INTRODUCTION

Paediatric urolithiasis is rare (14.5 per 100,000) and usually presented with vague symptoms like abdominal pain which are easily attributed to other more common conditions. Correct diagnosis is often delayed and complicated with end stage renal failure.

CASE REPORT

An 8-year-old girl presented with dysuria and lower abdominal pain for 10 months. She has been treated for recurrent urinary tract infection in polyclinic. Subsequently she got more lethargic, paler and puffier. Further history noted patient was passing stones in urine intermittently for 4 months with largest stone was 1cm in size. She came from consanguineous parents and two out of five of her siblings passed away at young age due to renal disorder. Full blood count shows microcytic hypochromic anaemia (haemoglobin 5.3g/dL), renal profile shows urea 42.6mmol/L, potassium 5.6mmol/L, creatinine 1,510µmol/L. Electrolytes showed hypocalcemia 1.14mmol/L and hyperphophataemia 2.6mmol/L. Serum uric acid 523µmol/L. ALP 336U/L. Blood gases shows severe metabolic acidosis with bicarbonate 9.7mmol/L. Random urine calcium/creatinine ratio is 0.13 (normal <0.09 in 7-8 year-old girl). Abdominal X-ray and ultrasound show right staghorn calculi with left renal calculi. Patient was referred to Sarawak General Hospital for haemodialysis, extracorporeal shock wave lithotripsy and further workup for inherited disorders.

DISCUSSION & CONCLUSION

Hypocalcemia with hypercalciuria is suggestive of familial idiopathic hypercalciuria (4 per hundred) and hypoparathyroidism (7.2 per million). Extensive familial studies are needed. Patient with multiple visits with similar presentation warrants further investigations. High index of suspicion of inherited disease is required. An early onset of disease, positive family history and consanguineous parents are the red flags for prompt investigation. "Horses" are more common, but we should not forget the "zebras".

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THE FAT THAT RAN AWAY

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INTRODUCTION

Fat embolism syndrome (FES) usually results from trauma and typically presents between 30 minutes and 48 hours post injury. The following case demonstrates the similarity of fat embolism to the commoner pulmonary embolism where both present as acute respiratory distress.

CASE REPORT

A 12-year-old boy was brought to Red Zone on 31st January 2016; presented with dyspnoeic since morning. He had a history of left femur fracture put on implant twice in May and August last year. He also had a trauma to the left ankle a day before presentation. On arrival, he is alert but noted to be tachypneic and tachycardia. His blood pressure was normal. Lungs auscultation and other systemic examination were unremarkable except for swelling and tenderness over left ankle region. Petechial rashes were

noted over the body. Saturation was 100% on high flow mask oxygenation.

Bedside echo found an enlarged right ventricles with a plethoric inferior vena cava. Electrocardiogram showed sinus tachycardia with an S1Q3T3 presentation. Arterial blood gas showed metabolic acidosis, lactate of 14 and pO2 of 239. His full blood count was normal except total white cell of 23.5/uL. D-dimer recorded 6498ng/mL. Also sustained closed fracture distal third tibia.

The patient was brought into ICU and intubated. Patient was thrombolysed with intravenous metalyse based on ECHO findings and D-dimer. However, CTPA done showed pulmonary fat embolism instead of pulmonary artery thromboembolism as no filling defect was seen.

DISCUSSION

There is no gold standard test for diagnosing FES; it is a clinical diagnosis. The Classical triad of respiratory symptoms, neurological abnormalities, and petechial rashes may not be all present. Gurd & Wilson criteria for diagnosis of fat embolism require 1 of 3 major criteria and four minor criteria. A chest x-ray is usually normal initially but may reveal increasing diffuse bilateral pulmonary infiltrates. ECG of S1Q3T3 does not confirm pulmonary embolism but rather acute pressure and volume overload of the right ventricle. The presence of fat globules, either in sputum, urine, wedged pulmonary catheter or even bronchoscopy to diagnose FES lack specificity and sensitivity.

CONCLUSION

In the patient presenting with a syndromic interpretation of acute respiratory distress, a high index of suspicion of fat embolism should be entertained especially if there was a recent trauma to the skeletal system. However, a non-traumatic situation like acute pancreatitis and sickle cell crisis may also cause fat embolism syndrome.

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COGNITIVE REASONING OF AN EMERGENCY PHYSICIAN

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Clinical reasoning describes cognitive process involved in medical decision-making. This process requires effective cognitive skill to arrive to a final diagnosis through a series of inferences derived from medical histories, physical examination findings as well as laboratory data. Effective decision making is very important in emergency department which is loaded with the highest decision densities as well as diagnostic uncertainty among all other medical fields. Emergency physicians are not only facing the physical challenges of doing long hour, demanding shift work but also mental challenges of high cognitive load. Various clinical decision making strategies have been reported by literatures but no research has yet to define the prevalence of any of them. Using a real case scenario of a 34 years old Sarawakian lady presented with respiratory distress to Emergency & Trauma Department of Hospital Sultanah Aminah Johor Bahru who eventually succumbed to endotracheal