

ANNIVERSARY SPECIAL DOUBLE ISSUE

KASTURBA: THE FORGOTTEN GANDHI | PEOPLE WE SEE WITHOUT 'SEEING'

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# THE WEEK

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ANNIVERSARY

## REPUBLIC, REIMAGINED

The India that Nehru made was remade by each of his successors. The differing visions and legacies of our prime ministers





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## ABO incompatible Liver Transplant- The Challenges...

Prevalence of liver disease in India is very significant. Cirrhosis of liver is one of the most common causes of liver disease related mortality. According to one study, India contributes to approximately one fifth global liver disease related death. The only permanent solution for decompensated chronic liver disease is liver transplant. As we all know, ideal liver transplant or any kind of transplant is ABO compatible or blood group matching transplant.

Unfortunately, incidence of cirrhosis of liver is very high in our society and many of our cirrhosis patients don't have blood group matching donor in their family. It's very unfortunate that we don't have adequate cadaver donations. Number of recipients in cadaver waiting list are multiple times than the donors. If you see the waiting list mortality among liver recipients, it's around 30%.

So, ABO incompatible or non-blood group matching liver transplant is one of the options when patient is sick and they don't have blood group matching donor in their families.

To understand ABO incompatible transplant, we have to understand natural antibody. If your blood group is A, your plasma will have anti B antibody and vice versa. These are natural antibody. If opposite blood group organ is implanted in someone's body, antibody against that organ in recipient's plasma will try to reject, damage and destroy that organ. If we have to perform ABO incompatible liver transplant, we have to remove antibody producing cells from recipient's blood and we also have to remove antibodies from plasma for which we have to do plasma exchange. These procedures are performed before transplant.

Initially when ABO incompatible liver transplant was started in 1980s, results were very poor. Mortality and graft failure rate were more than 50%. Biliary complications, vascular complications, infection and antibody mediated rejection rate was high. But things have

changed with time. Now we have well defined protocols for such type of transplant. In current scenario, there is no significant difference between survival rate after blood group non matching liver transplant as compared to blood group matching liver transplant. Although incidence of few complications after ABO incompatible transplant is more as compared to ABO compatible transplant.

Recently, we did ABO incompatible liver transplant of 16 year old male patient. Patient was suffering from Wilson's disease which is a genetic disease in which copper is deposited in vital organs including liver, kidney, eyes and brain. Our patient was very sick and his condition was deteriorating rapidly. He had jaundice, fluid in abdomen and his muscles were very thin. His mother came forward to donate part of her liver but her blood group was not matching. Patient's blood group was B and mother's blood

group was AB. There was no other blood group matching donor in family. So we decided to go for ABO incompatible transplant. Preparation for ABO incompatible transplant was started few weeks before transplant. He received Rituximab (to reduce antibody producing cells) few weeks before transplant. Two weeks before transplant he was admitted and optimized for liver transplant. After couple of session of plasma exchange he was taken for liver transplant. After transplant we have to be very careful for infection. Daily antibody titres were checked. Patient did very well and discharged on postoperative day 12.

As result of ABO incompatible transplant has improved with time and there is critical organ shortage in India, ABO incompatible liver transplant is a viable option when patients condition is deteriorating and there is no blood group matching donor in family.

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