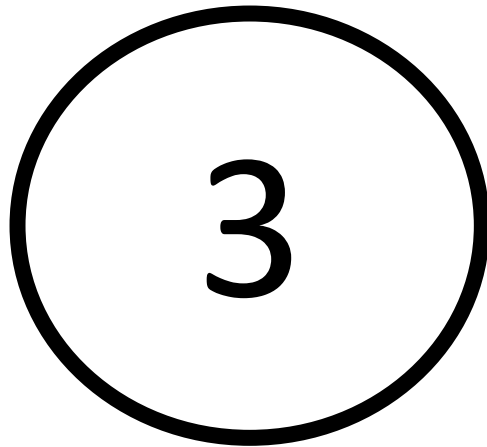


EFIM Winter School of Internal Medicine Case Presentation

Johan Van Laethem, January 2015
(Belgium)

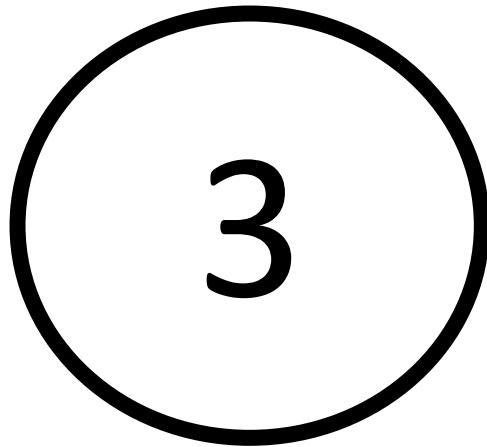
Interesting numbers



Official languages



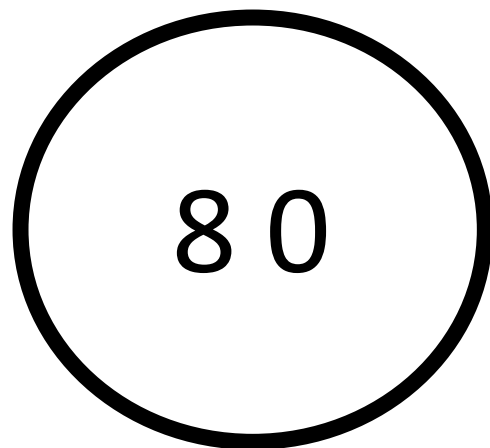
Interesting numbers



Interesting numbers



Interesting numbers



% of billiard players use Belgian (made) balls



Interesting numbers

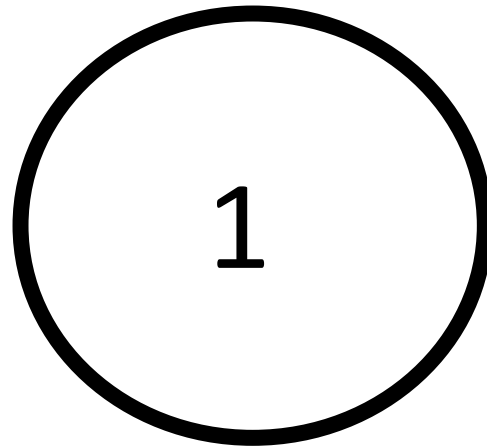
2,3

Interesting numbers

Tallest European man: Alain Delaunois



Interesting numbers



Using discount coupons (2nd USA)



This coupon entitles the bearer to

5% off

(Coupon not valid with other offer. Limit one coupon per customer.)

