

ELEVATED AMINOTRANSFERASE LEVELS

— IMPORTANCE OF DIFERENTIAL DIAGNOSIS —

Rita Serras Jorge

Name : H. R.

Age: 37

Sex: Female

Civil Status: Married

Profission: Housekeeper

Nationality: Ukranian

Identification



Present Illness



Left anterior chest pain

Past Medical History

- Colloid thyroid nodule
- Gallstones

Medication: Ibuprofen 600 mg SOS



Social History and Habits



No

30 PY

No

Countryside
Chicken,
cats and
dogs

5 meals per
day.
Low fat diet

No recent travels

Family History



Father: Died at 58 from drowning

Mother: Type 2 Diabetes Mellitus

Brothers: Healthy

Children: Healthy

No family history of liver disorders

Physical Examination

BP 110/80 mmHg HR 78 bpm RR 16 c/min BMI 27 Kg/m²

Oriented. No jaundice.

No stigmata of liver disease

Normal cardiopulmonary examination

Abdomen: normal

No oedemas

Neurological examination normal





Next step?

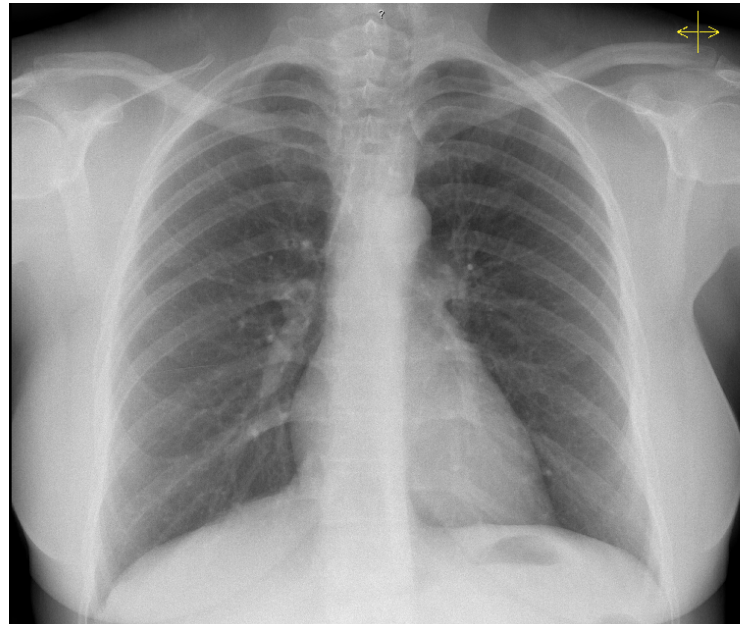
Blood Tests

BUN/ Creat	16/ 0,73 mg/dL
Na ⁺ / K ⁺ / Cl ⁻	138/ 4,1 / 105 mmol/L
Ca ²⁺	9,6 mg/dL
Osmolality	276 mOsm/Kg
Albumine	4,3 g/dL
AST	54 U/L
ALT	45 U/L
Alkaline phosphatase	86 U/L
γ GT	31 U/L
Total Bilirubin	0,6 mg/dL
Cardiac biomarkers	Negative
C-reactive protein	0,32 mg/dL

Leucocytes	7,3 x 10 ⁹ /L
Hb	14,3 g/dL
Ht	40,7 %
M.C.V.	87,8 fL
M.C.H.	30,8 pg
M.C.H.C.	35,1 g/dL
Platelets	256 x 10 ⁹ /L

