

# General Data

- Sex: male
- Age: 28 y/o
- Birth date: 65.08.04
- Birth place: Taiwan
- Date of Admission: 93.10.22
- Date of Discharge: 93.11.04



# Chief complaint

- Tarry stool with blackish vomitus since last morning.



# Present Illness

- 93/10/21 morning
  - ➔ Blackish water stool (1 time)
  - ➔ vomiting with coffee-ground material
- 93/10/21 afternoon
  - ➔ Second episode of vomiting
  - ➔ Lost of conscious
  - ➔ Sent to ER



# Family history

- **Thalassemia: mother and patient himself**
- **Gastric ulcer: father and grand father**



# Physical examination

## ■ Vital signs

93/10/21 6:25 pm at ER

- TPR: 36/93/16

- BP : 102/60

## ■ Abdomen:

- Tenderness(+)





# Laboratory Data

## ■ 93/10/21

- WBC [5.2-12.4 x10.e3/uL] 13.43
- MCV [80-99 fL] 67.1
- MCH [27-31 pg] 22.1

## ■ 93/10/22

- OB(+++)

## ■ 93/10/23

- HGB [12-18 g/dL] 10.6

# Image Examination

- Chest PA/AP → 93/10/21
- PES → 93/10/22
- Abdominal Sono → 93/10/25
- EUS → 93/10/27
- Upper GI series → 93/10/28



# Chest PA/AP → 93/10/21



- No specific finding in CXR





**PES → 93/10/22**

- **Esophagus : Negative**
- **Stomach :**
  - There was small amount of coffee-ground retention in stomach.
  - A 5-6 cm polypoid tumor with bridging fold and smooth covering mucosa at posterior wall of high body.
  - A deep central ulcer with a bleeder at ulcer base was noted.
- **Duodenum :**
  - An ulcer with easily contacted bleeding at LCS of bulb

# Abdominal Sono → 93/10/25

## ■ Sonographic Findings:

- Liver :Parenchyma : Homogenous echogenicity of parenchyma  
lesion : No space-occupying lesion  
Portal vein : Patent
- Others :one hypoechoic mass, size about 4.3 cm in diameter at splenic hilar area, near gastric fundus

## ■ Diagnosis : abdominal tumor, nature?



# EUS → 93/10/27

## ■ Endoscopic findings :

- A huge submucosal tumor with bridging fold was found at PW of upper body.

## ■ Sonographic findings :

- A hypoechoic tumor with central mottled hyperechoic density
- The lesion was originated from 4th layer of gastric wall
- Measured about 5.4 x 3.5 cm in diameter.



