

## THE CAUSES OF JAUNDICE

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The purpose of this investigation was to determine the relative frequency of the various causes of clinical jaundice. It was carried out in the period January-March 1972 and included all cases of jaundice admitted to the medical and surgical wards of St. Luke's Hospital. Note was made, in the laboratory, of patients with hyper-

bilirubinaemia and/or hyperbilirubinuria. The clinical history was then reviewed and each patient was followed-up.

Analysis of the findings was made as a Clinico-Pathological Exercise in December 1973. The results are being published in the same chart-form in which they were presented.

### 1st Chart

#### CLINICAL DIAGNOSES IN 43 CASES OF JAUNDICE

<i>Clinical Diagnoses</i>	<i>Clinical Diagnoses Number of</i>	<i>Clinical Diagnoses Percentage of</i>
Infectious hepatitis	2	4.3%
Cholecystitis; cholelithiasis	11	23.1%
Cirrhosis, liver	11	23.1%
Cholestatic jaundice	1	2.1%
Carcinoma stomach	2	4.2%
Carcinoma breast	2	4.2%
Carcinoma ovary	1	2.1%
Carcinoma head of pancreas	3	6.3%
Carcinoma lung and carcinoma nasopharynx	1	2.1%
Acute gastritis	1	2.1%
Chronic pancreatitis	1	2.1%
Heart disease	1	2.1%
No clinical diagnoses	9	18.9%
	46 *	100.0%

\* The number of clinical diagnoses exceeds the number of cases because some cases had multiple pathology.

## 2nd Chart

## BASES FOR CLINICAL DIAGNOSES IN 43 CASES OF JAUNDICE

<i>Clinical Diagnosis</i>	<i>Number of Clinical Diagnoses</i>	<i>Bases for Clinical Diagnosis</i>
Infectious hepatitis	2	1: SB: 3.7/18.0; UB: present; SGPT: 59/17; SAP: 29.2/27; Urobilin/ogen: in excess.
		1: SB: 17; UB: present; SGPT: 84; SAP: 17.3; Urobilin/ogen: in excess. NONE BIOPSIED
Cholecystitis; cholelithiasis	11	4: Cholecystectomy 1: Laparotomy 5: Unco firmid 1: Postmortem
Cirrhosis liver	11	1: Liver function tests. ± 2: Electrophoresis 1: Biopsy 1: Postmortem 1: Unsupported 5: Suggestive history
Cholestatic Jaundice (Toxic jaundice)	1	On ANABOLAN for aplastic anaemia.
Carcinoma stomach	2	1: Barium meal shows filling defect. 1: Laparotomy: no biopsy.
Carcinoma breast	2	No direct confirmation of cause of jaundice. 2: Excision biopsy.
Carcinoma head of pancreas	3	1: Laparotomy: no biopsy. 1: SB: 18.6; SGPT 74; SAP: 39.9; Orthotolidine: negative; no laparotomy. 1: SB: 15.4; SGPT: 17; SAP: 19.9; Orthotolidine: negative; no laparotomy.
Carcinoma lung; status post carcinoma, nasopharynx.	1	Carcinoma nasopharynx 1968. Alpha-fetoprotein positive. Liver biopsy: regeneration and necrosis. Postmortem: carcinoma lung with metastases to liver and lymphnodes.
Acute gastritis	1	Cholecystectomy ten years before admission. Past history of ureteric calculi with colics; epigastric pain. SB: 1.7; SGPT 15; SAP 30.8.

Chronic pancreatitis	1	Tenderness R. hypochondrium; nausea and vomiting. SB: 2.4; SGPT: 84; Urobilin/ogen: in excess. Plain abdomen: no opaque calculi.
Heart disease	1	Mitral incompetence; pulmonary oedema. Enlarged, fixed nodular liver: SB: 2.0; SGOT: 36; SGPT: 17. U B: present; Urobilin/ogen: in excess.
Carcinoma ovary	1	Pre-mortem diagnosis: carcinoma liver. Postmortem diagnosis: papillary serous cystadeno-carcinoma with metastases.

SB = serum bilirubin mg/‰.

UB = urinary bilirubin.

