

**YLLSOM SENIORS TEACHING INITIATIVE  
M3 PROGRAMMES AY14/15**

**CASE-BASED SESSION 1**

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### **Case 1: 40 year old man with abdominal pain**

Mrs Lee is a 40 year old lady who is mildly obese. She presents to the A&E with a fever and a 2-day history of pain in the RHC that is worsening. There is no jaundice, but the pain radiates to the right tip of scapula. Prior to this she has had intermittent episodes of sharp but milder RHC pain associated with meals but they often relieve after a while.

**Q1 What is the most likely diagnosis and what are the possible differentials for Mrs Lee?**

**Q2 What further history would you ask Mrs Lee?**

**Q3 What would you elicit in physical examination**

**Q4 What are some investigations you would want to order? Name 5 and explain your choice.**

An HBS ultrasound was done for Mrs Lee, and this is what it shows:

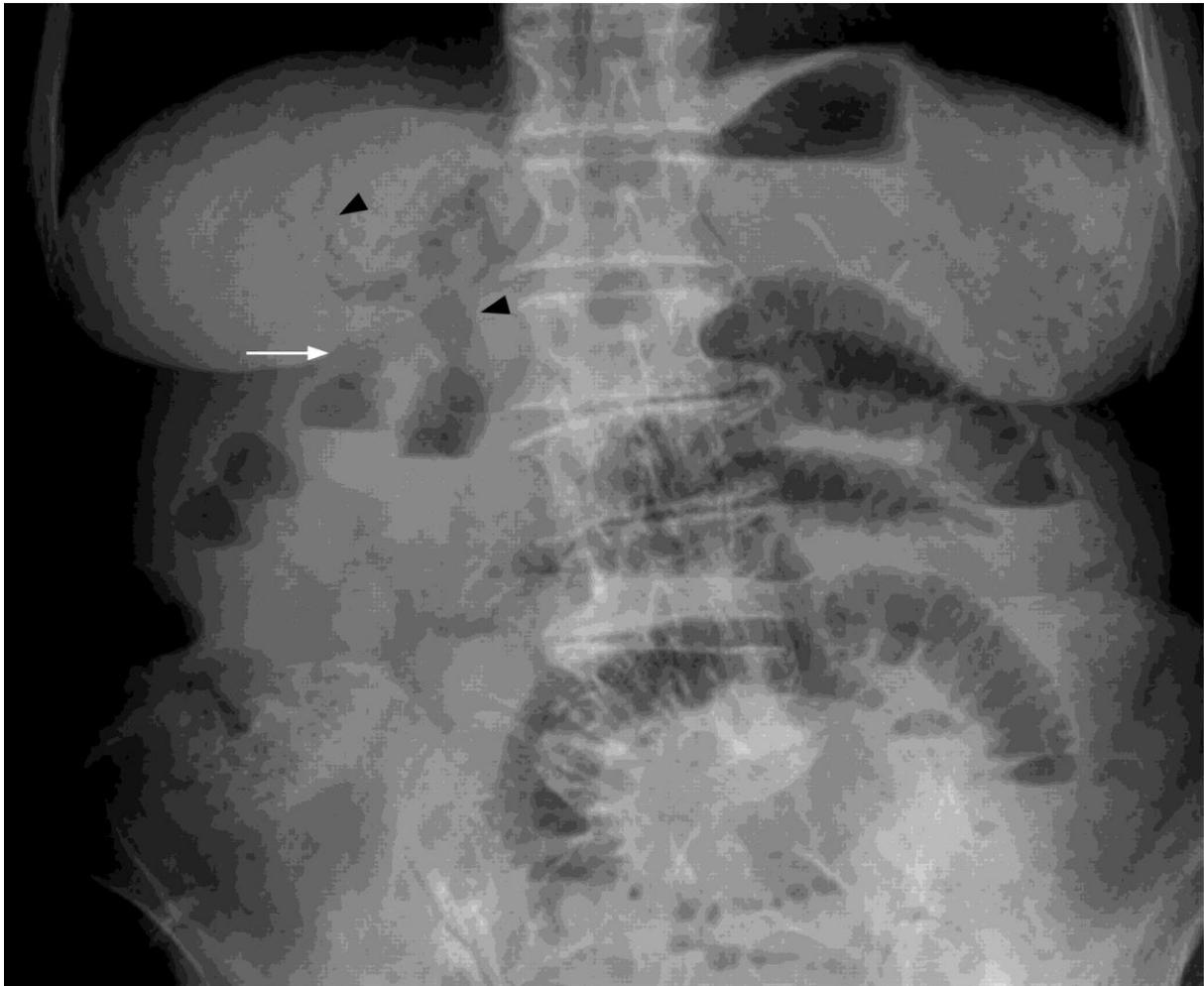


**Q5 Describe what you see on the ultrasound. What other sign would you elicit during this examination?**

**Q6 How would you manage this patient? What are the complications of the condition?**

**Q7 What is the pathogenesis of gallstones?**

Mdm Lim was feeling much better after 3 days and was discharged. However she came back into the A&E 2 days later complaining of severe abdominal pain, with bloating, vomiting and constipation. This is her supine AXR.