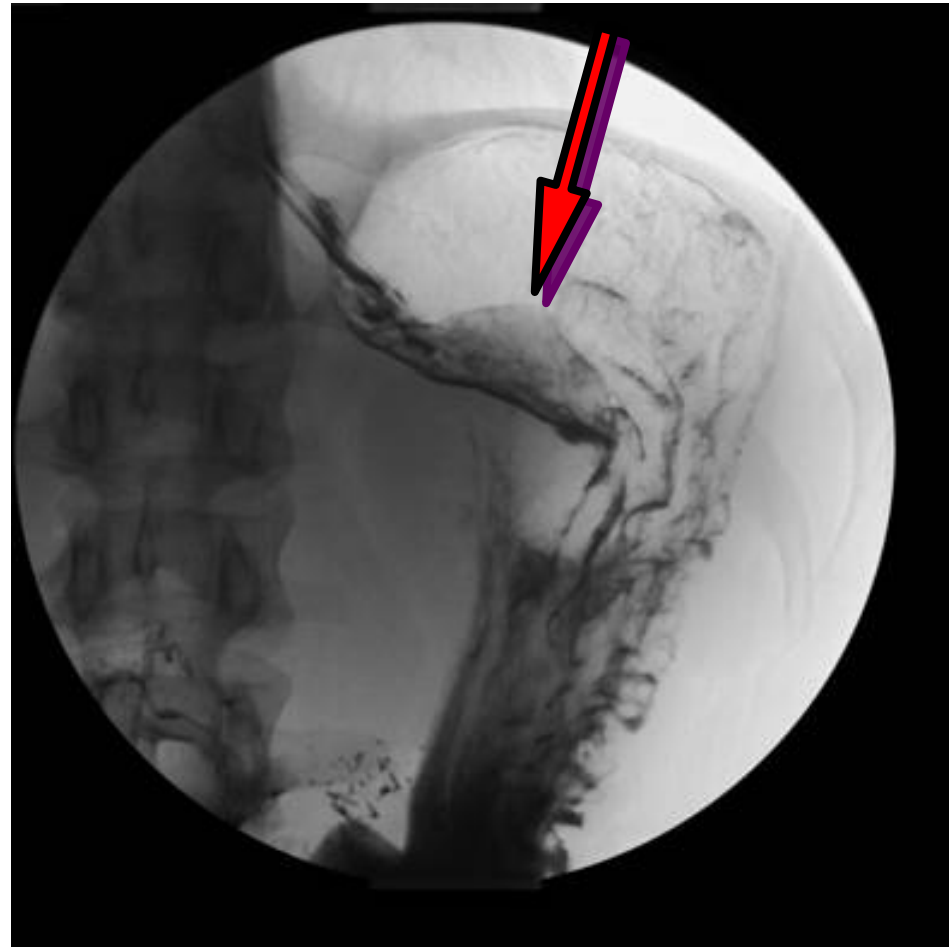


EUS → 93/10/27

- Impression :  
Submucosal tumor, Stomach
  - R/O Lymphoma,
  - R/O GIST

# Upper GI series → 93/10/28

Tumor



# Upper GI series → 93/10/28

## ■ Imaging findings :

- A well circumscribed submuscular mass is noted at the gastric high body near the EC junction without obstructed the EC junction.
- Well distension of the stomach with intact mucosal pattern.
- The passage of barium meal smooth without evident obstruction.

## ■ Impression :

Gastric submucosal tumor at the high body.



# Differential Diagnosis

1. Schwannoma
2. Gastrointestinal stromal tumor
3. Lymphoma
4. Leiomyoma



# Gastric Schwannoma

- Commonly intramural
- usually solitary tumours arising from the fundus, body or antrum of the stomach
- usually covered by intact mucosa and principally involve the submucosa and muscularis propria.
- vary from 0.5 cm to 11 cm diameter and are spherical or ovoid, occasionally with a multinodular pattern .





# GIST—UGI series

- Barium-enhanced images demonstrate predominantly intramural masses with potential exophytic components
- The tumor margins usually are smooth. En face, the intraluminal surfaces often have well-defined margins
- Intramural but extramucosal → overlying mucosa can be intact In the stomach → preserved area gastric pattern over the tumor mass
- Overlying mucosal ulcerations are often present → more common in malignant GISTs → bull's eye or target-lesion appearance



# Gastric lymphoma: UGI

1. Infiltrative, ulcerative, or nodular mass that often mimics the appearance of adenocarcinoma. Flexibility of gastric wall preserved.
2. The antrum and body are most commonly involved. Duodenum often affected when antrum involved.
3. Circumscribed mass with endogastric or exogastric growth
4. Large irregular ulcers



# Leiomyoma

- the most common smooth muscle tumor of the stomach.
- well-circumscribed but noncapsulated lesions
- They appear as large submucosal lesions on endoscopy, and endoscopic biopsies are invariably not deep enough to be of any diagnostic value.

