

中文題目：一氧化碳中毒的心肌病變，掩蓋原本的沉默型心肌梗塞。探討一氧化碳中毒病人診斷性心導管必要性 -- 個案報告與心得分享

英文題目：Diagnostic Percutaneous Coronary Interventions performed to patient with elevating cardiac enzyme after Carbon monoxide poisoning cardiac myopathy – A case sharing and Literature Reviews

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## **Introduction**

Carbon monoxide (CO) poisoning in the United States is the leading cause of the fatal poisonings, which is also an common poisonings in Taiwan. The clinical findings of CO poisoning are highly variable and nonspecific, resulting in widely misdiagnosed. Cardiac complications followed by CO poisoning is well documented in the literature. Secondary myocardial infraction was not uncommon. Therefore, regularly Percutaneous Coronary Interventions (PCI) for patient who was CO poisoned with elevating cardiac enzyme was hesitantly, especially as patient without typical chest pain. We reported a CO poisoned case who has critical coronary artery stenosis demonstrated by coronary angiogram.

## **Case Presentation**

A 42-year-old male was sent to our hospital's emergency service due to charcoal burning suicide. Initial biochemical tests showed very high serum carboxyhemoglobin (COHb) (33.5%), elevating cardiac enzyme (Creatine kinase-MB of 19.3 IU/L, Troponin I of 0.727 ng/mL). Electrocardiogram (ECG) revealed sinus tachycardia without specific ST segment change. A series of cardiac enzyme showed as Troponin-I 0.727ng/mL→ 2.571→7.065→7.605, CKMB 19.3 ng/mL→40.6→55.4→ 46.7. Patient denied any chest discomforts. Cardiologist was consulted for diagnostic PCI. To our surprise, a critical stenosis (99% stenosis) found at right coronary artery segment 1-2. One bare metal stent (BMS) was implanted. Finally, patient was discharged smoothly.

## **Discussion**

Cardiac complications followed by CO poisoned such as electrocardiographic QT prolongation, secondary myocardial ischemia, ventricular arrhythmia, resulted from

CO poisoning is well documented in the literature. Most of the cases had related changes in ECG or symptoms. However, regularly diagnostic PCI for whom without symptoms nor ECG finding is hesitantly. Patient who has critical coronary artery stenosis without symptoms and nor ECG finding knowns as silent myocardia infraction maybe masked by CO poisoned myocardia complication. Diagnostic Percutaneous Coronary Interventions (PCI) was reasonable to CO poisoned patient who has lasting elevating cardiac enzyme.