does not describe his pain but as a pressure-like sensation.

Laboratory testing is for the most part unremarkable except for a flat plate of the abdomen which demonstrates some dilatation of bowel loops but no air-fluid levels consistent with mild pseudoobstruction.

She asks you what drugs in addition to her cycling antibiotics might be of help with her symptoms at this stage her disease. The medication that is most likely to improve her gastrointestinal complaints at this time is:

A. Metoclopramide 10 mg orally 4 times daily.
B. Domperidone 10 mg to 20 mg 3-4 times daily
C. Octreotide 50-100 mcg subcutaneously at bedtime
D. Erythromycin 200 mg daily
E. Total parenteral nutrition.

Answer: C

Octreotide is the best answer at this time point for this patient. Octreotide is used in low doses only; 50-100 mcg subcutaneously at bedtime or an intramuscular long-acting release formulation at a 20 mg monthly dose (once stabilized on the subcutaneous dose) are both effective in improving gut motility in patients with advanced scleroderma. Improvement in extradigestive manifestations of scleroderma have also been reported in case studies making octreotide the best choice at this time. The enthusiasm for octreotide however must be tempered with its side effects of cholelithiasis, reduced pancreatic secretion and slow gastric emptying. The patient should be monitored for these side effects, specifically for worsening reflux which could advance her interstitial lung disease. Metoclopramide taken long-term has significant neurologic side effects that make it undesirable and although domperidone avoids most of these issues it is difficult to obtain in the U.S. and is not overly effective in advanced scleroderma gut. Erythromycin as a monotherapy has not been shown to be effective in improving scleroderma gut dysmotility syndromes however when used in conjunction with octreotide it can be a useful adjunct. Finally total parenteral nutrition should be a choice of last resort and certainly attempts at jejunal feedings should be at considered before resorting to parenteral nutrition.

References:

1. Gyger, G, Baron, M. *Gastrointestinal Manifestations of Scleroderma: Recent Progress in Evaluation, Pathogenesis, and Management.* Curr Rheumatol Rep 14:22-29, 2011