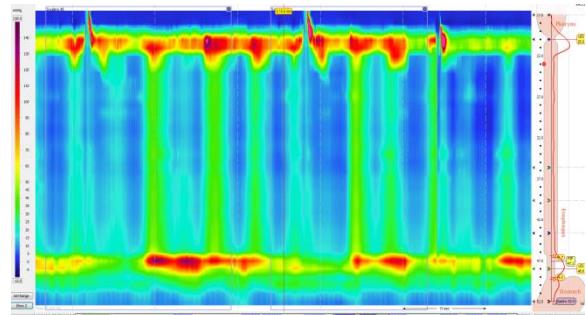


**A 38-year-old man presents with 7 years of progressive dysphagia to solids and liquids now occurring with every meal. He complains of frequent chest pain and heartburn with nocturnal regurgitation several times a week. He reports no significant weight loss. An EGD is done and is normal. An esophageal manometry is then done (see right). Which of the following is true of this condition?**

- a. Esophageal cancer occurs in 10% of patients
- b. Life expectancy is no different than the general population
- c. 60% of patients respond to conventional treatment
- d. Medical therapy is most appropriate



The correct answer is B.

This patient's clinical presentation and manometric findings are consistent with achalasia. Achalasia is defined by incomplete relaxation of the lower esophageal sphincter and aperistalsis. As no current treatments restore esophageal peristalsis, treatment is focused at diminishing resistance at the lower esophageal sphincter, typically with botulinum toxin injection, pneumatic dilation, and surgical or endoscopic myotomy. With the advent of high resolution manometry, achalasia has been further classified into three subtypes. In the case presented, the manometric findings are characteristic of type 2 achalasia which is defined by panesophageal pressurization. Type 2 achalasia has the best response to treatment, with studies suggesting over 90% response to conventional treatments. Patients with treated achalasia generally do well, with a life expectancy no different than the general population. Patients with achalasia do have an increased risk of esophageal cancer however this risk is low and therefore screening is not currently recommended.

**A 57-year-old woman on home TPN due to short bowel syndrome due to resection of a large desmoid tumor presents for yearly follow-up and laboratory monitoring. She is noted to be low in serum chromium. Which of the following do you expect to find?**

- a. Microcytic anemia
- b. Myelopathy
- c. Hyperglycemia
- d. Dermatitis
- e. Confusion

The correct answer is C.

Chromium is the enzyme cofactor for insulin action. Chromium deficiency can result in hyperglycemia, peripheral neuropathy or encephalopathy.