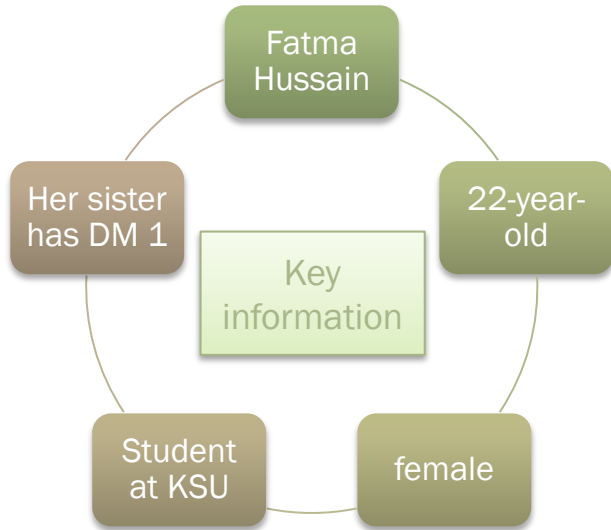


# CASE1: Looking for a solution



**PBL**  
TEAMWORK



**Main presenting problems**

- Loose bowel motion
- Abdominal discomfort
- Lost bodyweight
- Unable to gain them back

NEW TERMS			
Loose bowel motion	Approximately such as diarrhea	Offensive	Unpleasant smell
Bowel habit	the time, amount of bowel movements throughout the day.	bulky	large
Dull-ache	Mild pain, which may not prevent the patient from daily routine	Bruise	an area of swollen and discolored skin on the body
Malabsorption	Problem with the absorption of nutrients	shivering	Shaking due to cooling

*to understand the next slide*



## History and new problems:

- ❖ She used to stool once or twice daily, but for the last 4-5 months she tend to pass stools 5-6 times a day
- ❖ Her stools are loose, but show NO mucous or blood
- ❖ Sometimes show undigested food
- ❖ Sometimes are bulky and offensive
- ❖ She describes her abdominal discomfort as dull ache sensation (**all over her abdomen with no localization**)
- ❖ Her menstrual periods are regular, and not related to abdominal discomfort
- ❖ NO history of fever, shivering, night sweating or urinary trouble
- ❖ Three years ago she was diagnosed with iron-deficiency anemia and was treated with iron tablets. But she stopped these tablets due to her abdominal pain
- ❖ Her sister has diabetes mellitus type 1
- ❖ NO medication and allergy
- ❖ NO alcohol and smoking

## Clinical examination

- Fatma has a body mass index 20 kg/m (underweight)
- She looks pale
- She has NO skin bruises or palpable lymph nodes
- Normal vital signs

## Abdominal examinations

- Her abdomen is soft and not rigid or tender
- Her liver, spleen and kidneys are not palpable
- No palpable masses

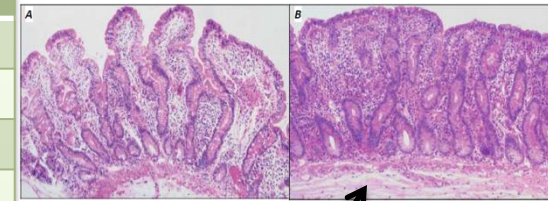
## CVS and Respiratory examinations

Normal

# Investigations needed

1- Blood			2- Biopsy
Iron studies	Antibodies test	Other nutrients (biochemical tests for blood)	Gastroscopy with duodenal/jejunal biopsies.
To determine the type of the anemia	To confirm the diagnosis	To give the patient the supplements	To confirm the diagnosis

Investigations' results		
Test	Fatm's results	Normal range
Haemoglobin (CBC)	9.7 ↓	11.5-13.5
MCV (CBC)	69 ↓	80-96 fl
MCHC (CBC)	262 ↓	300-350 g/L
Fat globules (stool analysis)	+++	Nil
Undigested food fiber (stool analysis)	++	Nil
Serum iron (iron studies)	6 ↓	9-30 μmol/L
Serum ferritin (iron studies)	7 ↓	10-120 μg/L
Serum transferrin (iron studies)	6 ↑	2.0-4.0 g/L
Folic acid-RBC (iron studies)	340 ↓	450-1400 nmol/L
Serum albumin (biochemical tests of blood)	29 ↓	35-48 g/L
Vitamin D (biochemical tests of blood)	17 ↓	20-95 nmol/L
Total calcium (biochemical tests of blood)	1.9 ↓	2.1-2.5 mmol/L
Anti-tissue transglutaminase antibodies (tTG) (antibodies test)	High titre	Absent
Deamidated gliadin peptide (DGP) IgA (antibodies test)	High titre	Absent
Deamidated gliadin peptide (DGP) IgG (antibodies test)	High titre	Absent



