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An audit of Tumour Lysis Syndrome prophylaxis in patients with haematological malignancies.

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INTRODUCTION

Tumour lysis syndrome (TLS) is a well recognised complication of chemotherapy which can lead to biochemical abnormalities as well as renal dysfunction. The British Committee for Standards in Haematology (BCSH) published guidelines[1] in 2015 providing recommendations on risk stratification of patients and what prophylaxis they should receive depending on whether they were classified as low, intermediate or high risk.

AIM

The aim of this audit was to review if patients in a level 3 haematology centre providing autologous haematopoietic stem cell transplantation centre were:

1. Appropriately assessed for tumour lysis risk.
2. Received prophylactic treatment appropriate to their level of risk.
3. Went on to develop tumour lysis syndrome.

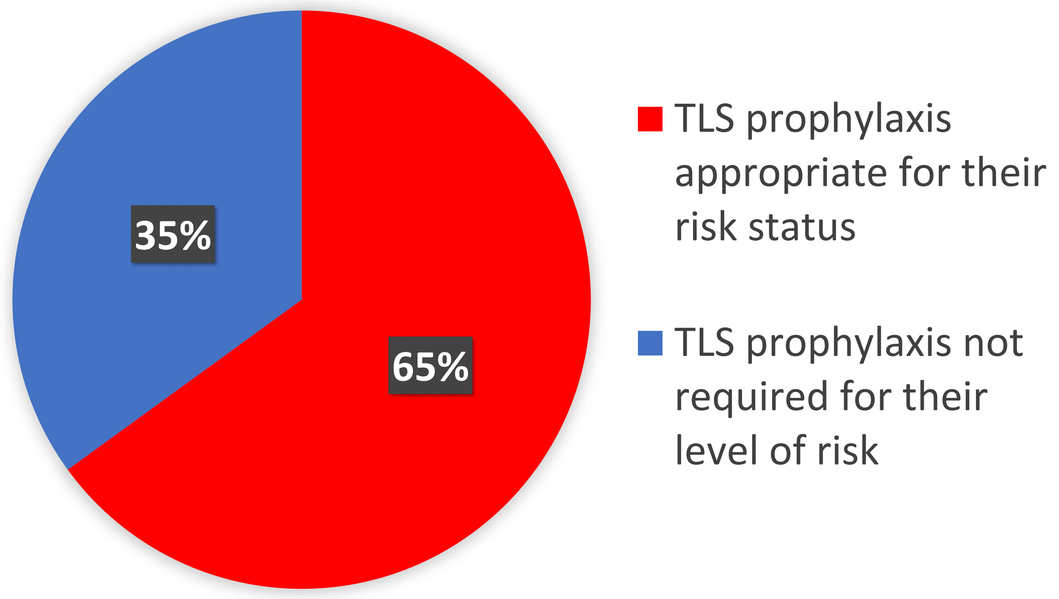
METHOD

Data was collected prospectively over a 3 month period from February to April 2019. Any patient admitted to the ward who was highlighted as potentially at risk of tumour lysis was included in the audit. For each case, the notes were reviewed to ascertain whether the patient had been formally assessed for TLS risk. The prescription records were reviewed to see if the patient received TLS prophylaxis, and if so, what treatment they received. Patient's biochemical parameters were monitored to see if TLS developed following delivery of chemotherapy.

RESULTS

Over the 3 month study period 20 patients were identified by the clinical team on admission as being at risk of tumour lysis syndrome. For each case, the risk category was determined by review of the diagnosis and laboratory parameters including Full Blood Count (FBC) and biochemistry. There was however no documentation of the TLS risk stratification for any patient recorded in the case notes. 8 patients were high risk, 9 intermediate risk and 3 low risk using the BCSH risk categories.

Out of the 20 patients 13 (65%) received TLS prophylaxis appropriate for their risk status. Seven (35%) patients received treatment not required for their level of risk. One low risk patient received fluids and Allopurinol whilst 6 intermediate risk cases received fluids and Rasburicase. Only 1 patient went on to develop tumour lysis syndrome despite prophylaxis. This was a high risk patient who received fluids and Rasburicase.



CONCLUSIONS

In summary the majority of patients at our centre are being treated appropriate to their risk status. However, approximately one third of patients received TLS prophylaxis regimens not deemed appropriate for their level of risk based on the current BCSH guideline. Whilst there may be good clinical reasons for the TLS prophylaxis regimen used in these cases, this was not documented in the patient's case notes.
This audit therefore highlights the need to appropriately document the TLS risk profile for a patient due to receive chemotherapy. The proposed prophylaxis regimen should also be recorded, giving clear reason(s) if it is deemed necessary to deviate from the guideline recommendations. One way to approach this is to include TLS prophylaxis as part of the multidisciplinary team (MDT) outcome proforma.

REFERENCES

1 **Jones G, Will A, Jackson G, Webb N & Rule S. Guidelines for the management of tumour lysis syndrome in adults and children with haematological malignancies on behalf of the British Committee for Standards in Haematology** *British Journal of Haematology 2015 , **169**, 661-671*

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