

Kidney transplantation in the country needs improvement

PROFESSOR MATIUR RAHMAN

In the field of organ transplantation, kidney transplantation is the most widely used form of organ transplantation all over the world because of its effectiveness and relatively low cost.

In Bangladesh first living related donor kidney transplantation was performed in the Institute of Post-graduate Medicine and Research (IPGMR) in the year 1982. However, in Bangladesh about 50 kidney transplantations are carried out per year. And after more than two decades, since first transplantation was performed, there are only two or three centres in the country and those are confined to capital city, Dhaka. During 1998-2004 a total of 278 live related donor kidney transplantation were done within the country and about equal number of end stage renal disease (ESRD) patients had their transplantation, mostly unrelated from outside the country.

The reason behind the low rate of renal transplantation in Bangladesh?

It is estimated that about 15,000 patients die from end stage renal failure annually in the country and only a fraction, 2-3 per cent has any access to the treatment facility i.e. dialysis and transplantation. The reasons for such low rate of transplant are -- (1) economic condition of the patients, (2) inadequate facilities available in the country, (3) ignorance of the patients, (4) non-availability of the suitable donor. The first three causes are common for all developing countries of the world.

Many people may argue that where the basic primary health care are so scarce, the advanced form of medical treatment such as kidney transplantation could just be a luxury. But they should consider that many end stage renal disease (ESRD) patients are seeking transplantation for this disease outside the country increasing their suffering and economic hardship. And the situation can be easily improved by motivating the medical profession, particularly involving the professional group engaged in the transplantation, by improving core facilities, gaining skill and a team work approach.

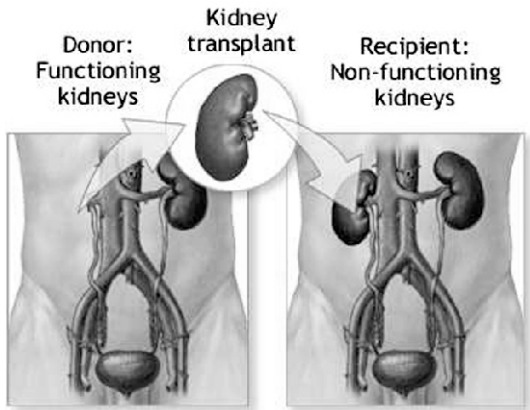
Source of kidney for transplantation

There are 3 sources of kidney -- (1) living related donor transplantation, (2) living unrelated donor transplantation; and (3) cadaver donor transplantation (transplantation from dead people).

Living related donor transplantation: This form of transplantation is done by taking one kidney from the first degree relatives who voluntarily and willingly donate their kidney out of love and affection. The graft and patient survival of such transplantation is much better compared to transplantation from other sources.

Naturally when suitable related donor is not available then the patient will have to remain on dialysis, which is very expensive for most of our ESRD patients or try for other source of kidney for transplantation.

Living unrelated donor kidney transplantation: Ethical question needs to be balanced



between the desire to do good to ESRD patients by expanding donor pool on the one hand avoiding the possible abuse and exploitation of the poor individuals offering their kidney for sale for tiding over some pressing financial worthwhile humanistic crisis on the other.

Cadaver donor kidney transplantation: Cadaver donor transplantation means the healthy individuals who are involved in road traffic accidents and sustains head injury and after being in the intensive care unit on life sustaining machine (ventilator) are examined by a team of experts and given the opinion that they have "brain death" and there are laid down medical criteria for declaring one as "brain death" patient, then their kidneys and other organs are retrieved and utilised for transplantation.

Such accident patients on ventilator when declared to have "brain death" legal authority is required for the doctors before they can remove the organs. Keeping

this in mind it was felt that an organ transplantation law is necessary for the country as a first step for initiation of cadaver donor transplantation in the country, even through this form of transplantation is expensive and has poorer result.

Bangladesh Organ Transplantation Act of 1999

In 1999, an organ transplantation bill was passed and became an act. The main objective of the act was to promote renal transplantation, particularly to initiate cadaver donor transplantation in the country.

This act has some 10 clauses, out of which certain clauses (like Clause 2 para C and Clause 10 para 1-3) create controversy and instead of promoting, the law has been rather prohibitive for developing live donor as well as cadaver donor transplantation in the country.

For live related donor transplantation, no law is required, however for live unrelated donor and cadaver donor transplantation, law is necessary to prevent abuses of

the donors and to protect the profession from unnecessary harassment and litigation. And therefore it is necessary to bring the amendments of this organ transplantation act so that unrelated transplantation (now being done mostly outside the country) can be performed inside the country in a centrally controlled and supervised manner avoiding rampant commercialisation in the matter and also initiate to undertake the various steps necessary to start cadaver transplantation in the country.

