

中文題目：激烈運動造成的橫紋肌溶解症所帶來的肝功能衰弱

英文題目：**Rhabdomyolysis with acute liver injury after extreme exercise**

作者：李迎春<sup>1</sup>，張秀文<sup>2</sup>

服務單位：天主教耕莘醫院內科部<sup>1</sup>，天主教耕莘醫院腎臟內科<sup>2</sup>

## 1.Introduction

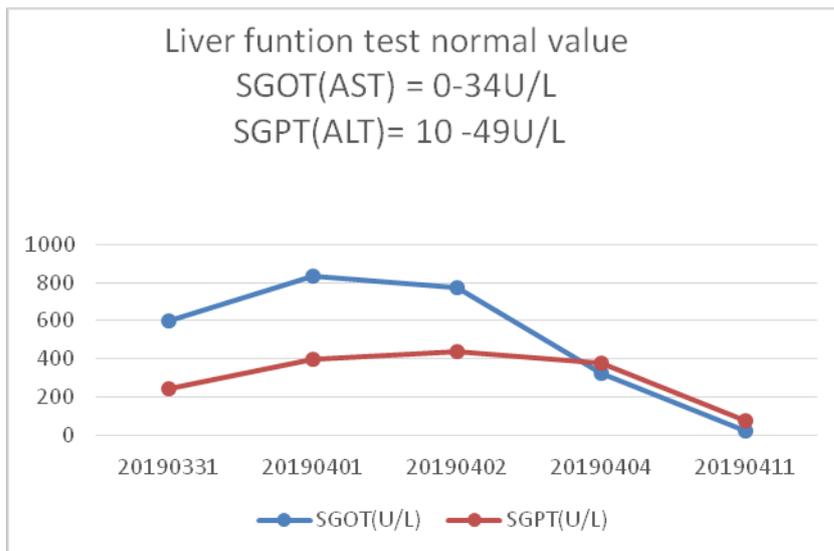
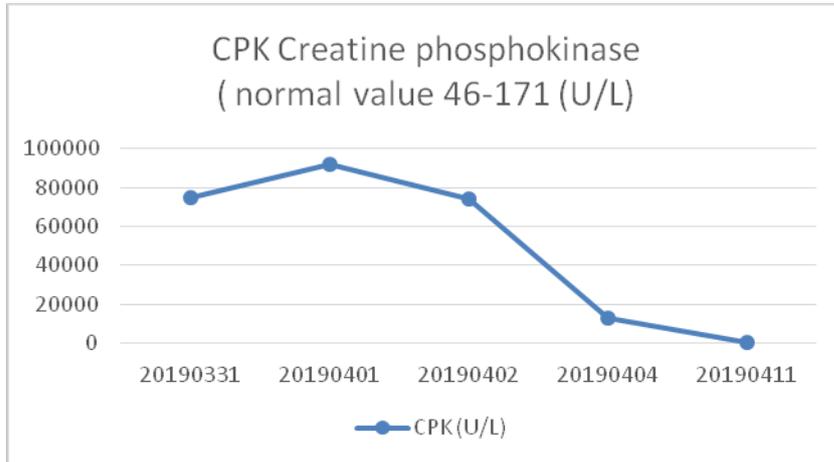
Rhabdomyolysis is a condition due to direct or indirect muscle injury. The clinical implications of rhabdomyolysis are important, such as acute renal failure and multiorgan failure. Acute liver injury is rarely reported in rhabdomyolysis. We reported 24 years old obese man who developed acute liver injury with rhabdomyolysis after extreme strenuous exercise.

## 2. Case description

A 24 years old obese man has no known medical disease who suffered acute onset of whole body soreness especially bilateral shoulder and upper limbs for 3 days. He noticed his myalgia and weakness was more severe after strenuous physical exercise. He also noted his urine color was brown. He denied any taking of drugs such as lipid lowering agents, Non steroidal anti-inflammatory drugs(NSAID) and alcohol drinking. He also denied fever, malaise, palpitation, and gastrointestinal symptoms. So he visited to our emergency department(ED) for help. At ED, Creatine phosphokinase (CPK) level was 74840U/L, Creatine kinase-MB was 38.7ng/ml. Renal function showed blood urea nitrogen(BUN) : 32mg/dl, serum creatinine(Cr) : 0.71mg/dl, estimated glomerular filtration rate(eGFR):144.9ml/min. Urinalysis revealed proteinuria(2+), 0-2 RBCs/HPF, 0-2 WBCs/HPF, specific gravit:1.030 and urine pH=6. There was no hyperkalemia and electrolytes were within normal limit such as sodium(Na)=138mmol/L, potassium(K)=4.29mmol/L. So under impression of rhabdomyolysis he is admitted for further management.

Because of his liver function test(LFT) was abnormal SGOT(AST)=603U/L, SGPT(ALT)=249U/L so we checked alkaline phosphatase(78U/L), gamma glutamyltransferase(r-GT):0.17mg/dl,bilirubin(total):0.59mg/dl,bilirubin (direct) :0.17mg/dl, all lab datas showed within normal range. Hepatitis screening showed negative result.(HBsAg=<0.10, Anti-HCV(EIA)Ab:0.04). No yellow discoloration of skin, sclera and abdominal pain was noted. Blood myoglobin showed >3887ng/ml. There was no hyperphosphatemia, hypocalcemia, hyperuricemia, and metabolic acidosis. We checked his urine myoglobin which showed negative. Followed urine pH showed 7. We prescribed adequate IV hydration and encourage the patient to intake plenty of water. We arranged abdominal sonogram and moderate bright echogenicity, far gain attenuation and blurred vessel of liver

parenchyma, moderate fatty liver and mild liver parenchyma disease was noted. We prescribed silima 1 tab BID for liver support. We followed his LFT and CPK levels which gradually decreasing. After that he was discharged and one week after discharge, followed liver function tests and CPK levels which showed within normal limits.



### 3.Conclusion:

Athlete's hepatitis is a pathologic state in which extreme exercise leads to a compromise in the blood supply to the liver resulting in ischemic hypoxic damage. This condition results in transient elevation of liver enzymes which gradually improve in 1-2 weeks with supportive measures in the absence of ongoing hypotension. Our patient is not need to do liver biopsy and management consisted of aggressive fluid support. Liver enzymes improved after the OPD follow up. All lab datas showed within normal limit and the patient was symptom free.