SGPT = serum glutamic phosphopyruvic acid transaminase in I.U.

SAP = serum alkaline phosphatase in K.A. Units.

Urobilin/ogen = urobilin and urobilinogen.

± excluding the electrophoretic pattern.

### 3rd Chart

#### NUMBER OF DIAGNOSES SUPPORTED BY SPECIAL INVESTIGATION

<i>Clinical Diagnoses</i>	<i>Number of Clinical Diagnoses</i>	<i>Number Supported</i>	<i>Type of Investigations</i>
Infectious hepatitis	2	0	—
Cholecystitis; cholelithiasis	11	6	4: Cholecystectomy. 1: Laparotomy. 1: Postmortem.
Cirrhosis, liver	11	5	2: Electrophoresis. 1: Biopsy. 1: Postmortem. 1: Liver function test.
Cholestatic jaundice	1	0	—
Carcinoma stomach	2	0	—
Carcinoma breast	2	2	Biopsy confirms carcinoma breast but not the cause of jaundice.
Carcinoma head of pancreas	3	0	—

Carcinoma lung	1	1	Postmortem.
Acute gastritis	1	0	—
Chronic pancreatitis	1	0	—
Heart disease	1	1	—
Carcinoma ovary	1	1	Postmortem.
<b>TOTAL</b>	<b>37</b>	<b>15</b>	

15 = 40% of clinical diagnoses.

#### 4th Chart

#### NUMBER OF DEATHS AND POSTMORTEM DIAGNOSES

<i>Certified Cause of Death</i>	<i>Number of Diagnoses *</i>
Infectious hepatitis	—
Cholecystitis; cholelithiasis	2
Cirrhosis liver	4
Cholestatic jaundice	—
Carcinoma stomach	2
Carcinoma breast	2
Carcinoma pancreas	3
Carcinoma lung	1
Acute gastritis	—
Chronic pancreatitis	—
Heart disease	—
Carcinoma ovary	1

NUMBER OF CASES: 43

TOTAL No. OF POSTMORTEMS: 3 21.3% of deaths

TOTAL No. OF DEATHS 14 \*

CAUSE OF DEATH VERIFIED IN 6 CASES 42.6% of deaths

- 1 Laparotomy
- 2 Excision biopsies
- 3 Postmortems

\* Number of diagnoses exceeds number of deaths because one case had two clinical diagnoses.

## 5th Chart

**COMPARISON OF CLINICAL AND ANATOMICAL DIAGNOSES  
IN THREE AUTOPSIED CASES**

<i>Case No.</i>	<i>Clinical Findings</i>	<i>Clinical Diagnoses</i>	<i>Anatomical Diagnoses</i>
7	Adenocarcinoma cells in ascitic fluid. AFP: positive; SB: 6.7; SGPT: 22; SAP: 31.	Malignancy: site undetermined.	Papillary serous cystadenocarcinoma ovary.
16	Carcinoma nasopharynx 1968. AFP: positive; SB: 3.2; SGPT: 20; SAP: 21.6.	Recurrent carcinoma nasopharynx with metastases.	No residual carcinoma nasopharynx. Adenocarcinoma lung with metastases to liver and lymphnodes.
20	Flattening body second lumbar vertebra. SB: 18.8; SGPT: 32; SAP: 21.6; "Mass in epigastrium."	Carcinoma head of pancreas.	Cholelithiasis; Biliary cirrhosis.

AFP = Alpha-fetoprotein.

SB = serum bilirubin mg/%.

SGPT = serum glutamic phosphopyruvic acid transaminase in I.U.

SAP = serum alkaline phosphatase in K.A. Units.

**Concluding Note**

The management of jaundice improves with a better understanding of its aetiology. Arriving at an accurate clinical diagnosis is not an easy matter; in most cases the nature of the jaundice is immediately obvious but the underlying lesion defies detection. This is particularly true of obstructive jaundice because

I) The distinction between intra-

hepatic and extra-hepatic obstruction is not always clear cut.

II) It is very often impossible to distinguish clinically between the various causes of extrahepatic obstructive jaundice.

III) Metastatic and primary neoplastic disease of the liver, can produce a similar clinical picture.