**Q8 Describe the AXR. What is the cause of her of presentation?**

**Q9 How else may gallstones present in a patient like Mrs Lee?**

**Q10 If a stone had been found in Mrs Lee's common bile duct, what are some of the strategies to remove it?**

## **Case 2: 55 year old man with blood in her stool**

Mr Tan is a 55yo Chinese man who comes into your GP clinic saying that he has been feeling more tired lately, complaining that he gets breathless after climbing two flights of stairs over the past 3 months. He has lost 10kg in the last month and has poor appetite. He has no previous history of hypertension, diabetes, hyperlipidemia or heart disease. He also notes that his stools are smaller in calibre and is intermittently mixed with fresh red blood.

**Q1 What are the differentials for Mr Tan's condition?**

**Q2 What are some other important aspects in history and physical examination?**

Mr Tan's vitals are stable. On physical examination you note Mr Tan to be slightly pale, but the rest of the examination is otherwise unremarkable. DRE and proctoscopy show an empty rectum with brown stools.

**Q4 What are some investigations you would want to order? Name 5 and explain your choice.**

You are still worried and do some blood tests for Mr Tan. The results are as follows:

|     |     |
|-----|-----|
| Hb  | 7.6 |
| Plt | 1   |
| TW  | 170 |
| MCV | 70  |
| Hct | 0.3 |

Renal panel and liver function tests were otherwise normal.

**Q5 How would you interpret the full blood count?**

Mr Tan was arranged to see a general surgeon, who then advised him to go for colonoscopy to evaluate the cause of his anemia.

**Q6 What could be the possible reasons if nothing was found on colonoscopy?**

**Q7 A large mass was seen in the sigmoid colon, which prevented the scope from going beyond the lesion. The rest of the bowel could not be evaluated, but a biopsy of the lesion was taken. What would you expect the lesion be histologically? What is its pathogenesis?**

The surgeon then carried out the necessary investigations and imaging to stage the tumour and planned for an operation to be carried out for Mr Tan next week. However, Mr Tan into the A&E 3 days later complaining of abdominal pain, bloating, vomiting and constipation. He has not passed flatus in the last day. His supine AXR is as follows



**Q8 Describe this AXR. What is the diagnosis, what are its complications and discuss the emergent management of this condition.**

Fortunately, Mr Tan survived the acute event. He eventually had a Hartmann's procedure which removed his tumour completely. Mr Tan is still worried about his cancer coming back, and also notes that his family has a strong history of colon cancer and is very worried, wondering if he has passed on these "bad genes" to his children.

**Q9 What can be done for surveillance in Mr Tan's case for cancer recurrence?**

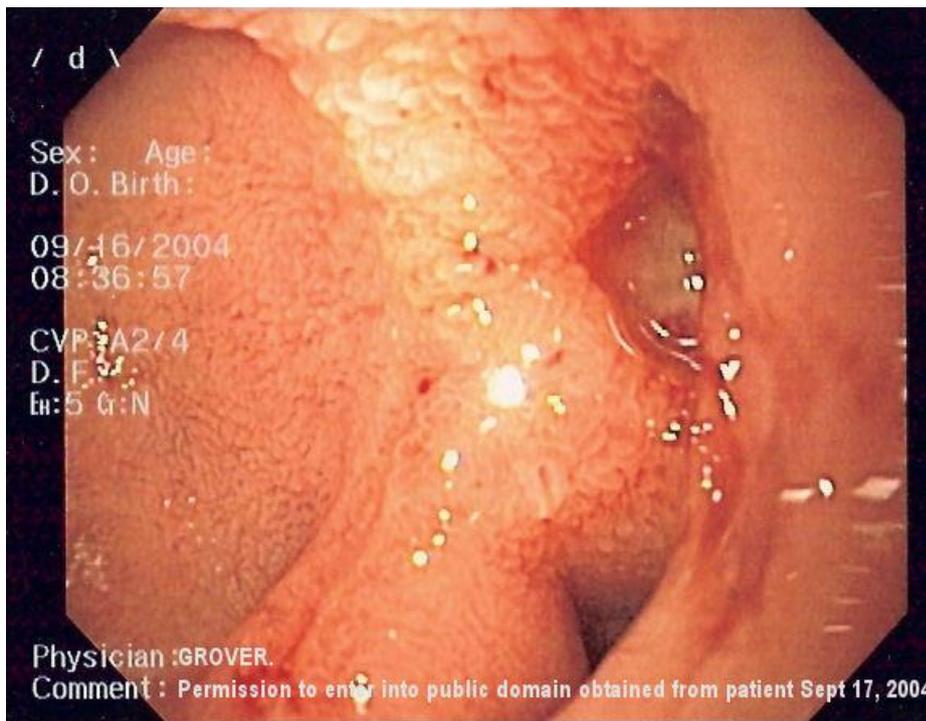
**Q10 What are some of the risk factors for colorectal cancer and what advise can you give Mr Tan and his children?**

