

Liver transplantation

Liver failure and transplantation

- Nearly 6,000 liver transplants are carried out in Europe each year³
- Approximately 30% of patients die within five years of their transplant³
- Only 61% of patients survive 10 years after their transplant³
- The first liver transplant was carried out in America in 1963⁶
- The European Liver Transplant Registry (ELTR) was created in 1985⁷

- Liver failure occurs when large parts of the liver become damaged beyond repair and the liver is no longer able to function
- Liver failure can happen suddenly (acute liver failure) as a result of infection or complications from certain medications
 - It can also be as a result of a long-term problem including chronic hepatitis with cirrhosis, Wilson's disease, hemochromatosis, alcoholism, and liver cancer¹
- A liver transplant is considered when the liver no longer functions adequately (liver failure)¹
 - The reasons for carrying out liver transplants and the number of transplants carried out per population vary from country to country across Europe²
- In Europe, nearly 6,000 liver transplants are performed each year³
- The first year after transplantation is critical as more than half of deaths occur within the first year post-transplant³
- The number of organ transplantations is increasing every year
 - In 2011, more than 30,000 transplants took place in the European Union alone⁴
- At the end of 2011, over 61,500 patients were on a waiting list for an organ transplant in the European Union and the number of patients dying on waiting lists was estimated to be 5,500⁵

History of liver transplantation and the European Liver Transplant Registry (ELTR)

- The first human liver transplant was performed by an American doctor, Dr. Thomas E. Starzl (University of Colorado Medical School)
 - However the lack of effective immunosuppressives limited the success, and the recipient did not survive for long after the operation⁶
- The development of immunosuppressive drugs led to an increase in survival rates with one year survival rising from 47% in 1968 to 67% in 1988-1996⁶

- The discovery of ciclosporin was a significant breakthrough
- There are several classes of immunosuppressant drugs⁹
- Astellas is committed to improving the lives of people who have had organ transplants

- The formation of the European Liver Transplant Registry (ELTR) came out of a desire to:⁷
 - Have a register of all the liver transplants carried out in Europe
 - Develop links between European liver transplant centres
 - Promote scientific exchange and generate publications
- The ELTR was formed by Professor Henri Bismuth France, Professor Rudolf Pichlmayer, Germany and Sir Roy Calne, UK in 1985 at the European Society for Organ Transplantation meeting⁷

Treatments in liver transplantation

- The discovery of the immunosuppressant effects of ciclosporin (a compound produced by fungi in the 1970s) was a significant breakthrough in liver transplantation⁸
 - Researchers discovered that ciclosporin can suppress the human immune system, and can prevent rejection of newly transplanted organs and tissues⁸
- Today several treatments are available which can help prevent or reduce the risk of rejection of a transplanted organ
- Immunosuppressants (or anti-rejection drugs) are a class of drugs that suppress or reduce the strength of the body's immune system
 - One of the primary uses of immunosuppressant drugs is to reduce the body's ability to reject a transplanted organ, such as a liver⁹
- Tacrolimus is an oral immunosuppressant agent which acts on cells in the immune system (called T-cells) which are responsible for attacking the transplanted organ. This is when organ rejection occurs^{10, 11}

References

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