AIM Exit Examination Question Acute (2)

DRESS Syndrome

Madam Chan, 78-year old lady with history of hypertension, diabetes mellitus, paroxysmal atrial fibrillation. She was taking Lisinopril 20mg daily, Metoprolol 50mg BD, Metformin 500mg BD and Warfarin 2.5mg Nocte. She was admitted to Orthopaedic unit 1 month ago due to acute arthritis of her left knee, was treated as gout, with Allopurinol 100mg daily and Colchicine 0.5mg BD was added.

She was admitted to Medical ward through Emergency Department because of fever together with pruritic erythematous rash over trunk and both lower limb for 1 week. The blood pressure was 145/70 mmHg, pulse rate of 100 beats /min and temperature of 38 ^{o}C.

1. How would you manage her?

- Possible hypersensitivity to allopurinol: withhold offending agent
- Possible sepsis: history, physical examination and sepsis work up

Subsequent blood test showed:
Hemoglobin: 10 g/dl (baseline 11.8g/dl)
WBC count: 13.7 x10^{9}/L (neutrophil 6.7, lymphocyte 1.4, eosinophil 5.3 x10^{9}/L)
PLT: 112 x10^{9}/L
Serum Creatinine 407 umol/l (baseline 115) Urea: 21.9 mmol/l
Na: 135 mmol/l; K: 7 mmol/l, HCO_3 12 mmol/l
LFT: Bilirubin 13umol/L ; ALP: 237 IU/L ; ALT: 135 IU/L
INR: 4.2

2. What is your working diagnosis?

- Possible Drug reaction with eosinophilia and systemic symptoms (DRESS Syndrome), Steven-Johnson Syndrome
- Sepsis
- Acute kidney injury with hyperkalaemia with metabolic acidosis

3. What is your management and investigation plan?

- Sepsis work up
- Acute kidney injury with hyperkalaemia.
  - Withholding lisinopril, metformin and warfarin

- Treatment of hyperkalaemia: IV calcium gluconate, Dextrose-insulin infusion, Resonium
- Close monitor of fluid status and urinary output
- Look for possible causes: infection, urinary retention/obstruction

- DRESS Syndrome
  - Drug withdrawal: Allopurinol
  - Supportive measures
  - Severe organ involvement (patients with renal and/ or hepatic involvement)
    - Systemic corticosteroid (Prednisolone 0.5-2mg/kg per day)
    - Continue until clinical improvement and normalization of Laboratory parameters.
    - Gradual tapered over 8-12 weeks
    - If urinary output of less than 500ml/day with rising Cr/urea - RRT
  - Alert card to patient for allopurinol hypersensitivity
  - Bonus: Association of allopurinol and HLA-B*58:01 positive

~ End ~