PT	12,9 s (14)
aPTT	23 s (28)
D-dimer	0,17 µg/mL

Chest X- Ray

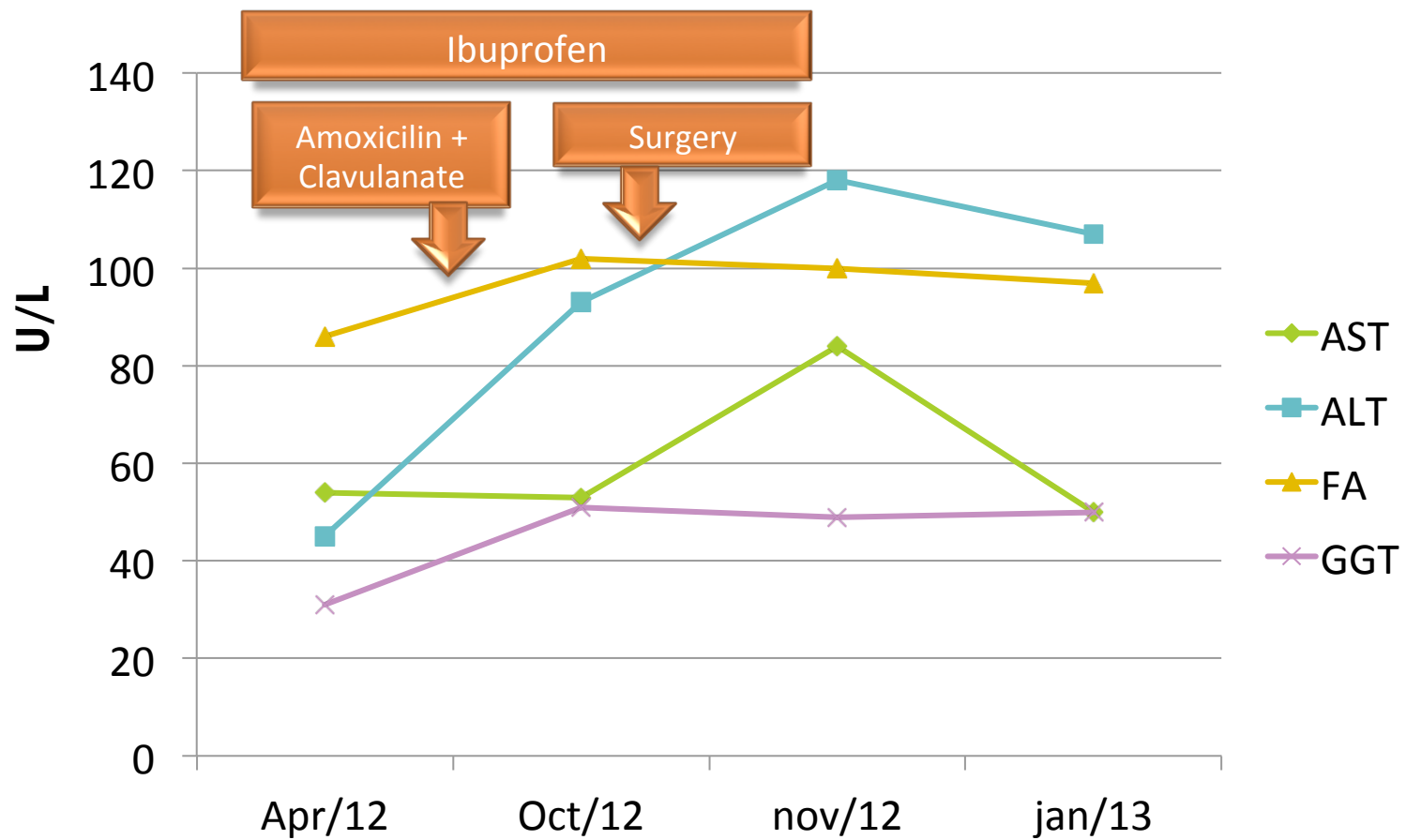


Electrocardiogram Normal



Next step?

Evolution





And Now?

Other tests

HBV, HCV, HAV
Negative

Autoimmunity
Negative

α -1 antitrypsin
Normal

Iron Study
Normal

Copper and ceruloplasmin

Copper	0.98 mg/mL	0.80-1.54
24h -Urinary copper	42 mcg	<100
Ceruloplasmin	16 mg/dL	20-60

