

Case Scenario (Suspected Cancer Head of Pancreas)

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1. Introduction

A male patient, Saudi, 75 years old, known case of diabetes mellitus type 1 and hypertension

Presented to Emergency department complaining from shortening of breath and mild abdominal pain increased in the last 3 days. With a history of recurrent emergency department visit.

No history of fever, sweating, anorexia, or weight loss. And no history of vomiting, diarrhea, or constipation.

2. On Examination

Vital Signs

Temperature: 37.1 C*
 Pulse: 81 beats/min
 Blood pressure: 151/62 mmHg
 SPO2: 98%
 Random blood glucose: 201 mg/dl
 Respiratory rate: 18/min

Patient looks anxious, jaundiced, and mild dehydrated.

- Glasgow coma scale: 15/15
- Chest: clear bilateral brnchovesicular equal air entry
- Heart: normal S1+S2 with no added sound
- Abdomen: soft, lax, no tenderness.

* Patient referred to higher centre for further management

3. Laboratory Investigation.

Complete Blood Count

WBC: $9.3 \times 10^3/\text{ul}$
RBC: $4.3 \times 10^6/\text{ul}$
Hemoglobin: 10.9 g/dl
HCT: 34.8%
MCV: 80.9 FL
MCH: 25.3 PG
MCHC: 31.3 g/dl
PLT: $161 \times 10^3/\text{ul}$
RDW-SD: 46.3 FL
RDW-CV: 15.9%
NEUTRO: $8.15 \times 10^3/\text{ul}$ 87.7%
Lymphocyte: $0.65 \times 10^3/\text{ul}$ 7% (lymphopenia)
Monocyte: $0.44 \times 10^3/\text{ul}$ 4.7%
Eosino: $0.04 \times 10^3/\text{ul}$ 0.4%
Baso: $0.02 \times 10^3/\text{ul}$ 0.2%

Blood Biochemistry:

Random glucose: 9.58 mmol/l (4.2-6.1)
Urea: 13.8 mmol/l (1.7-8.2)
Creatinine: 167mmol/l (44-123)
NA: 139 mmol/l (136-145)
K: 4.44 mmol/l (3.5-5.1)
CK: 81 U/L (26-308)
CK-MB: 12.5 U/L (7-25)
AST: 91.4 U/L (0-40) (HIGH LFT)
ALT: 205.9 U/L (0-41)
TOTAL BILIRUBIN: 50.7 U/L (3.42-17.1) (hyperbilirubinemia)
DIRECT BILIRUBIN: 39 U/L (0-3.42)



Comments:
 Positive
 Diff. Morph.

WBC	9.30	[10 ³ /uL]	
RBC	4.30	[10 ⁶ /uL]	
HGB	10.9	[g/dL]	
HCT	34.8	[%]	
MCV	80.9	[fL]	
MCH	25.3	[pg]	
MCHC	31.3	[g/dL]	
PLT	161	[10 ³ /uL]	
RDW-SD	46.3	[fL]	
RDW-CV	15.9	[%]	
PDW	14.7	[fL]	
MPV	11.7	[fL]	
P-LCR	39.1	[%]	
PCT	0.19	[%]	
NEUT	8.15 *	[10 ³ /uL]	87.7 * [%]
LYMPH	0.65 *	[10 ³ /uL]	7.0 * [%]
MONO	0.44 *	[10 ³ /uL]	4.7 * [%]
EO	0.04	[10 ³ /uL]	0.4 [%]
BASO	0.02	[10 ³ /uL]	0.2 [%]

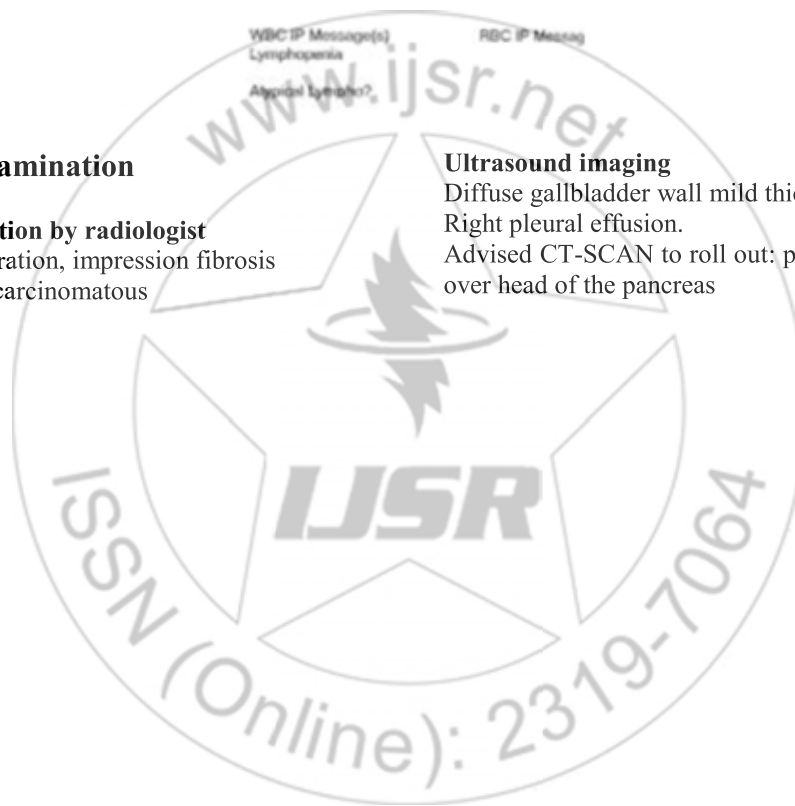
4. Radiological Examination

Chest x-ray interpretation by radiologist

Diffuse interstitial infiltration, impression fibrosis
 DDX: lymphangitis vs. carcinomatous

