

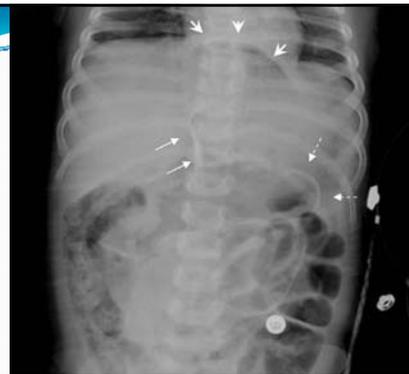
# ER-GS combined meeting

Reporter: R2 劉劭穎  
Supervisor: VS 連楚明  
990210

## Discussion

- **pneumoperitoneum**
  - In KUB
- **perforated gastric cancer**

## Pneumoperitoneum



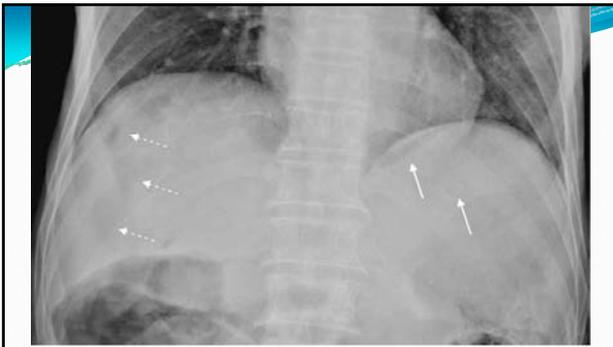
**Fig. 1** A 1-year-old female subject with cecal perforation due to chronic inflammation. The KUB shows Rigler sign (broken arrows), falciform ligament sign (straight arrows), and cupola sign (arrowheads).



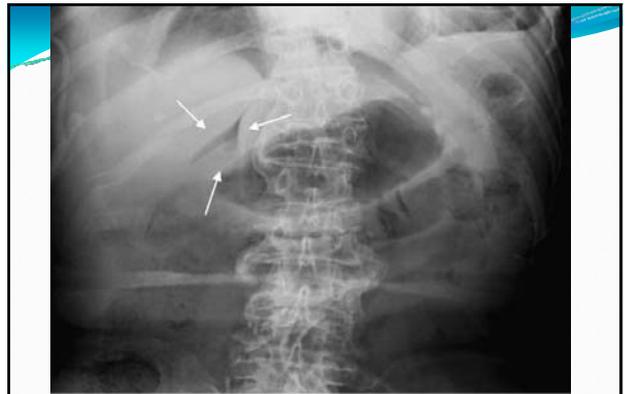
**Fig. 2** A 28-year-old female subject with perforated duodenal ulcer. The KUB shows triangle sign (broken arrows) and fissure for ligament teres sign (straight arrows).



**Fig. 3** An 83-year-old male subject with perforated duodenal ulcer. The CXR shows hyperlucent liver sign (broken arrows) and dolphin sign (straight arrows).



**Fig. 4** A 68-year-old male subject with proximal jejunum perforation due to ischemic bowel disease. The CXR shows anterior superior oval sign (broken arrows) and left anterior superior oval sign (straight arrows).



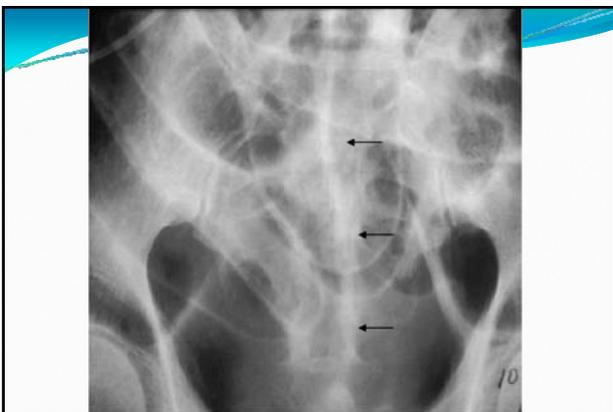
**Fig. 5** A 76-year-old male subject with pylorus perforation. The KUB shows doge cap sign (arrows).