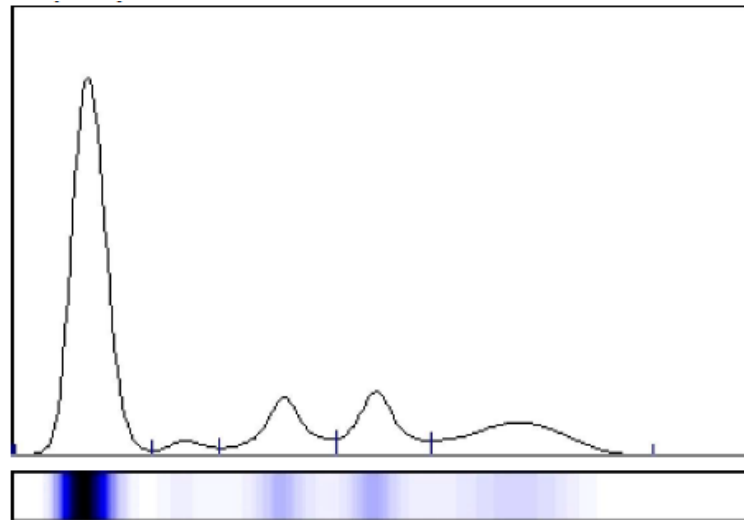


Abdominal ultrasound



Normal liver, spleen and biliary tract.
No ascites.

Other tests



Proteinas totais	8.1	g/dl	
A/G	1.48		
	%	g/dl	V.Normais g/dl
Albumina.....	59.7	4.84	3.2 - 5.0
Alfa 1.....	2.4	0.19	0.1 - 0.4
Alfa 2.....	11.6	0.94	0.6 - 1.0
Beta.....	12.1	0.98	0.6 - 1.3
Gama.....	14.2	1.15	0.7 - 1.5

G immunoglobulin	11,50 g/L
A immunoglobulin	2,73 g/L
M immunoglobulin	3,11 g/L

Other tests



Normal

Total cholesterol	178 mg/dL
HDL cholesterol	62 mg/dL
LDL cholesterol	100,8 mg/dL
Triglycerides	76 mg/dL



And Now?

Differential Diagnosis

 Liver toxicity

 Fatty liver disease

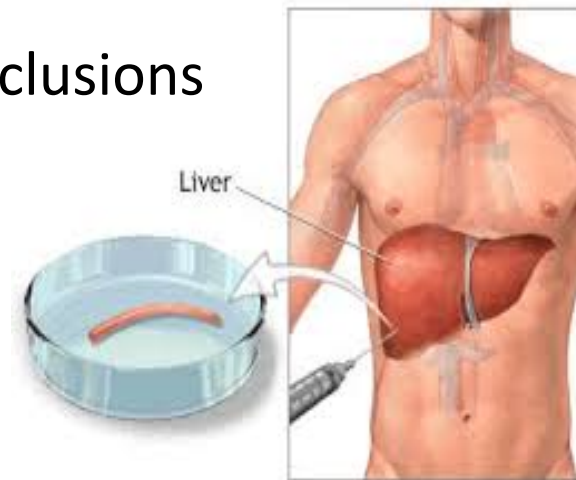
 Wilson disease

Liver biopsy

Normal architecture with no inflammatory infiltrate or fibrosis.

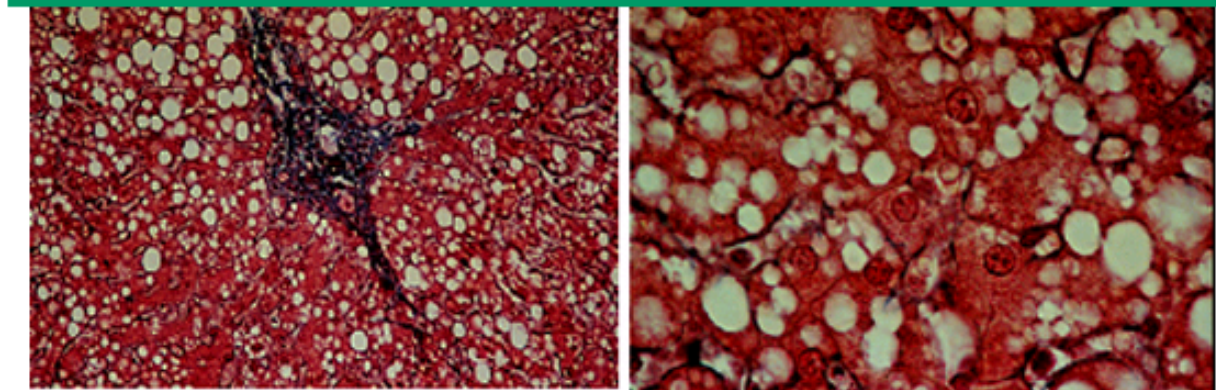
Hepatocytes with ballooning areas within cytoplasm and glycogen inclusions within nuclei.