**Pathology report:** Fatma's biopsy sample shows:

1. Diffuse severe atrophy of villi
2. Blunting of villi
3. Chronic inflammatory cells infiltrating the lamina propria

## **Diagnosis: coeliac disease**

An autoimmune disease, Which causes malabsorption of nutrients such as iron, folic acid, vitamin D, calcium, and fats. Her low serum albumin is due to a loss of albumin from damaged villi.

## **Management:**

- 1. Restrict diet and avoid foods containing gluten (wheat, rye and barely)**
- 2. Iron tablets 3 times a day. (after meals)**
- 3. Folic acid tablets.**
- 4. Vitamin D supplements**

**Prognosis:** This disease has a good prognosis. By avoiding foods rich in wheat, rye and barely (any food which contain GLUTEN). Adhering to this diet will result in lowering the level of antibodies, and allowing lining small intestine to grow back and hence improving the absorption of nutrients.

# Questions

<b>Q1: What is the diagnosis in fatma's condition?</b>	<b>Q5: Mention 3 food that aggravate her symptoms</b>
Coeliac disease	Food that contains <u>gluten</u> like: Wheat, rye and barely.
<b>Q2: What are the investigations we could do FIRSTLY?</b>	<b>Q6: What is the type of fatma's anemia ?</b>
- CBC - stool analysis	Iron deficiency anemia
<b>Q3: Mention one confirmatory investigation?</b>	<b>Q7: What could we see in fatma's biopsy sample?</b>
Gastroscopy with duodenal/jejunal biopsies	1. Diffuse severe atrophy of villi 2. Blunting of villi 3. Chronic inflammatory cells
<b>Q4: What is the information we got from stool analysis that help us in diagnose this case?</b>	<b>Q8: Her low body weight, her anemia and the presence of fat globules in her stools are due to:</b>
1/ fat globules 2/ undigested foods 3/ semi solid stool	Malabsorption

<p><b>Q9: What did Dr.Ali prescribes for her?</b></p>	<p><b>Q13: Why did Fatma should avoid foods that rich in wheat, rye and barely?</b></p>
<ul style="list-style-type: none"> <li>- Iron tablets 3 times a day (after meals)</li> <li>- Folic acid</li> <li>- Vit.D supplements</li> </ul>	<p>Because in her condition her body reacts to <b>GLUTEN</b> present in these foods and produce antibodies attack the lining of her small intestine.</p>
<p><b>Q10: important result from the full blood count ?</b></p>	<p><b>Q14: Why did Dr.ali suggest that she Has a malabsorption disease?</b></p>
<ul style="list-style-type: none"> <li>1/Low hemoglobin</li> <li>2/ low MCV</li> <li>2/low MCHC</li> <li>    → indicates iron deficiency anemia</li> </ul>	<p>Because of</p> <ul style="list-style-type: none"> <li>1/ loss bowel motion</li> <li>2/ present of fat globules and undigested food</li> <li>3/ iron deficiency anemia</li> </ul>
<p><b>Q11: What can cure coeliac disease?</b></p>	<p><b>Q15: Why the doctor advised fatma to take the iron tablets after meals?</b></p>
<p>Free gluten diet</p>	<ul style="list-style-type: none"> <li>1. For absorption</li> <li>2. Iron tablets are very irritable to stomach</li> </ul>
<p><b>Q12: Complication of coeliac disease ?</b></p>	<p><b>Q16: Word refers to the present of fat in stool ?</b></p>
<ul style="list-style-type: none"> <li>1/ T-cell lymphoma (major one)</li> <li>2/ small bowel and esophageal cancer</li> </ul>	<p>Steatorrhea</p>



## DONE BY:

Ahmed AlHussain

Naif AlHefdhi

Omar AlDhasee

Nawt Alfuweres

## REVISED BY:

Alaa Alharbi



[PBLteamw433@gmail.com](mailto:PBLteamw433@gmail.com)