### Case 3: 45 year old woman with black stools

Mdm Lim is a 45yo Chinese lady. She is a chronic smoker of 20 pack years and presents to the gastroenterologist because of sticky and foul smelling black stools for the last month. She has no known history of liver disease, and is not on any long-term medications but was recently started on a pain-killer for her knee pain in the last 2 months. She has no other complaints except an occasional feeling of bloatedness and notes that she has been eating less lately.

#### Q1 What are the differentials for Mdm Lim's black stools?

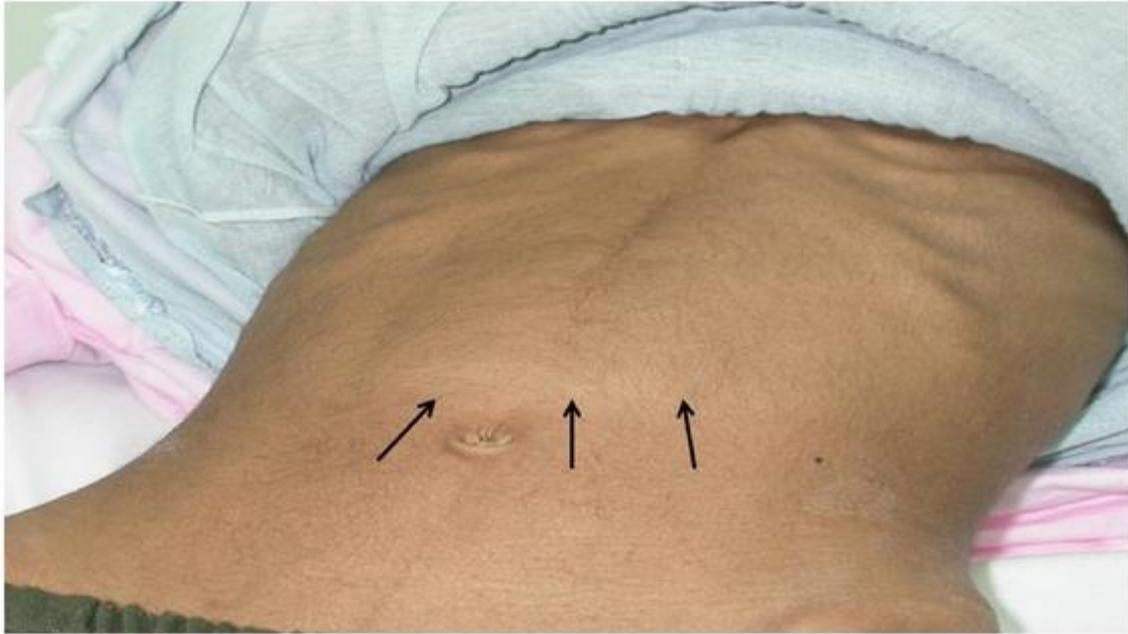
The gastroenterologist is concerned and decides to do an OGD for Mdm Tan. This lesion near the antrum is what he sees on the scope, and he takes a biopsy.



#### Q2 Describe the image. What is the diagnosis and pathogenesis of this lesion? What will the biopsy of the lesion show?

