

EVALUATION OF INCOMPATIBLE CROSSMATCH AT BLOOD CENTER

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INTRODUCTION

Pre transfusion compatibility testing is one of the most important serological testing. Transfusion poses risk of adverse reaction , among one is immune mediated haemolytic transfusion reaction. The most common cause for immune mediated HTR is transfusion of incompatible donor's RBCs to recipient. Compatibility testing helps us to find best match (compatible units) for recipient and ensure the safety of transfusion . It is therefore important to detect incompatibility between patients plasma and donor cells and crossmatch should be performed following departmental SOP.

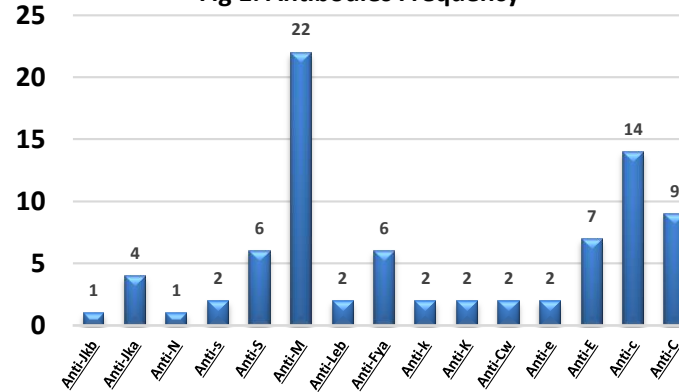
AIM/OBJECTIVE

- To find out prevalence of incompatible crossmatch to formulate root cause analysis to help ensure safe transfusion.
- To serologically categorize the auto and allo antibodies with regard to different antibodies .

MATERIALS AND METHOD

A retrospective study was conducted in which total incompatible cases of 220 were reviewed out of total 174734 cross matches done by CAT(Column agglutination test) in polyspecific (IgG+c3d) gel cards (BIORAD) over a period 22 months.

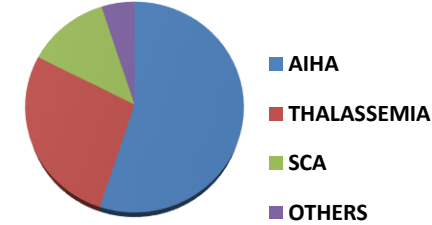
Fig 1. Antibodies Frequency



RESULTS

Out of 174734 crossmatches reviewed only 220 were found to be incompatible of which 209(89%) were incompatible due to presence of antibodies,40(19%) have autoantibody,97(46%) have alloantibody,72(39%) have both autoantibody with our without allo antibody. Out of 97 patients of alloantibody 15(15.4%) have multiple and 82(84.5%) of them have single antibody which are Anti-Jkb:1(1.2%), Anti-Jka-4(4.8%), Anti-N-1(1.2%), Anti-s:2(2.4%), Anti-S:6(7.3%),Anti-M:22(26%), Anti-Leb:2(2.4%), Anti-Fya:6(7.3%), Antik:2(2.4%), Anti-K:2(2.4%),Anti-cw:2(2.4%),Anti-e:2(2.4%),Anti-E:7(8.5%),Anti-c:14(17%),Anti-C:9(10%).

Fig 2. Prevalence of autoantibodies



Out of 40 patients (autoantibody) 22 (55%) are more prevalent in Autoimmune Hemolytic Anemia (AIHA) patients followed by 11 (27%) in thalassemia & 5(12.5%) in sickle cell anemia (SCA), & 2(5%) in liver parenchymal disease,which are associated with Immune haemolytic anemia.

CONCLUSION

Presence of Antibody is most prevalent for incompatibility of which alloantibody are more prevalent and most of alloantibody identified have ANTI-M.

REFERENCES

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