Summary and recommendation

Kidney transplantation is a better option for treatment of ESRD patients compared to maintenance dialysis in terms of economy and quality of life. So efforts should be made to promote transplantation programme in the country. Efforts should be given to expand the live related donor pool by encouraging relatives to donate their kidney to their unfortunate relations with ESRD, as it is safe to donate their one kidney. Secondly, live related donor pool needs to be expanded by including first and second degree cousins. This shall require amendments of the present Organ Transplantation Act of 1999.

Although there has been expansion of centres in the private sector with facilities for haemodialysis in the country, private clinics so far have not come forward for doing transplantation as is being practiced in other South Asian countries.

In conclusion the following recommendations and suggestions are made for consideration by

the appropriate authority, so that the transplantation programme can be expanded in the country --

1. All out effort should be given as a priority measure to establish effectively the transplantation programme of National Institute of Kidney Diseases and Urology, (NIKDU)
2. Emphasis to organise transplantation team in different government medical college hospitals within the next 2-3 years to decentralise the facility throughout the country. Necessary manpower training of various experts required for transplantation should be taken up now
3. Necessary amendments of the Organ Transplantation Act of 1999 to be brought through parliament on the basis of recent scientific advancements with open mind to expand the donor pool, keeping in mind the best possible service to the recipient, preventing exploitation and abuse of donors
4. There must be cooperation between the different transplantation centres within the country and sincere efforts be given to develop cooperation within the SAARC countries just like European Dialysis and Transplantation Association if South Asian countries want to establish the cadaver donor transplantation programme for the benefit of their ESRD patients in the region.

The writer is the founder Professor of Nephrology, Dialysis and Renal Transplantation at former IPGMR.



Emphasis should be given to neonatology

DR WAZIR AHMAD

Maternal nutrition and health during pregnancy is an important factor for the birth of a healthy newborn. A neonate is a newborn within 28 days of age. In Bangladesh 3.8 million babies are born every year out of which 1.5 million die. The neonatal mortality rate in Bangladesh is about 60 per thousand live births per year, which is one of the highest in the world. This high neonatal mortality is due to many factors like lack of regular antenatal check up, home delivery by untrained persons, delayed referral to hospitals etc. Management of neonatal cases by trained doctors and nurses is very unsatisfactory at different level of our health system.

Neonatology as a sub specialty at the undergraduate level has not gained enough emphasis. Both doctors and nurses have minimal exposure in the proper management of newborn care. Neonatal care is very much dependent on skilled nursing manpower. So more importance should be given in this sector. There are various neonatal problems like perinatal asphyxia (failure to breath or suffocation), preterm delivery, septicemia (blood poisoning), neonatal jaundice etc. A state of the art management of such cases is a very expensive affair, which includes highly skilled manpower and

sophisticated treatment facilities. Except in few centers at Dhaka and Chittagong, the rest of the country is deficient in providing proper neonatal services.

In order to combat the high Neonatal mortality in our country; it has to be dealt with jointly by both Government and non-government organisations. To address this problem, more emphasis should be given at grass root level.

- a) More trained birth attendants (TBA) should be made available at the village level
- b) General practitioners should be trained to conduct delivery and manage newborn problems
- c) Regular clinically oriented training should be given to nurses at District Hospitals and Thana Health Complexes
- d) Proper guideline should be given for early referral of cases of Hospitals
- e) All pregnant mothers should be encouraged to seek regular antenatal checkup.
- f) As we all know prevention is better than cure, so media has a great role to play in this regard to enlighten the people about neonatal care in order to decrease the neonatal mortality of our country and help mitigate the sufferings of the pregnant mothers.

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WISER OR NOT?

Should we keep our wisdom teeth?



STAR HEALTH DESK

Our wisdom teeth are the last teeth to erupt, usually in our late teens to early 20s. This is probably why they are termed wisdom teeth, or third molars in some cases because like wisdom, they come with age.

Reasons for removal

Contrary to popular belief, the emergence of wisdom teeth does not always cause pain. It is when the teeth do not emerge properly from the gum that discomfort and pain set in.

Trouble can be caused when wisdom teeth get impacted-jammed against existing teeth with insufficient space to grow. This causes an unpleasant sensation of pressure.

As wisdom teeth grow at the back of the mouth where it is difficult to clean, food debris may get lodged below the gum that covers the partially emerged tooth. This may lead to gum infection where the gum swells, bleeds, and causes pain.

Wisdom teeth may be removed if they are not functional. For example, when a lower wisdom tooth is removed, this may leave the upper wisdom tooth with nothing to bite on. Removing it then serves to pre-empt future problems or infections.

Another instance whereby it is advisable to remove wisdom teeth is when the teeth are being fitted with braces. This gives the

teeth more space instead of crowding together.

When the wisdom teeth are able to emerge fully from the gum, align themselves nicely, and be easily accessible for cleaning, there is usually no need for removal.

Whereas, general dentists are trained to extract wisdom teeth, in some cases where the tooth is very deeply and badly impacted, making it extremely difficult to remove, the patient may be taken to determine the shape and size of impacted teeth.

Precautions for operation

Pre-operational: Inform your dentist of any heart condition, drug allergy, or serious illness.

Arrange for a few days of medical leave in advance.

Have a good meal and brush your teeth.

Post-operational: Do not wash your mouth too vigorously or probe at the wound with your tongue. This will cause further bleeding.

Reduce the cheek swelling with an ice-cold towel or ice pack.

Abide by the medication schedule prescribed by the dentist. Complete the entire course of antibiotics.

Eat only soft foods and avoid vigorous exercise, alcohol, and smoking.

After the first day of the operation, rinse your mouth gently after every meal to dislodge any food particle. Continue to brush other parts of your mouth.

Hormone replacement therapy

Consult a physician before making a decision

DR MINATI ADHIKARY

Many women at some stage consider taking hormone replacement therapy (HRT), but the risks and benefits make this decision difficult. Women are increasingly encouraged to participate in making decisions about HRT.

The complexity and lack of information about the treatment often make it difficult for women to make a decision, increasing their reliance on medical advice. Since HRT was introduced 70 years ago, a steady flow of studies have produced evidence of both harmful and beneficial effects which has added to the confusion. So it is important to know the risks and benefits of HRT.

Benefits and risks of HRT

The main reason for prescribing HRT is relief of menopausal symptoms and prevention and/or management of osteoporosis. Some evidence also exists that it may have a role in primary and secondary prevention of cardiovascular diseases, colorectal cancer, and prevention of Alzheimer's disease. But HRT seems to be associated with an increased risk of breast cancer, myocardial infarction (MI), stroke, cerebrovascular diseases, and thromboembolic disease.

Randomised controlled trial among 2563 healthy menopausal women by Women Health Initiative (WHI), UK have shown that continuous treatment with 0.625 mg of conjugated equine oestrogens plus 2.5 mg of medroxy progesterone increases the risk of heart events by 29 per cent and stroke by 41 per cent. And the study had to be stopped prematurely when the risk of invasive breast cancer exceeded the stopping boundary.

Evidences show that, in case of postmenopausal symptoms a "domino" effect may occur-for example, relieving hot flushes may improve sleep, which may improve mood. HRT can also improve quality of life of women.

Osteoporosis: after the age of 35 years, men and women start to lose around 1 per cent of bone mass each year. However bone loss is accelerated during the first three to four years after the menopause. HRT reduces bone loss at clinically relevant sites like spine and femur neck and thereby reduces risk of fractures at these sites. This effect however, may be less in women older than 60.

Different studies show a reduction in hip fracture with HRT. But bone loss resumes with in one year after stopping HRT, however, and bone turnover rises to the level of that in untreated women within three to six months. Considering risks of HRT, Royal College of Physicians UK suggests HRT for high risk groups only. That is HRT is recommended for women with premature menopause (before the age of 40), with family history of osteoporosis, taken steroids for more than 6 months, premenopausal amenorrhoea for more than 6 months, and women with excessive alcohol intake.

Cardiovascular diseases: cardiovascular disease rarely affects women before the menopause, strongly implicating oestrogen deficiency in the oetiology of the disease. Observational studies have reported that oestrogen decreases morbidity and mortality from coronary heart disease by 30-40 per cent. The Heart and Oestrogen-progesterone Replacement Study (HERS), UK, investigated the risk of events among 2763 postmenopausal women. The recommendation after WHI and HERS studies is that HRT should not be used for reducing risk of coronary heart disease in menopausal



women.

Thromboembolic diseases: WHI and HERS studies showed that women taking HRT have twice the risk of venous thromboembolism (condition where a blood clot forms in one part of the body and moves through the blood vessels to block another, usually smaller, part) compared with non-users and the risks are greater in women with family history of thromboembolic diseases, severe varicose veins, obesity, surgery, trauma, or prolonged bed rest, and age is an important risk factor.

Colorectal cancer: observational studies are consistently suggesting that HRT reduces the risk of colorectal cancer.