**Fig. 6** A 77-year-old male subject with Billroth II anastomosis perforation. The KUB shows hepatic edge sign (broken arrows) and football sign (straight arrows).



**Fig. 7** A 73-year-old male subject with perforated gastric ulcer. The KUB shows inverted V sign (broken arrows) and focal radiolucency (straight arrows).



**Fig. 8** A 72-year-old male subject with perforated peptic ulcer. The KUB shows urachus sign (arrows).



**Fig. 9** A 72-year-old female subject with perforated gastric ulcer. The CXR shows bilateral subphrenic radiolucency (arrows).

## Emergency spontaneous gastric perforations: ulcer versus cancer

### □BACKGROUND:

- The spontaneous perforation of gastric cancer
  - a rare fatal complication, occurring in 1%
  - wide hospital mortality range (0-82%)
- about 10-16% of all gastric perforations
  - caused by gastric carcinoma
- The aim of this study
  - to evaluate the gastric perforations
  - and improve an alternative pathway for the management of this disorder
    - when a pathologist is not available

Langenbecks Arch Surg. 2009 Jul;394(4):643-6. Epub 2008 Apr 17

### □MATERIAL AND METHODS:

- reviewed the medical records of 513 patients
  - undergone surgical treatment for gastric perforation
  - two medical centers
    - due to gastric ulcer or gastric carcinoma
- Sixty-seven (13.06%)
  - treated for perforated gastric carcinoma
- trauma and iatrogenic causes
  - excluded

### □RESULTS:

- Who might have a gastric carcinoma
  - age more than 60 years
  - an ulcer diameter (with edema) more than 6 cm
  - perforation diameter more than 0.5 cm
  - symptom duration of more than 20 h
  - WBC less than 15000/microL
- This system has
  - specificity of 98.7%
  - sensitivity of 53.7%
  - negative predicted value of 93.4%
  - positive predicted value of 85.7%

### □CONCLUSION:

- The diagnosis of malignancy
  - often made only on postoperative
  - or operative frozen pathologic examination
- We suggest a new pathway for the gastric perforations
  - if a pathologist is not available during the operation

## Perforated gastric carcinoma: a report of 10 cases and review of the literature

### □ Background

- Perforation is a rare complication of gastric carcinoma
  - accounting for less than 1% of all gastric cancer cases
- The aim of the present study
  - to evaluate the prognostic value of perforation
  - to point out the surgical treatment options

World Journal of Surgical Oncology 2006, 4:19doi:10.1186/1477-7819-4-19

### □Methods

- 10 patients with perforated gastric carcinoma
- retrospectively reviewed
- among 2564 consecutive cases of gastric cancer
- in three Centers
- tumor stage and survival were analyzed and compared to literature data

### □ Results

- Incidence rate was 0.39%
- All patients underwent emergency surgery
  - performed gastrectomy in 6 patients (mortality 17%)
  - repair surgery in 4 patients (mortality 75%)

### □ Conclusion

- Perforation usually occurs
  - in advanced stages
- When possible,
  - emergency gastrectomy should be performed
  - leaving repair surgery for unresectable tumors
- A two-stage treatment
  - a good treatment option for frail patients with resectable tumors

## Long-term survival after gastrectomy for advanced bleeding or perforated gastric carcinoma

### □ OBJECTIVE:

- To find out whether massive bleeding or free perforation of advanced gastric carcinoma affect long term survival after gastrectomy

### □ DESIGN:

- Retrospective analysis of prospectively collected data

### □ SETTING:

- Teaching hospital, Hong Kong

### □ INTERVENTIONS:

- Gastrectomy

### □ MAIN OUTCOME MEASURES:

- Long term survival

European Journal of Surgery. 162(9):723-7, 1996 Sep

### □ RESULTS:

- 50 patients with gastric carcinoma that had penetrated the serosa (pT3)
- between 1985 and 1990
  - 17 patients with tumour free perforation
  - 10 with massive bleeding
  - 23 patients with comparable uncomplicated tumours had elective gastrectomy

### □ CONCLUSIONS:

- suggest that perforation or bleeding from advanced gastric carcinomas
  - do not significantly affect long term survival after gastrectomy

