BSH ANNUAL SCIENTIFIC MEETING 2022

62nd Annual Scientific Meeting

3-5 April 2022, Manchester Central

An audit of compliance with BSH haemoglobinopathy patients' transfusion requirements and antibody prevalence in a UK tertiary centre hospital blood bank

S. MAKKI[1], **V. GARCIA**[1], **R. AUTURALLY**[1], **R. JOLLEY**[1], **K. PHILPOTT**[1], **DR T FOUKANELI**[1], **DR E DICKENS**[1], **DR M. BESSER**[1]

1 Cambridge University Hospitals NHS Trust

INTRODUCTION

Patients, with Sickle cell disease (SCD) and Thalassaemia (T), should receive Rh/K matched blood and be extended antigen typed to reduce the risk of alloimmunisation.

A retrospective audit checked request orders and patient history in the laboratory information system (LIMS) of Cambridge University Hospital (CUH).

AIM

The objective was to review CUH Blood Transfusion laboratory's LIMS record for each Haemoglobinopathy patient.

The standards used for this audit were taken from Guideline recommendations made in the British Society for Haematology (BSH) for Haemoglobinopathy patients.

The Audit focused on Antigen typing as opposed to the provision of HbS negative units or the age of blood..

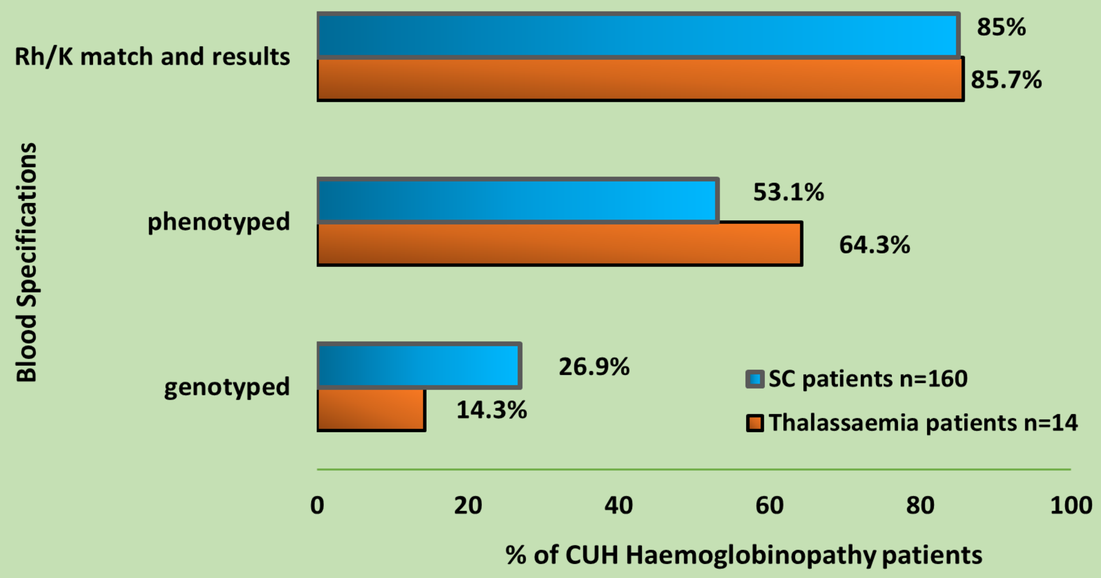
METHOD

There were 174 (SCD=160, T=14) haemoglobinopathy patients registered at our hospital.

Although genotyping results from the International Blood Group Referencing Laboratory (IBGRL) are accessible on NHSBT SpICE, for the purpose of this audit, data was collected using the systems used exclusively by CUH laboratory staff to ensure that the necessary instructions were present to alert the BMS to the patients' blood specifications.

