

ABO INCOMPACTIBILITY

1.0 INTRODUCTION:

In 1901, a German surgeon known as Landsteiner described the ABO blood groups.

1.1 BLOOD GROUPS

The red cells contain substances (antigen) which have been designated A, B and O. These give the blood type of an individual. There are plasma other substances (antibodies), which are able to clump red cells. Each antibody can reach with only one group of red cells and therefore are referred to as anti A or anti B antibodies. Red cells of Group A and plasma containing anti A antibody are said to be incompatible. It is obvious that an antigen and its corresponding antibody would never normally occur together in the same blood.

The different blood groups in shown in Table below:

Blood Group	Red cell antigen	Plasmas antibodies	
A	A	Anti B	
B	B	Anti A	
AB	AB	NIL	Universal recipient
		Anti A and anti B	Universal donor
O	O		

It is not difficult to see why A blood for instance cannot be given to either group B or group O patients the blood of both these groups contains anti A antibodies. ABO incompatibility usually occurs when the mother is blood group O and baby is group A or B. In this case the first born child may be affected because mother already has an in born immunity to A and B groups.

MANGEMENT

During the pregnancy antibody titres are monitored throughout the pregnancy. After birth, a sample of the cord blood is taken to determine the bilirubin level final appropriate measurers taken.

RHESUS D INCOMPATIBILITY

In the red cells of some people there is antigens, which has also been found also in the blood of rhesus monkey. Their individuals are said to be rhesus positive. Rh D incompatibility can occur when a women with Rh-negative blood type is pregnant with a foetus (baby) with a Rh. Positive.

INCIDENCE

This condition is common among Caucasians, about 15% of who are Rh negative compared with 8% of African and 1% of Asian Countries (Gunshon, 1993). Placenta usually acts as a barrier to foetal blood entering maternal circulation.

However, during pregnancy or birth, the Rh-positive cells may enter the maternal circulation. The immune system of the mother reacts by producing anti D antibodies that cause sensitisation. In subsequent pregnancies these maternal antibodies can cross the placenta and destroy the foetal erythrocytes (red blood cells).

PREVENTION

- It is important for couples to know their blood group and Rhesus factor.
- Pre-conception care must be given to know individual's medical history.
- During pregnancy anti D prophylaxis in doses of at least 500 iv at 28 and 34 weeks.
- At birth within 72 hours anti D gamma globulin is given to the mother to protect her against subsequent births.
- It could also be given in cases of threatened, complete, incomplete or missed Abortion, ectopic pregnancy and in case of medical or surgical therapeutic termination of pregnancy.
- During pregnancy, Rhesus negative women are screened for Rh antibodies (indirect coomb's test). Even if it is negative the test is repeated at 28 and 34

weeks gestation. However if the anti D 1g prophylaxis is given at 28 weeks, the blood is not retested.

- Antibody titres are monitored throughout the pregnancy

In conclusion, preconception care is necessary so that most of these hereditary diseases could be controlled. Young people need genetic and premarital counselling.