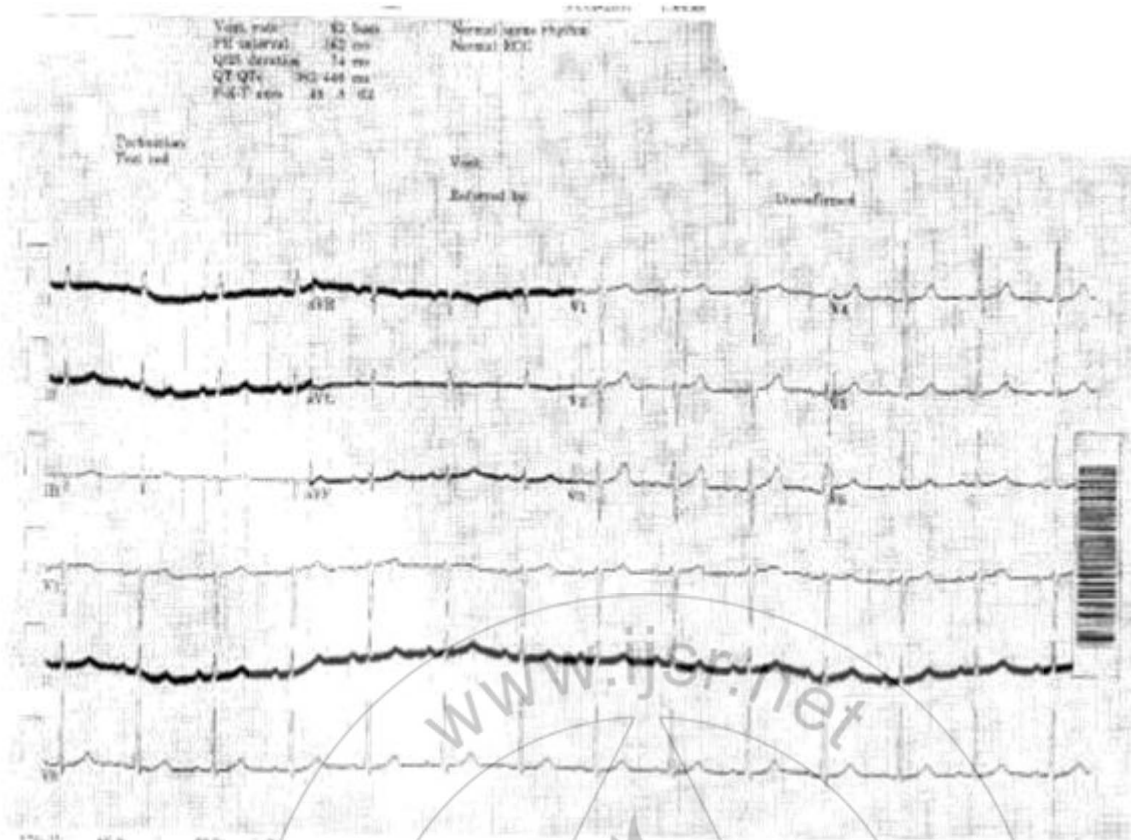
Ultrasound imaging

Diffuse gallbladder wall mild thickening CBD: 8mm, dilated
 Right pleural effusion.
 Advised CT-SCAN to roll out: pancreatic head tumour mass
 over head of the pancreas





5. ECG:



6. Stages of Pancreatic Cancer

Once the T, N, and M categories have been determined, this information is combined to assign an overall stage of 0, I, II, III, or IV (sometimes followed by a letter).

Stage	Stage Grouping		Stage description
0	Tis, M0	N0,	The tumor is confined to the top layers of pancreatic duct cells and has not invaded deeper tissues. It has not spread outside of the pancreas. These tumors are sometimes referred to as pancreatic carcinoma in situ or pancreatic intraepithelial neoplasia III (PanIn III).
IA	T1, M0	N0,	The tumor is confined to the pancreas and is 2 cm across or smaller (T1). The cancer has not spread to nearby lymph nodes (N0) or distant sites (M0).
IB	T2, M0	N0,	The tumor is confined to the pancreas and is larger than 2 cm across (T2). The cancer has not spread to nearby lymph nodes (N0) or distant sites (M0).
IIA	T3, M0	N0,	The tumor is growing outside the pancreas but not into major blood vessels or nerves (T3). The cancer has not spread to nearby lymph nodes (N0) or distant sites (M0).

Stage	Stage Grouping		Stage description
IIB	T1-T3, N1, M0		The tumor is either confined to the pancreas or growing outside the pancreas but not into major blood vessels or nerves (T1-T3). The cancer has spread to nearby lymph nodes (N1) but not to distant sites (M0).
III	T4, N, M0	Any	The tumor is growing outside the pancreas and into nearby major blood vessels or nerves (T4). The cancer may or may not have spread to nearby lymph nodes (Any N). It has not spread to distant sites (M0).
IV	Any	T,	The cancer has spread to distant sites (M1).
	Any	N,	
	M1		

<https://www.cancer.org/cancer/pancreatic-cancer/detection-diagnosis-staging/staging.html>