Case 1

A 50 year old male presented to the emergency department with 5 day history of abdominal distension and not passing stools and flatus.

On examination he was dehydrated, pulse rate was 100/min and blood pressure was 110/80 mm Hg. His abdomen was grossly distended with a tympanic resonance. On digital rectal examination the rectum was collapsed.

This is an x-ray of the abdomen.

Questions:
1. What is the diagnosis?
2. What is the characteristic sign seen here?
3. What are the treatment modalities?

Case 2

A 55 year old male who was a chronic smoker, presented with gradually worsening dyspnea and pedal edema of 6 months duration. He was a hypertensive for 10 years and had rheumatoid arthritis for 2 years. On examination he had tachycardia and tachypnea. His blood pressure was 160/100 mm Hg.

Cardiac examination revealed cardiomegaly; there were crepitations on auscultation in the inter scapular and infra scapular lung fields on both sides.

Questions:
1. Describe the clinical finding on general examination? (Clue: Look at the ear lobe)
2. What is this sign called?
3. What is the clinical significance of this sign?
4. What is the postulated hypothesis behind the same?
5. What are the other visible age related signs associated with increased risk of myocardial infarction?
Case 1:

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1. sigmoid volvulus
2. “coffee bean” sign or the bent inner tube sign - The ‘coffee bean sign’ is a classic plain x-ray finding of sigmoid volvulus. As the obstructed sigmoid colon fills up with air, it forms two air-filled compartments with a double wall in between, in the shape of a coffee bean (see image on right). An air-fluid level may be seen in each segment of dilated bowel on upright radiographs. Because the volvulus is located at the sigmoid colon, the “coffee bean” arises from the pelvis, and it may occupy the entire abdomen.
3. non operative treatment – endoscopic decompression. Operative management - sigmoidectomy or Hartmann’s procedure

Discussion:

Sigmoid volvulus: refers to torsion of a segment of the sigmoid colon which occurs when an air-filled loop of the sigmoid colon twists about its mesentery. This leads to obstruction of the lumen and in severe cases, to impairment of vascular perfusion.

Clinical features:
- Most patients with sigmoid volvulus present with the insidious onset of slowly progressive abdominal pain, nausea, abdominal distension, and constipation. Vomiting usually occurs several days after the onset of pain. The pain associated with sigmoid volvulus is usually continuous and severe, with a superimposed colicky component during peristalsis.
- Due to the insidious presentation, the majority of patients usually present three to four days after the onset of symptoms. Acute presentation may be seen in approximately 17 percent of patients - sudden onset of acute severe pain, obstipation, and vomiting. Rarely, compromise of the blood supply to the sigmoid colon may result in gangrene, peritonitis, and sepsis.
- The diagnosis may be missed in elderly patients because the symptoms may be ill-defined. Younger patients may have an atypical presentation with recurrent attacks of abdominal pain with pain free periods in between because of spontaneous detorsion.
- On physical examination the abdomen is distended and resonant on percussion, with tenderness to palpation. In some cases there may be emptiness in the left iliac fossa. Fever, tachycardia, hypotension, abdominal guarding, rigidity, and rebound tenderness are absent in the early stages of the disease, but if present are indicative of perforation and/or peritonitis.

When to suspect a volvulus:
- The condition must be suspected in patients with abdominal pain, nausea, abdominal distension, and constipation/obstipation and a physical examination that reveals a distended and tympanitic abdomen.
- The diagnosis of a sigmoid volvulus is established by imaging. Plain x-ray has an accuracy of 30-90%. CT abdomen will help in difficult cases and may provide further information.

Management:
The goal of treatment is to relieve the obstruction and prevent recurrence. Endoscopic decompression should be
attempted in hemodynamic stable patient. A patient who is hemodynamically unstable or suspected to have bowel gangrene should undergo operative intervention. This may involve a sigmoidectomy or Hartmann’s procedure.

References
• Uptodate (http://www.uptodate.com/contents/sigmoid-volvulus)

Case 2
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1. Diagonal pre-auricular crease in bilateral earlobes, which runs backward from the tragus at a 45-degree angle across the lobule to the rear edge of the auricle.

2. Presence of this diagonal ear lobe crease [DELC] is called as Frank's sign

3. This sign has been found to be an independent risk factor for coronary artery and cerebrovascular diseases. This patient’s ECG revealed sinus tachycardia with left ventricular hypertrophy. His Echocardiogram revealed left ventricular hypertrophy and global hypokinesia of the left ventricle with an ejection fraction of 42%. He was diagnosed to have ischemic dilated cardiomyopathy with decompensated cardiac failure. He was treated with appropriate failure medications, antihypertensive agents, lipid lowering agents and antiplatelet agents.

4. The two hypothesized pathophysiological mechanisms behind the same are
   1. It indicates premature aging with loss of dermal and vascular elastic fibers
   2. Higher circulating free radical oxidative stress and increase in intima-media thickness of blood vessels

A prospective cohort study including 10,885 individuals had established the above finding to be an independent risk factor for coronary artery disease. This finding had shown a moderate sensitivity (approximately 48%) and specificity (approximately 88%)

5. Presence of frontoparietal baldness, crown top baldness and xanthelasma

References: