

Concentrating on the ethical aspects involved



Organ transplantation is a main branch of medical surgery in which many technological leaps have been made in the last decade. So much so that it has become common practice in many of the modern hospitals of today. The process involves finding an organ donor (often the most difficult part), if the donor is deceased the organ has to be removed within a few hours as the internal biology of humans degenerates greatly in a relatively short space of time. In the case of heart transplants, the operation is conducted under general anaesthesia. An incision is made into the person's chest and the heart is exposed.

They are then connected to a heart-lung bypass machine that keeps them supplied with a steady flow of oxygenated blood. The heart can then be removed and the replacement sewn into place. Once the new heart is in place the heart-lung bypass machine is disconnected and the heart restarted. Hopefully the heart transplant is successful and the patient leads a full life for many years. The two main reasons for actually receiving a heart transplant are cardiomyopathy (weakening of the heart muscle), and severe coronary artery disease. Unfortunately, too often this isn't the case.

The patient's body rejects many organs that are transplanted, this is due to the immune system not recognising the foreign organ and attacking it, effectively rendering it useless. Due to this, the donor and patient must be as genetically similar as possible. All patients are given immunosuppressive drugs to help ensure that the new organ is accepted, the drugs temporarily weaken the patients immune system, making it less likely to attack the organ. Other transplant failures are caused from excessive use of the

immunosuppressive drugs, which encourages infection and weakens the body enough to reject the transplant.

To meet the criteria for a heart transplant the patient must be in a life threatening condition, all other treatments must have been tried previously, the patient must also be in otherwise good health. The patient must also be able to adhere to complex drug regimes and be able to attend frequent follow-up examinations. I believe that this is a very effective selection method, because if all other treatment avenues haven't been explored, then an organ that may have been better used would have been wasted.

The same could be said for a patient not able to stick to the drug regime. The ethical issues surrounding organ transplantation are compelling, complex and frequently perplexing. Doctors and other trained professionals are on a daily basis, deciding who should receive a transplant operation and the organ necessary and who should not, essentially, who should die and who should not. The decisions, when made, often seem incredibly unfair. Patients who are less ill than others often get transplants, whilst others die waiting for a donor to appear.

For example in Ohio the median waiting time for Blood Type O kidney patients is approximately 204 days in one part of the state. 1, 422 days in another. This system obviously does not pass even the most rudimentary of ethical tests, and it is clearly very unfair that patients living in different parts of a state should be treated so differently, not when the stakes are so high. But often the problem isn't with the basics of ethics, but with the more

complex issues. For these issues to be applied, the doctors and specialists must make decisions and new protocols that benefit some and not others.

Every extension of the right to moral protection represents a corresponding burden on the moral community that have to respect that right. For example, one the ethical quandaries that doctors may have to face is when is a person actually dead? Declaring that a person is alive when brain dead, but on artificial life support, may seem morally correct, but it would mean sustaining comatose people indefinitely, and being unable to remove their organs for people that actually have a chance of having a decent quality of life.

Xenotransplantation has become a bigger issue in the last decade. It involves breeding an animal for its organs. Being able to breed animals purely for organ transplantation purposes helps to dispel many ethical dilemmas, such as having to " pull the plug" on brain dead patients in an attempt to keep up with the demand for organs. The most widely recognised method of xenotransplantation is with pig hearts, as they are the nearest equivalent in the animal kingdom to human hearts.

But, presumably because there are marked differences between human and pig DNA, rejection rates are higher using this technique. However there is hope as technology improves and immunosuppressive drugs get more complex. In spite of these technological leaps, do people want to be part human, part pig? Will vegetarians accept an animal heart? Will Jews only accept pig hearts that have been prepared with Kosher is mind? So it seems that instead of diminishing the ethical aspects that need to be addressed,

technological advances and alternate methods have and will only compound the problems.