RESULTS

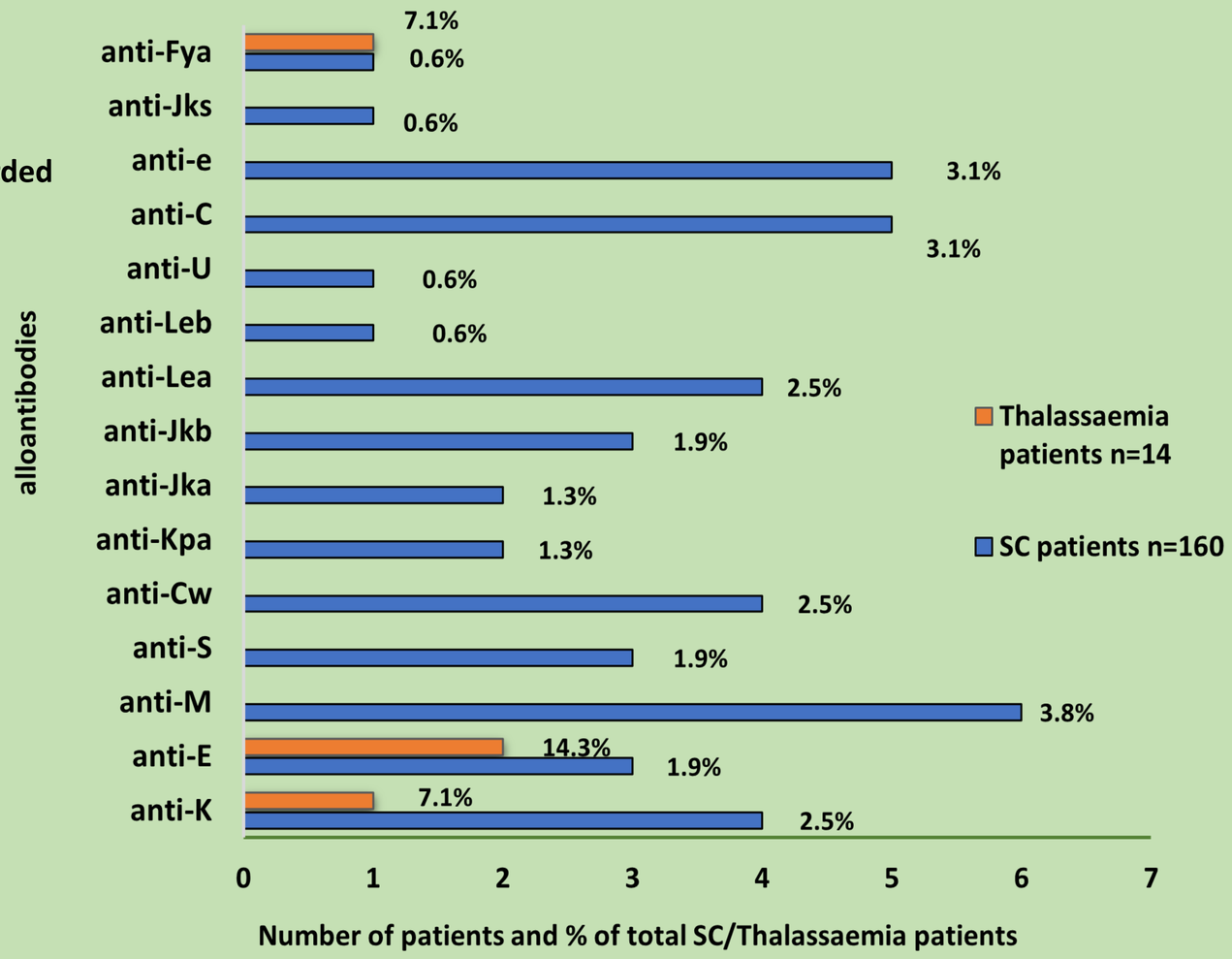
Figure 1: Haemaglobinopathy Blood Specifications recorded on CUH LIMS



Rh variants were detected in SCD patients, all had extended typing, and none in the thalassaemia patients and all were reported on LIMS.

There were 3 autoantibodies in SCD patients and 1 autoantibody in T patients.

Figure 2: Alloantibodies recorded in CUH Haemoglobinopathy patients on LIMS



Alloimmunisation prevalence was 13.8% amongst SCD patients and 21.4 % amongst thalassaemic patients.

There were a total of 45 antibodies (with 16 different antibody specificities) and all were typed for Rh/K as well as extended antigen typing.

CONCLUSIONS

- Most significant among the antibodies is the detection of 3.1% anti-e, Anti-C, AND Anti-E antibodies, which could be indicative of possible transfusion errors in the past and require further investigation.
- Reaudit and ensure that the manual entry of necessary patient information within a reasonable time frame.
- Robust processes are required to ensure the communication of the haemoglobinoathy diagnosis to blood bank in all cases.
- Although genotyping results can be accessed through NHSBT SpICE, it would be a safer, leaner way of working to streamline the information on to LIMS.

REFERENCES

b-s-h.org.uk

Davis, B.A. *et al*. British Committee for Standards in Haematology. Guidelines on red cell transfusion in sickle cell disease. Part I: principles and laboratory aspects. *British Journal of Haematology* (2017), **176**, 179– 191.

Dick, M & Rees, D. on behalf of the Sickle Cell Society Cell Disease in Childhood: Standards and Recommendations for Clinical Care, 3rd Edition, November (2019.)

Trompeter, S. *et al.* Position paper on International Collaboration for Transfusion Medicine (ICTM) Guideline 'Red blood cell specifications for patients with hemoglobinopathies: a systematic review and guideline', British Journal of Haematology (2020), **189**, 3, (424-427)

ACKNOWLEDGEMENT

Dr Martin Besser

CUH Blood Transfusion Laboratory

The Royal Papworth Hospital's Blood Transfusion Laboratory

CONTACT INFORMATION

suzannemakki@nhs.net.