

COCAINE-INDUCED CHEST PAIN WITH HIGH CK

CASE:

A 47-year-old African American male (AAM) with a past medical history (PMH) of hypertension (HTN), smoking and cocaine abuse is admitted to the hospital with a chief complaint (CC) of chest pain (CP), which started 50 minutes after his last dose of crack cocaine.

The patient was on a cocaine binge for the last 3 days, wandering on the streets and using all the cocaine he could buy. He had one episode of similar CP 2 years ago, again after using cocaine.

PHYSICAL EXAMINATION:

Sleepy but arousable, oriented x 3.
BP 177/101, otherwise the examination is unremarkable.

QUESTIONS:

- **What is the most likely diagnosis? Why?**
- **What laboratory workup would you suggest?**
- **As a doctor in the emergency room, what interventions should be made to address the patient's signs and symptoms?**

❖ **Additional information:**

- The patient was given ASA, O₂, Nitro SL, and Metoprolol.
- He was CP-free after admission.
- Urine toxic screen was positive for cocaine.
- There were nonspecific changes on the EKG.
- CK was more than 1800, CK-MB was 14 (high), and Troponin was negative. (see the image below)

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HEME	WBC	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	PLT	MPV
0635			13.5L	39.9						
1840			13.4L	40.2						
0646	7.7	4.15	13.3#	38.8L	93.5	32.1	34.3	13.7	158	8.7
0609	11.0	5.15	16.2	48.5	94.1	31.4	33.4	13.4	185	8.8

COAG	INR	PTT
0609	1.13	C 27.5

CHEMPROFIL	NA	K	CL	CO2	GLUC	BUN	CREAT	TP	ALB	CA	BILI	AST	ALT	ALK P
0635	137	4.3	102	28	93	14	1.0	5.6L	2.9L	8.2L	0.2	22	43	50
0646	138	4.1	104	24	92	13	1.0	5.3#	2.8#	7.8#	0.6#	27#	43	43L
0609	140	3.9	100	28	115H	22H	1.4H	7.8	4.5	9.6	1.3H	57H	55	65

CHEMPROFIL	CHOL	TRIG	HDL	LDL	MG
0646	129L	40	36L	87	
0609					2.1

CARDIAC	CK	CK MB	BI	TROP
0635	317#			
0646	555H			
1420	1142H	9.4H	0.8C	0.06C
0609	1806C	14.2H	0.8C	0.04C

- What do you think? Is it AMI? Explain your answer.
- What is the reason for the elevated CK then?
- ❖ **Additional information:**

While in the hospital, the patient was given NS IV at 200 cc/hr to maintain a good urine output. CK decreased to 300 two days later. Cardiac enzymes were monitored every eight hours for two days. Patient was negative for AMI. He continued to be CP-free. He was discharged after seeing a drug abuse counselor.

- What did we learn from this case?
- How accurate is the cocaine urine test?
- How long does cocaine and other drugs stay in the urine?
- When do you discharge a patient with rhabdomyolysis? Is there a specific CK level which is safe for discharge?