A PATIENT WITH CHEST PAIN

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INITIAL CHEST RADIOGRAPH
CAUSES OF PNEUMOPERICARDIUM

- Penetrating trauma, e.g. stab wound
- Blunt trauma, e.g. high speed MVC
- Barotrauma, usually infants on high ventilator pressure
- Pericarditis due to gas forming organisms
- Intrapericardial perforation of lung abscess or tuberculosis cavity
- Perforated benign or malignant ulcers with bronchopericardial, esophagopericardial, and gastropericardial fistulae
- Pneumopericardium has been reported to occur from sub-diaphragmatic lesions namely anaerobic and pyogenic liver abscesses that have penetrated through the diaphragm
- Foreign body aspiration
- Vigorous Valsalva, e.g. during sports, drug use
- Acute asthma
IATROGENIC CAUSES OF PNEUMOPERICARDIUM

- Sternal bone marrow puncture
- Thoracic surgery
- Thoracocentesis and pericardiocentesis
- Dental extraction
- Endoscopic procedures
- Laparoscopy
INITIAL CHEST CT
INITIAL CHEST CT
INITIAL CHEST CT
INITIAL ABDOMINAL CT
INITIAL ABDOMINAL AND CHEST CT
INITIAL ABDOMINAL CT
UPPER GI SERIES
CHEST RADIOGRAPH DAY 2
CHEST RADIOGRAPH DAY 5
CHEST RADIOGRAPH DAY 8
CT ABDOMEN DAY 11

Pericardial drain

Pericardial effusion
CT ABDOMEN DAY 11

Pericardial drain

Oral contrast

Abdominal drain
CHEST RADIOGRAPH DAY 13
GASTROPERICARDIAL FISTULA

Gastropericardial fistula is a rare sequel of transdiaphragmatic perforation of a gastric ulcer or carcinoma.

The stomach is usually intra-thoracic:
- hiatus hernia
- diaphragmatic hernia
- after oesophagectomy with gastric pull-up

Trans-diaphragmatic perforation of a gastric carcinoma or ulcer into the pericardium, particularly in Zollinger-Ellison Syndrome, may also occur with an intra-abdominal stomach.
CONCLUSION

Gastropericardial fistula is a rare condition with high mortality

Requires a high index of suspicion, early diagnosis and prompt surgical intervention for a favorable outcome

Surgery is the definite treatment as patients rarely survive with conservative management

Definitive management includes resection of the fistula, repair of the diaphragmatic defect and dealing with the primary pathology of stomach
REFERENCES

4. Spontaneous Pneumopericardium Due to Exertion Gerald W. Westermann, MD, Barbara Suwelack, MD South Med J. 2003;96(1)
THANK YOU!