



RESEARCH ARTICLE

Colchicine Induced Anaemia

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Abstract

Introduction: Anaemia is common among older adults and targeted investigations are performed according to the case. Our case describes a rare iatrogenic cause of anaemia.

Case description: 79-year-old lady with a history of hypertension and bilateral knee replacements was with colchicine for a presumed gout attack. Initial investigations showed slightly elevated uric acid and a microcytic anaemia of 10.1 g/dL.

A few days later she required blood transfusions in view of symptomatic anaemia. Case was discussed with haematology and advised further investigations. Colchicine was stopped as the patient had not improved. Repeat haemoglobin level improved until it remained stable at around 10 g/dL.

Results: Most of the results were shown in the above case description. Of note is that the patient's haemoglobin level improved drastically on stopping colchicine.

Conclusion: Bone marrow suppression and a plastic anaemia are adverse drug events related to colchicine use, whose incidence is unknown. Iatrogenesis should always be considered as a possibility when it comes to new clinical pictures.

Keywords

Anaemia, Older adults, Colchicine, Adverse drug event, Iatrogenesis

iatrogenic cause of anaemia.

Case Description

79-year-old lady with a history of hypertension and complex bilateral knee surgical history was admitted for rehabilitation following a fall and rhabdomyolysis. She was previously independent. On admission to the rehabilitation facility she was noted to have increasing swelling and pain in her left knee. She was haemodynamically stable and was treated prophylactically with colchicine. Investigations showed a slightly elevated uric acid and a microcytic anaemia of 10.1 g/dL.

She complained of increased lethargy and a repeat haemoglobin was 7 g/dL. There was no reported blood loss. Haematinics were taken and revealed low iron stores. She was transfused 2 units of red cell concentrate and repeat haemoglobin was 9.5 g/dL. The patient remained haemodynamically stable and asymptomatic despite another drop of haemoglobin to 8 g/dL.

Case was discussed with haematology and advised to take a blood picture, serum protein electrophoresis (SPE), and direct antiglobulin test (DAT). All results were normal except for a slightly raised DAT. Blood picture showed rouleaux, no defining morphological findings.

Computed tomography (CT) of the thorax, abdomen and pelvis was carried out and did not reveal anything in particular except for ovarian cysts. She was reviewed by the gynaecologists, who advised further follow-up but it was an unlikely cause for her anaemia.

Introduction

Anaemia is particularly common amongst older adult patients and investigations are generally targeted according to patient's functional status, patient's wishes and degree of anaemia. This case shows a rare



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She was reviewed by orthopaedic surgeons in view of her left knee pain and colchicine was stopped as no improvement was noted. Her haemoglobin improved slowly, until it remained stable at around 10 g/dL.

Results

Most of the results were shown in the above case description. Of note is that the patient's haemoglobin level improved drastically on stopping colchicine.

Conclusion

Bone marrow suppression and a plastic anaemia are known adverse events of colchicine, whose incidence is unknown as per summary of product characteristics (SPC). Iatrogenesis should always be considered with changing clinical pictures. The adverse effect was reported to the local medicine authority.

Discussion

Colchicine is an oral treatment of acute gout and it can be used as prophylaxis while initiating with allopurinol or other uricosuric drugs. It should be used with caution in persons with renal or hepatic impairment as well as in the older age group [1].

A retrospective study by Singh, et al. [2] showed that gout itself increases the risk of a plastic anaemia and pancytopenia, but the use of colchicine increases the risk of anaemia by 3 to 4 fold, while that of pancytopenia increases by 2 to 3 fold. The blood picture should have been taken prior transfusion, however the haematologist advised to take it just the same. Rouleaux formations were observed. This is a very non-specific findings which may be secondary to infections, multiple myeloma, inflammatory, connective tissue disorders and cancers [2].

There are a number of case reports showing different adverse events secondary to colchicine including haematopoietic suppression and multi-organ failure in cases of toxicity. Nausea, vomiting and diarrhoea are among the possible symptoms on presentation of acute toxicity [3]. Even rhabdomyolysis was described as side effect of colchicine independent of the dose used [4].

It is believed that colchicine may induce aplastic anaemia a few days after exposure (3 to 5 days) and may resolve a few days to weeks after stopping it. In cases colchicine induced pancytopenia patients may be at risk of serious life-threatening infections [5,6]. Treatment with granulocyte-colony stimulating factor (G-CSF) may at times be required to help the low counts. In this case, the patient improved steadily upon stopping colchicine. One must keep in mind that this saved the patient unnecessary risks of transfusion associated complications amongst others [7].

Though it is sometimes assumed that there is an organic cause for anaemia, one should always review the patient's treatment list as it might well be drug-induced,

that is, iatrogenic. There were fatalities reported with colchicine toxicity, so one should always take a detailed drug history. Deprescribing was key to success in the management of this patient [3,8,9].

Involvement of the different medical and surgical specialities was important in managing this patient. Deprescribing was key to success in the management of this patient.

Conflicts of Interest

Nil.

Details of Contribution

Dr. Doriella Camilleri was working as higher specialist trainee in Geriatric Medicine together with the consultant Dr. Edward Bellia. Mr. James Vella Bondin is a senior principal pharmacist who helped in the management of this patient. All three had direct involvement in the management.

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