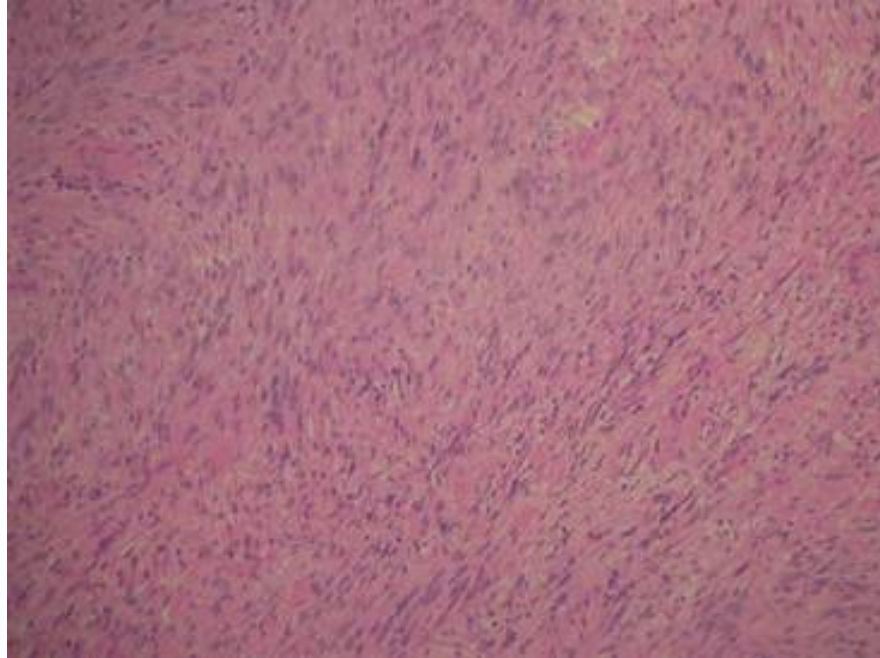


# Operation on 93/10/29

- Pre-OP diagnosis:GIST
- Post-OP diagnosis:GIST
- OP procedure:laparoscopic gastric tumor resection
- OP finding:
  - A well encapsuled yellowish tumor
  - about 5 cm in diameter
  - In the posterior wall near lesser curvature site



# Pathology



- Submucosal nodule composed of bland-looking spindle cell arranged in fascicular pattern and vague nuclear palisading.

# Pathology

- A complete lymphoid cuff around the nodular is present and perivascular lymphoid aggregates in the nodule are also noted.
- The immunohistochemical stain of S-100 protein reveals strong and diffuse immunoreactivity of tumor cell. The stain of CD117 shows negative.
- Pathology diagnosis: Stomach, laparoscopic resection, schwannoma



# Final diagnosis

- **Gastric schwannomas**





# Discussion



# Gastric schwannomas

## ■ Schwannomas

- also known as neurinoma and neurilemmoma
- benign, slow growing neoplasms originating in any nerve
- has a Schwann cell sheath.
- rarely occur in the digestive tract
- represent 0.2% of all gastric tumours .



# Gastric schwannomas

- Gastric schwannomas
  - occur more frequently in the third to fifth decade of life
  - usually solitary tumours arising from the fundus, body or antrum of the stomach
  - can occur in children and, rarely, can be malignant .
  - Commonly intramural, although they can be extraluminal or endoluminal .



# Gastric schwannomas

- Gastric schwannomas
  - usually covered by intact mucosa and principally involve the submucosa and muscularis propria.
  - vary from 0.5 cm to 11 cm diameter and are spherical or ovoid, occasionally with a multinodular pattern .
  - can be distinguished from other gastric mesenchymal tumours based on immunohistochemical or ultrastructural findings.



# Clinical presentation

- asymptomatic
- abdominal pain or discomfort
- gastrointestinal bleeding.
- palpable mass



# Lab

- Laboratory studies are not diagnostic, and no identifiable tumor markers exist



# Image

## ■ PES

→ first examination performed in the evaluation of patients with upper gastrointestinal symptoms

## → Endoscopic ultrasonography (EUS)

→ demonstrate the location of the tumor

→ define it's size, borders, and echoic pattern.



# Image

- CT&MRI

- defining the exact location and extent of the tumour

- Microscopic examination  
immunohistochemical staining

- definite diagnosis



# Treatment

- The only treatment for gastric schwannomas had been surgery
  - Prognosis of patients with this tumour is extremely favourable after resection

