Abstract / Povzetek predavanja

Sildenafil induced liver injury – a case report

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Drug induced liver injury (DILI) can result from medications, dietary supplements, or various herbal products. When the injury is dose-dependent, it is referred to as intrinsic liver injury. Idiosyncratic liver injury is not dose-dependent and occurs in a small subset of individuals, with a variable latency period (1–2).

A 59-year-old male with a history of arterial hypertension was admitted to our department due to a two-week history of abdominal pain, jaundice, and elevated liver enzymes.

In the months preceding the onset of symptoms, he had modified his lifestyle by adopting a new diet, increasing physical activity, and initiating the use of a dietary supplement aimed at lowering cholesterol. He reported occasional use of sildenafil. His usual intake of alcohol was at least one unit daily.

Imaging and laboratory diagnostics excluded diseases of the gallbladder and biliary tree, hepatic vascular disorders, infectious causes, inherited metabolic disorders, and immune-mediated liver diseases. Histological examination of the liver biopsy was consistent with DILI. We confirmed hepatocellular toxic liver injury, most likely due to sildenafil, although a possibility of a combined effect of multiple agents cannot be excluded. At the most recent follow-up, liver enzyme levels had returned to normal. Table 1 and 2 present investigations and their values at the initial and last outpatient assessment.

A broad spectrum of substances has the potential to cause liver injury. Obtaining a comprehensive medical history and excluding alternative etiologies are essential steps in establishing an accurate diagnosis. The primary therapeutic interventions include discontinuation of the suspected agent and close patient monitoring. Despite an extensive diagnostic

Table 1: Investigations and Their Values at the Patient's Initial Assessment in Our Institution

Investigation	Result	Ref. values
Blood count		
Leukocytes (10^9/L)	6.35	4.00 – 10.00
Erythrocytes (10^{12}/L)	5.53	4.50 – 5.50
Haemoglobin (g/L)	162	130 – 170
MCV (fL)	86.1	83.0 – 101.0
Thrombocytes (10^9/L)	279	150 – 410
Biochemical investigations (Blood serum)		
Glucose (mmol/L)	5.7	3.6 – 6.1
Urea (mmol/L)	3.2	2.8 – 7.5
Creatinine (µmol/L)	67	64 – 104
oGF (mL/min/1.73m^2)	>90	80 – 120
CRP (mg/L)	4	<5
Total bilirubin (µmol/L)	185	<17
Direct bilirubin (µmol/L)	143	<5
AST (µkat/L)	15.19	<0.58
ALT (µkat/L)	39.63	<0.74
y-GT (µkat/L)	7.3	<0.92
Alkaline phosphatase (µkat/L)	2.48	0.50 – 2.00
Lipase (µkat/L)	1.55	<1.25
Sodium (mmol/L)	135	135 – 145
Potassium (mmol/L)	3.83	3.5 – 5.3
Chloride (mmol/L)	105	97 – 110
Magnesium (mmol/L)	0.86	0.6 – 1.1
Lactate dehydrogenase (µkat/L)	4.72	<4.13
Albumin (g/L)	36	32 – 55
Ammoniac (µmol/L)	42	<50
Iron (Fe) (µmol/L)	4.19	<4.13
Feritin (µg/L)	3082	30 – 300
Transferrin (g/L)	2.41	2.00 – 3.60
Transferrin saturation (%)	82.1	16 - 45
Ceruloplasmin (g/L)	0.30	0.22 – 0.61
Copper (Cu) (µmol/L)	20.6	11.0 – 22.0
CDT (%)	2.01	1.19 – 2.47
Tumor markers		
Total PSA (µg/L)	0.72	<4
Free PSA (µg/L)	0.258	<0.934
AFP (kU/L)	2.8	<11.1
CEA (µg/L)	<2	<5
CA 19-9 (kU/L)	5	<37
CA 72-4 (kU/L)	2.20	<8.82
β2-microglobuline (mg/L)	2.61	<8.2
Hormones		
B12 (pmol/L)	34	6.1 – 32.6
Folates (nmol/L)	1342	132 – 857
TSH (mU/L)	1.13	0.27 – 4.2
17-beta oestradiol (nmol/L)	0.11	
Progesterone (nmol/L)	<1.6	
Prolactin (µg/L)	5.9	1.6 – 17.7
Testosterone (nmol/L)	35.76	
SHBG (nmol/L)	102.8	13.5 – 71.4
DHEAS (nmol/L)	1.96	
β-HCG (IU/L)	0	<15
FSH (U/L)	5.1	
LH (U/L)	5.0	
Immunology		
ANA, ANCA, ASMA, LKM, liver profile (M2, gp210, sp100, LKM1, LC1, SLA, F-actin)	Negative	
AMA	Suspected	
IgG (g/L)	12.10	7.67 – 15.90
IgA (g/L)	4.09	0.61 – 3.56
IgM (g/L)	0.35	0.37 – 2.86
Toxicology		
Opiates, Amphetamines, Cocaine, Cannabis, Methadone, Benzodiazepines	Negative	
Coagulation profile		
Prothrombin time (PT) (E)	0.82	0.7 – 1.2
INR	1.11	
Thrombin time (TT) (s)	17	15 – 21
Activated Partial Thromboplastin Time (aPTT) (s)	33	26 – 36
Fibrinogen (g/L)	2.58	2.2 – 4.2
Microbiology		
Hepatitis E	Negative	
Hepatitis A	Post-Infectious/ Post-Vaccination Status	
Hepatitis B	Non-reactive	
Hepatitis C	Non-reactive	
HIV	Non-reactive	
HSV-1	Negative	
HSV-2	Negative	
CMV	Negative	
EBV	IgG – positive, IgM – negative	
Leptospira	Negative	
Hantavirus	Negative	
Haemocultures	Negative	

Table 2: Investigations and Their Values at the Patient's Last Outpatient Assessment in Our Institution

Investigation	Result	Ref. values
Blood count		
Leukocytes (10^9/L)	6.35	4.00 – 10.00
Erythrocytes (10^{12}/L)	5.53	4.50 – 5.50
Haemoglobin (g/L)	162	130 – 170
MCV (fL)	86.1	83.0 – 101.0
Thrombocytes (10^9/L)	279	150 – 410
Biochemical investigations (Blood serum)		
Glucose (mmol/L)	6.3	3.6 – 6.1
Urea (mmol/L)	3.9	2.8 – 7.5
Creatinine (µmol/L)	77	64 – 104
oGF (mL/min/1.73m2)	>90	80 – 120
CRP (mg/L)	<3	<5
Total bilirubin (µmol/L)	11	<17
Direct bilirubin (µmol/L)	3	<5
AST (µkat/L)	**0.79**	<0.58
ALT (µkat/L)	**1.21**	<0.74
y-GT (µkat/L)	0.95	<0.92
Alkaline phosphatase (µkat/L)	1.09	0.50 – 2.00
Sodium (mmol/L)	136	135 – 145
Potassium (mmol/L)	4.51	3.5 – 5.3
Chloride (mmol/L)	104	97 – 110
CHE (µkat/L)	193	117 – 317
Cholesterol (mmol/L)	5.23	4.0 – 5.7
Triglycerides (mmol/L)	0.96	0.6 – 1.7
Albumin (g/L)	38	32 – 55
Iron (Fe) (µmol/L)	14	<4.13
Feritin (µg/L)	151	30 – 300
AFP (kU/L)	2.4	< 11.1
Coagulation profile		
Prothrombin time (PT) (E)	0.86	0.7 – 1.2
INR	1.09	

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