Breast cancer: a serious concern for

women taking long-term HRT is the reported increased risk of breast cancer. A large meta-analysis of data from 51 observational studies reported that the risk of breast cancer increased by 2.3 per cent for every year of use of HRT. The cumulative incidence of breast cancer in women aged 50-70 years women who have never taken HRT is about 45 cases per 1000 women. The excess risk translate to two extra cases of breast cancer for every 1000 women using HRT for five years, six extra cases of breast cancer for every 1000 women using HRT for five years, and twelve extra cases of breast cancer for every 1000 women using it for fifteen years. And for every 10000 women using HRT there would be 8 more cases of invasive breast cancer a year. The risk of breast cancer falls after stopping HRT and returns to baseline within 5 years.

Uterine cancer: The increased incidence of endometrial cancer associated with HRT has been established since 1970s and the risk is significantly increased after five years of use.

Principles of prescribing HRT

Symptomatic perimenopausal women who present with hot flushes or irregular periods may be offered sequential HRT. Treatment for 1-2 years is likely to improve quality of life with minimal risk.

In Symptomatic postmenopausal women risk benefit ratio for short term use of HRT is weighted towards benefit. Women without a uterus need only oestrogen which will relieve hot flushes, improve urogenital symptoms, and protect against bone loss. But increase the risk of breast cancer, stroke, and sometimes cardiovascular diseases. Women with a uterus can use sequential HRT. But HRT is not recommended for women with urogenital symptoms alone. Symptoms like vaginal dryness can be adequately treated with local preparations for example, creams, pessaries or rings.

Women experiencing menopause before the age of 40 should be advised to start long-term HRT. As these women have not been exposed to the normal length of natural oestrogen, the health risk associated with HRT is not thought to apply until they reach the normal postmenopausal age.

Women who should not be offered HRT

HRT is difficult to justify in women with no risk factors for osteoporosis. Women who have heart disease, breast cancer, and venous thromboembolism, should be discouraged from taking HRT unless there are other strong indications.

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Maternal folic acid level linked to birth weight

Pregnant women who lack the vitamin folate in their blood are more likely to have a baby with a low birth weight, British scientists revealed.

Folate is a B vitamin found in green leafy vegetables, cereals and liver. It is essential for foetal growth and gene expression, helping produce and maintain new cells.

Women are already advised to take folic acid supplements, a synthetic compound of folate, before conceiving and during the early months of pregnancy, to reduce the risk of defects such as spina bifida, a defect of the spinal column.

Researchers from the University of Newcastle upon Tyne examined folate levels in red blood cells for nearly 1,000 pregnant women and looked at lifestyle data.

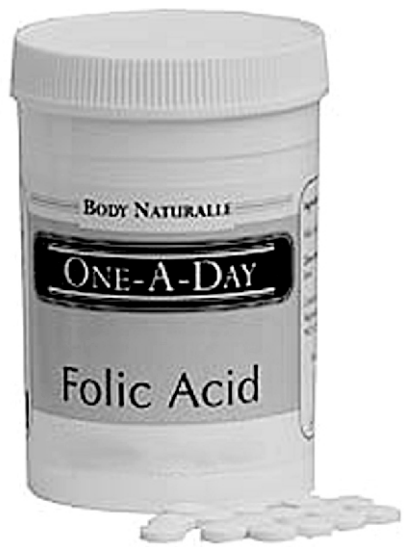
They found higher folate levels in women were associated with increased birth weight for their babies -- a marker for good health in infancy and later in life.

"Low folate status in early pregnancy has been linked with low infant birth weight. Mothers with low levels of folate have lighter babies," said Dr Caroline Relton, who headed the research team.

Babies with low birth weight -- 5.5 pounds (2.5 kg) or less -- are more likely to have a low IQ and to suffer from health and developmental problems.

Relton and her team, also noted that women who smoked tended to have lower levels of folate in their blood, which could explain why they give birth to smaller babies.

The researchers believe their findings strengthen the argument for fortifying foods such as bread and cereals with folic acid.



The United States started fortifying flour with folic acid several years ago after its role was established in reducing neural tube birth disorders. Other countries included Canada, Australia, Mexico and Chile have followed their example.

These birth defects occur during the early development of the fetus, when the spine does not close properly. Spina bifida is the most common of these. Since the United States began the fortification program the number of babies born with spina bifida or another serious defect called anencephaly (absence of a brain, which causes a fetus to die a few hours after birth) has fallen.

Scientists have also found that daily supplements of folic acid or food fortified with it can help to prevent heart disease, stroke, blood clots and cognitive decline.

However, folic acid breaks down a substance called homocysteine in the blood, and too much homocysteine is related to a higher risk of heart attack and stroke.

Source: British Journal of Nutrition