#### Q3 Mdm Lim tests positive for H pylori. How would you manage her condition?

However, Mdm Lim felt better and defaulted her follow-up with the gastroenterologist. 3 years later, Mdm Lim presents to the A&E complaining of severe projectile vomiting. She vomits everything that she eats and has not passed stools in the last 2 days. The vomitus is undigested food, mixed with some blood. This is a clinical picture of Mdm Lim:



**Q4 What is the diagnosis? What are the possible causes in this case, and what other physical signs can you elicit?**

The doctor in the A&E urgently does an arterial blood gas for Mdm Lim. The results are as follows:

|                  |         |
|------------------|---------|
| pH               | 7.51    |
| pO <sub>2</sub>  | 100mmHg |
| pCO <sub>2</sub> | 50mmHg  |
| HCO <sub>3</sub> | 30      |
| Na               | 130     |
| K                | 3.0     |
| Cl               | 83      |

Her urine dipstick also showed that her urine was acidic.

**Q5 How would you describe Mdm Lim's test results? What is the pathophysiology?**

Mdm Lim then had another OGD done to investigate the condition. It was found that she had a malignancy at the pylorus.

**Q6 What is the most likely histological diagnosis? What are the other possibilities?**

**Q7 How can this cancer spread? What are the associated clinical signs?**

Mdm Lim does not understand how she can have cancer. She wants to better understand her condition, and to explain it to her children as well so they do not end up in the same situation as her.

**Q8 What are some of the risk factors for gastric cancer?**

**Q9 What are some surgical options to manage Mdm Lim?**

**Q10 Describe some surgical complications of the operation?**

### **Case 4: 58 years old man with jaundice**

Ahmad is a 58 years old Malay gentleman who presents with jaundice of 2 weeks' duration.

**Q1) Describe the pre-hepatic, hepatic and post-hepatic causes of jaundice. Name 4 per categories.**

**Q2) How would you take a history of this man? Describe 10 questions.**

He describes having tea-coloured urine and loss of weight over the last 1 month of 5kg. He does not have fever, abdominal pain.

**Q3) What would you look for in the physical examination?**

**Q4) What is Courvoisier's law?**

On physical examination, the patient appears jaundiced and has sclera icterus. The gall bladder is palpable and is not tender. No other masses or organomegaly.

**Q5) Name 5 differentials and your reasoning.**

**Q6) How would you investigate? Name 5 investigations and your reasoning.**

The Liver Function Test reveals the following:

Total Bilirubin – 150 umol/L

Conjugated – 130 umol/L

ALP – 480 U/L

ALT – 70 U/L

AST – 80 U/L

Albumin – 28 g/L

The Computed Tomography shows the following images.



**Q7) Describe and interpret the images. What is your likely diagnosis?**

An Endoscopic Ultrasound Guided (EUS) Fine needle aspiration cytology is done and the patient is diagnosed with Pancreatic Adenocarcinoma with hepatic metastasis.

**Q8) What are the treatment options available for this patient? Describe 3 options.**

The patient decides for ERCP insertion of biliary stent.

**Q10) How will you prepare this patient for the procedure?**

**Q11) What are the complications of this procedure? Describe 5 and the steps you would take to manage these complications.**

### **Case 5A: 2 days old boy with jaundice**

*Huang Huang is 2 days old and his mother is worried because he is becoming increasingly yellow.*

*The serum bilirubin was analyzed and revealed the following:*

| Parameter            | Value     |
|----------------------|-----------|
| Total Bilirubin      | 150umol/L |
| Conjugated Bilirubin | 9umol/L   |
| Unconjugated         | 141umol/L |

**Q1) What is the pattern of hyperbilirubinemia? What are the possible etiologies? Name 6.**

**Q2) How will you evaluate this child – history and physical examination?**

**Q3) What are the investigations you will order?**

## Case 5B: 1 month old boy with jaundice

*Heng Ya Low is a 1 month old boy who is in hospital for evaluation due to jaundice.*

**Q1) How will you take a history in this patient?**

**Q2) History revealed that the child had pale stools and dark urine. He was feeding well on breast milk, and thriving (gained about 1kg).**

*He was born full term, 3 kg via normal vaginal delivery. No significant antenatal history. Cord TSH and G6PD status were normal. No previous history of jaundice in his siblings.*