Interesting numbers

540

540 days without government in 2011



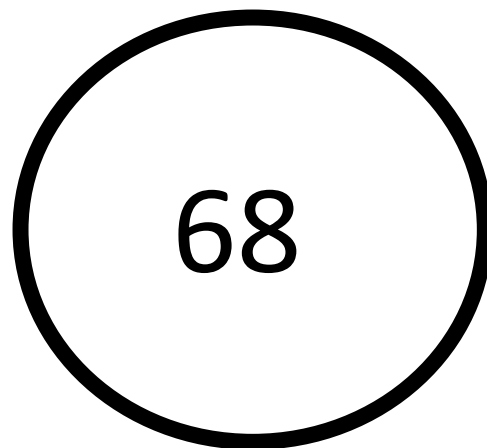
Interesting numbers

22

22 kg of chocolate ingested/y



Interesting numbers



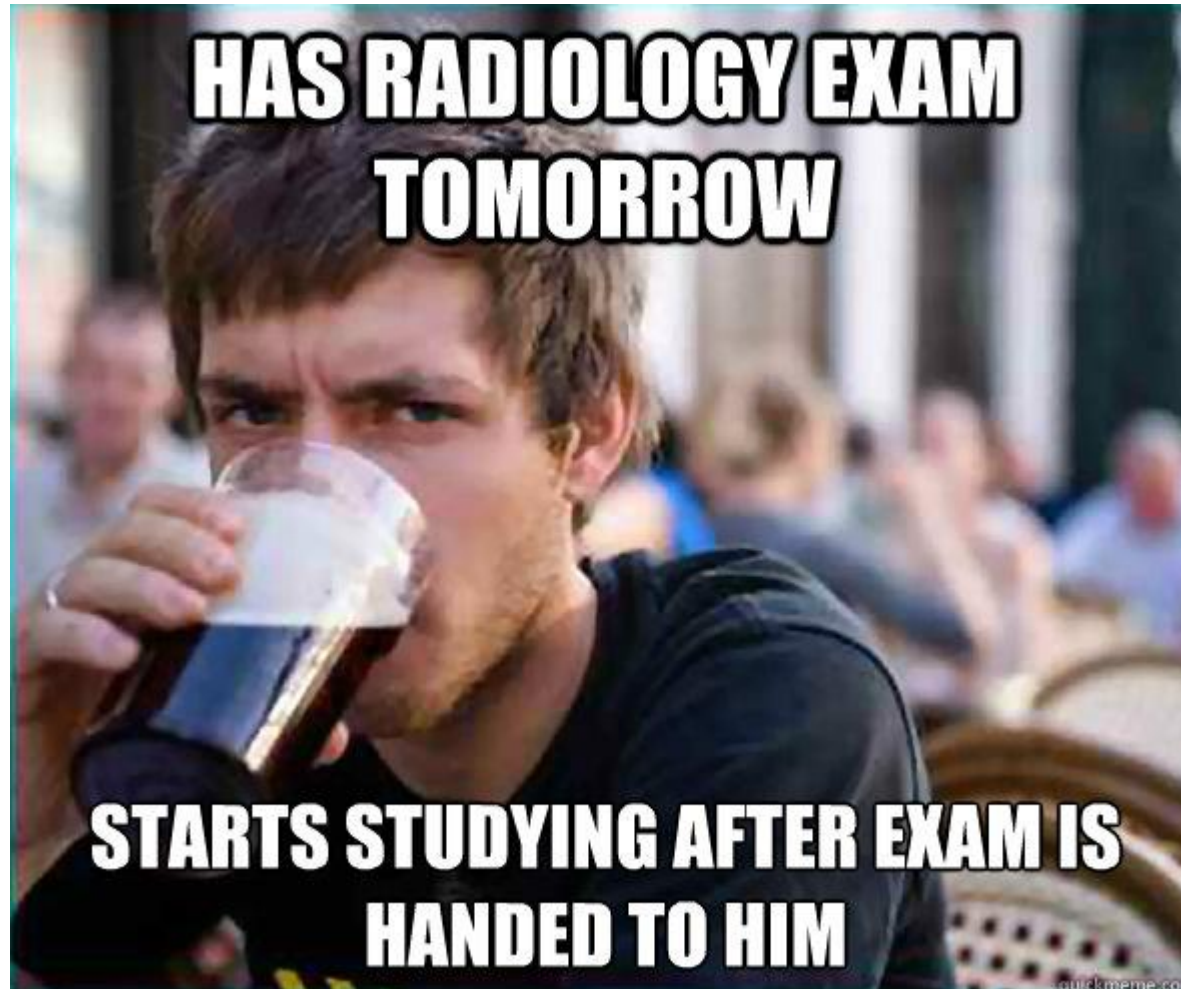
Interesting numbers

68 y: life expectancy anaesthesiologist



Interesting numbers

92 y: life expectancy radiologist



1. Introduction

Systemic interrogation:

