



# THE RARE BLOOD CHALLENGE

What are rare blood types and what challenges do they pose to healthcare and blood banks?

Most people find out that they have a rare blood type when they require a transfusion, and find that they cannot find blood that matches the owner's blood. This presents a challenge to not only healthcare professional and blood banks, but also to the individual, the owner of this rare blood type.

## Blood group know how

Screening of blood type is an important procedure to avoid blood transfusion reaction. The rare blood types include A negative, B negative, AB negative, O negative and Bombay Blood group. Says Dr Varsha Pancholi, Medical Director, Pooja Blood Bank, Mumbai, "In addition to the Rh negative groups and the Bombay Blood Group, which are not easily available, there are the less common types namely MNSS, Duffy, Lewis, Kell etc., which can create problems in cross-matching."

## Challenges faced

Satya Patel, 25 had miscarried and was bleeding profusely when brought into the hospital for an emergency operation to remove the

For people with rare blood groups it is difficult to locate blood of the same type especially when they need it for any medical emergency. There can be an acute shortage of rare blood groups, for which donors are few. Also, there can be some risk in travelling to parts of the world where your rare blood type may be in short supply.

A transfusion with incompatible blood can result in serious problems especially when the person is already injured or is suffering from disease and is in dire need of blood. Another unfortunate situation is that the person would remain untreated until the blood type is obtained. And to find a match in addition to screening the family members, intensive screening of random donors may have to be conducted. If no match is found, the blood centre may have to contact other registries at blood banks in other areas.

**Each blood type is determined by the presence of antigens (proteins) in the blood. Normally the blood group is expressed as A, B, O or AB with a plus or minus symbol that indicates the presence or absence of the antigen Rh. The blood group therefore is represented as either A positive or A negative etc.**

## Blood bank perspective

Rare blood types can cause blood supply problems for unprepared blood banks and hospitals. "The uncommon types of blood groups require a panel of antibodies to test the type of antigen. This facility is available only in institutes and reference centres. The tests are easy to perform but are expensive and need expertise. Only for patients with autoimmune disorders or haemolytic disease of newborn and complicity in cross matching may require these tests", says Dr. Pancholi. "Generally, blood banks have a data base of donors of all groups and as per our requirement we summon our donors especially the rare types and they voluntarily come to donate", she adds.

foetus. But when she reached the hospital she had another major problem. Her blood group was Bombay blood group. "It took quite some time to find even two units of blood. My condition was becoming critical. Being a rare group, donors are very few," she says.