*He had no fever, lethargy, irritability or smelly urine.*

**Q3) What is the likely pattern of hyperbilirubinemia? What are your differentials? Name 6.**

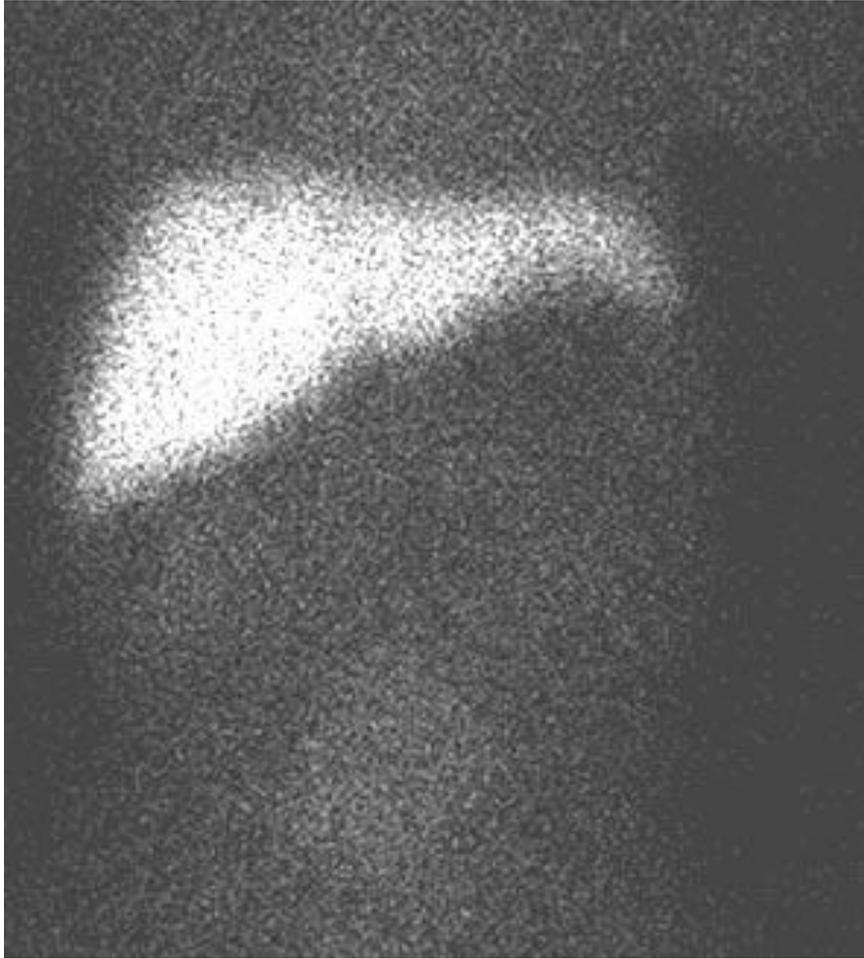
**Q4) What will you look out for in the physical examination?**

**Q5) How will you investigate?**

*Investigations showed:*

| Parameter                     | Value             |
|-------------------------------|-------------------|
| Total/Conjugated/Unconjugated | 180/155/25 umol/L |
| ALP                           | 755 U/L           |
| AST                           | 70 U/L            |
| ALT                           | 60 U/L            |

Hepatobiliary Scintigraphy  
@ 24 hours



**Q6) What is your likely diagnosis?**

**Q7) What are the treatment options in this child?**

*Heng Ya Low underwent a Kasai Procedure.*

**Q8) What are the complications you must look out for in this patient? Name 5.**

## Case 6: 8 year old girl with abdominal pain

*Lisa is a 8 year old girl who presents with paraumbilical abdominal pain that started yesterday.*

**Q1) Name 6 possible etiologies.**

**Q2) Describe how you will evaluate her through history-taking and physical examination.**

### ***History reveals***

*Pain was dull, ill-localized, started acutely and becoming worse, no radiation. Pain score of 6.*

*Associated with 2 weeks' duration of polyuria, nocturia and weight loss.*

### ***Physical examination***

*Vitals: Tachycardic with tachypnea, afebrile, normotensive; drowsy.*

*Peripheries: Dry mucous membrane, decrease in skin turgor*

*Abdomen: Generalized tenderness, but no guarding or rebound tenderness*

*Patients weights around 25kg previously.*

**Q3) What investigations will you perform? Describe your rationale for each investigation.**

### ***Investigations show***

| Parameter        | Value       |
|------------------|-------------|
| Glucose          | 38.1 mmol/L |
| pH               | 7.046       |
| Sodium           | 140         |
| Potassium        | 5.3         |
| Bicarbonate      | 6.8         |
| Chloride         | 115         |
| pCo <sub>2</sub> | 19          |
| Blood Ketones    | 6.0         |

**Q4) What is your diagnosis? Describe your reasons.**

**Q5) What is the severity of dehydration in this patient? What fluid replacement will you order in this patient?**

**Q6) How will you manage this patient acutely? Describe broad management principles.**