- Referral GP: cytolysis, cholestasis since 1 month, asthenia
- Fatigue, muscle wasting
- No history of alcohol intake

Physical examination:

- Lean
- Icterus
- Asterixis after few days
- Parameters stable

Male, 68 yr

Medication intake:

- Iron supplementation
- Tamsulosin (alfa-blocker)
- Aspirin 80 mg/d
- Protein powder (Nutricia)

Medical history:

- Partial gastrectomy 1983, gastric carcinoma
- 2012 intestinal operation
- Benign prostate hypertrophy
- Iron deficiency

2. Diagnostic work-up: lab results and imaging

			12/12	07/12	01/12
Aspartaat aminotransferasen	17 - 59	U/L	160	257	405
Alanine aminotransferasen	21 - 72	U/L	422	489	632
Alkalische fosfatasen	38 - 126	U/L	212	190	159
Gamma-glutamyltransferas...	<73	U/L	394	396	347
Pseudocholesterasen		KU/L			
Amylasen	< 113	U/L			
Lipasen	23 - 300	U/L			
Koper	85 - 170	µg/dl			40
Bilirubine: totaal	0.2 - 1.3	mg/dL	13.64	11.12	9.41
Bilirubine: direct	< 0.5	mg/dL	8.1	6.8	5.4

Radioimmunologie			
Hepatitis B Core Antilichaam			Negatief
Thyroid Stimulerend Hormo...	0.27 - 4.2	mIU/L	0.299
Hepatitis B surface Antigen			Negatief
Hepatitis B surface Antilicha...	Beschermd...	IU/L	Negatief
Hepatitis A IgG			Positief
Hepatitis A IgM			Negatief
Hepatitis C Antilichaam			Negatief
Vitamine B12	0.22 - 0.94	µg/L	1.93
Foliumzuur	2.0 - 14.0	µg/L	17.95

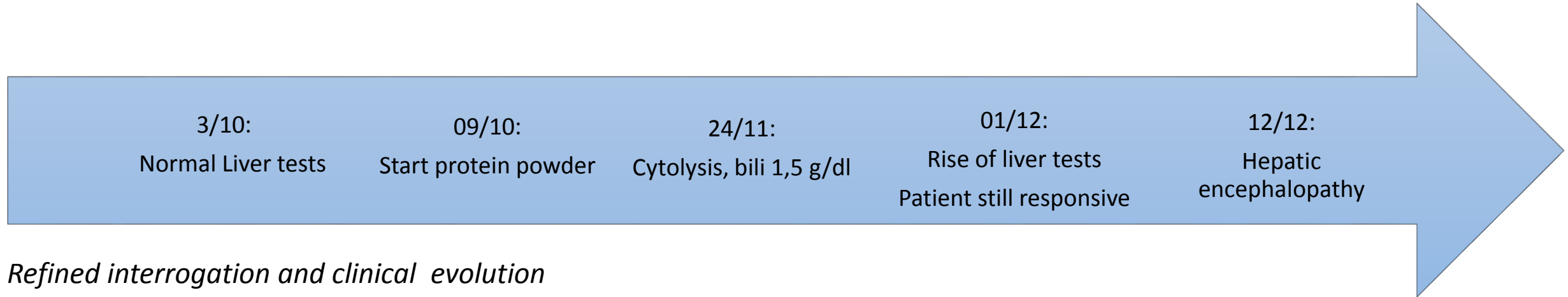
ANCA's, ANF, LKM Ab, smooth muscle Ab, anti-mitochondrial Ab: negative

Abdominal CT en echography: normal liver morphology, no biliary stones nor bile duct dilatation

3. What would you do?

- A. Treat the patient with corticosteroids
- B. Perform a liver biopsy
- C. Watchful waiting
- D. Refine the interrogation
- E. Put the patient on the liver transplantation list

4. Refined interrogation and clinical evolution



Refined interrogation and clinical evolution

Low ceruloplasmin

Koper	40	µg/dL	85 - 170
Ceruloplasmine (nieuwe eenheid)	0.12	g/L	0.15 - 0.38
Ceruloplasmine	12	mg/dL	15 - 38