Macrovacuolar steatosis <5%.



Liver biopsy

Copper 450 $\mu\text{g/g}$

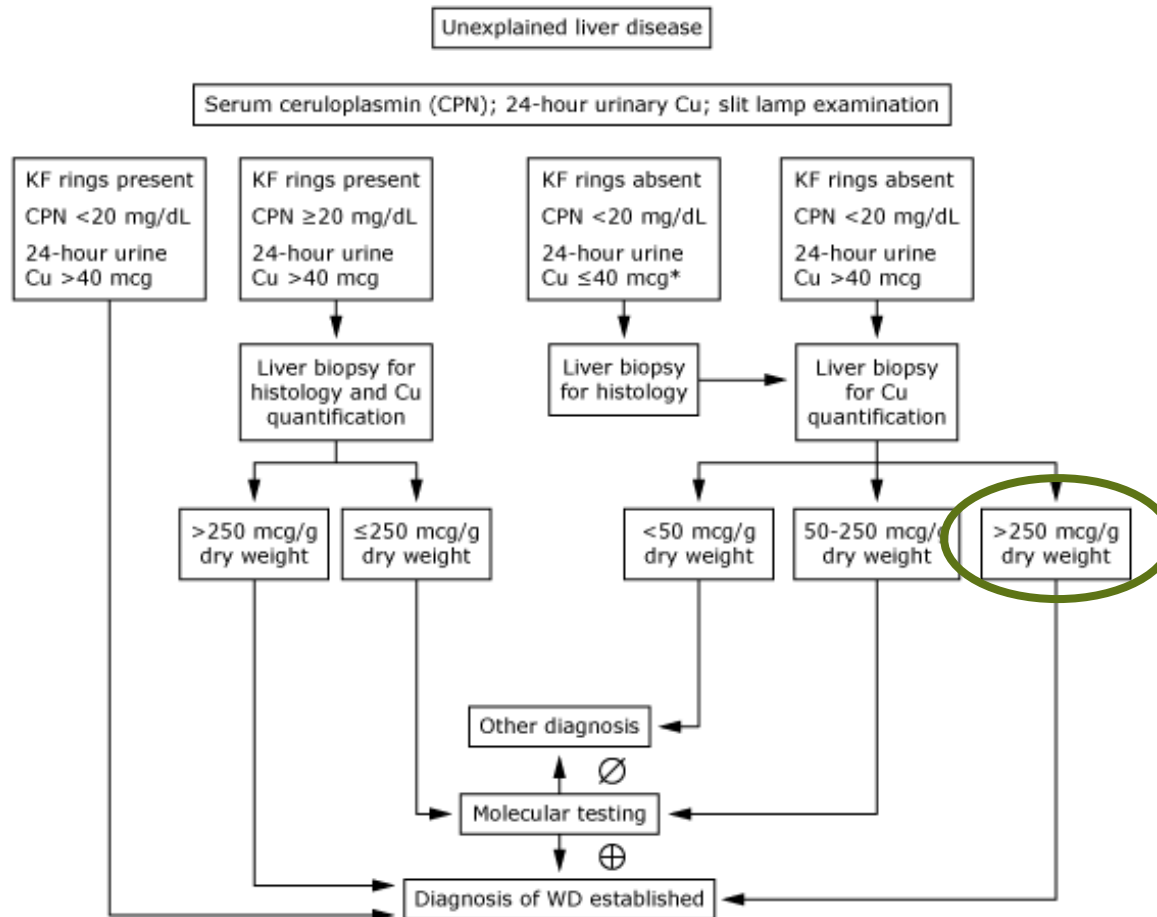


Wilson Disease

Diagnosis



Approach to diagnosis of Wilson disease (WD) in a patient with unexplained liver disease



Treatment and evolution



Trientine 300 mg 3id