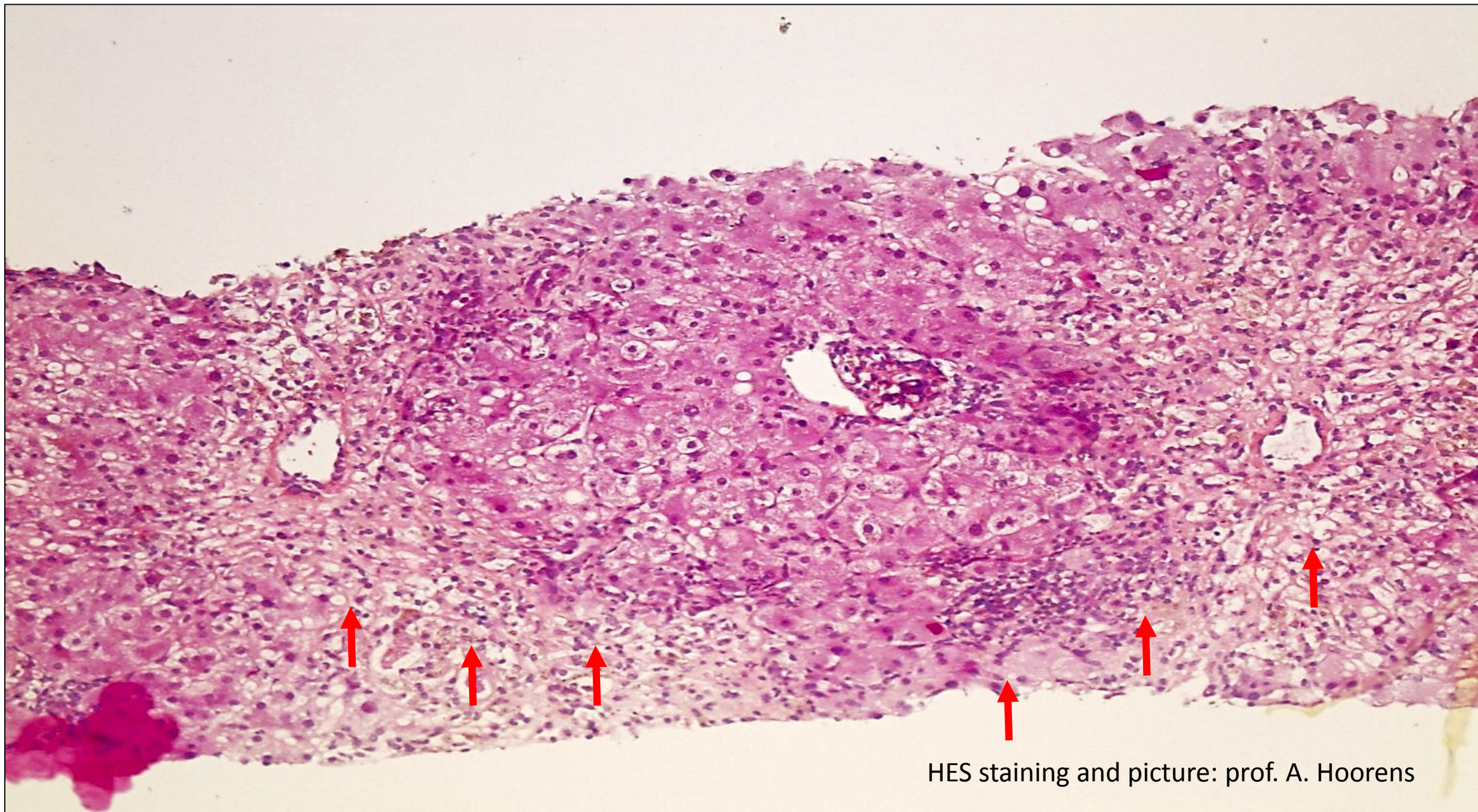
Wilson's disease?

Low ceruloplasmin (PPV 6%):

- Wilson's
- Acute viral hepatitis
- Chronic hepatitis
- Drug-induced liver injury (DILI)
- Alcohol-induced liver disease
- Malabsorption

Split lamp examination: no Kaiser Fleischer rings (sensitivity 60%)

Nonceruloplasmin-bound copper (mcg/L) = serum copper (mcg/L) – (3.15 mcg/g x serum ceruloplasmin [mg/L])
Wilson's: free copper typically > 20-25 mcg/dl



HES staining and picture: prof. A. Hoorens



6. Management: what would you do?


- A. Discontinuation of the medication
- B. Discontinuation of the protein powder
- C. Start corticosteroids
- D. Lactulose for hepatic encephalopathy
- E. Something else?

7. Cause of the medicamentous/ toxic hepatitis?

1. Iron supplementation/ Aspirin/ Tamsulosin ??

← → ↻

 United States National Library of Medicine
 NATIONAL INSTITUTE OF DIABETES AND DIGESTIVE AND KIDNEY DISEASES

 **LiverTox**
Clinical and Research Information on Drug-Induced Liver Injury

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LIVERTOX® provides up-to-date, accurate, and easily accessed information on the diagnosis, cause, frequency, patterns, and management of liver injury attributable to prescription and nonprescription medications, herbs and dietary supplements. LIVERTOX also includes a case

8. Protein powder?

“Thank you for the information...but it seems unlikely the liver failure was due to our product because the patient ingested 4,4-8,8 g of proteins a day, which would be equal to the protein amount of 1 glass of milk.”



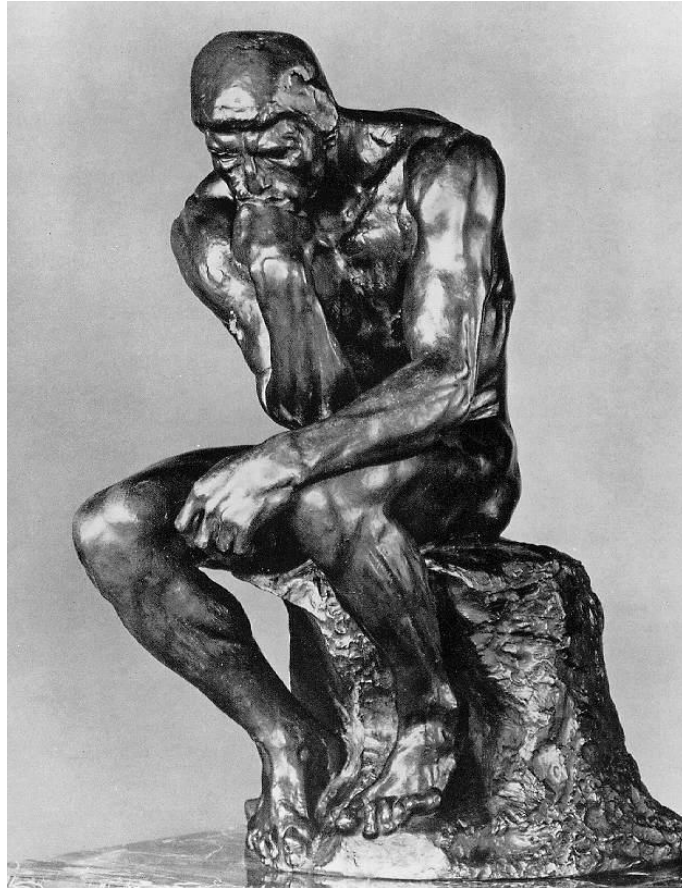
- Slow decrease cytolysis and bilirubin over time, correction of PT
- Decrease of icterus
- Patient still weak
- PET-CT: no particularities

→ Based on the chronology of liver failure our first hypothesis is liver failure due to protein powder

Unanswered questions

Place of corticoids?
(no proof of beneficial
effects, only
hypersensitivity reactions)

Causative drug/
supplement?



Cause of progressive
hypoalbuminemia?

Conclusions

1. Drug induced liver injury (DILI) is frequent (15-30% acute liver failures)
2. Liver biopsy is useful in diagnosis
3. Identification of causative drug is difficult, no routine test. Re-challenge is difficult.
4. Cornerstones of treatment: discontinuation of the drug, sometimes liver transplant
5. Corticotherapy has no proven effect but can be tried in evident hypersensitivity

Thank you for listening



Thank you for listening



Thank you for listening



Thank you for listening

