Star health

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KNEE REPLACEMENT SURGERY

Don't suffer in silence for knee pain

DR M ALI

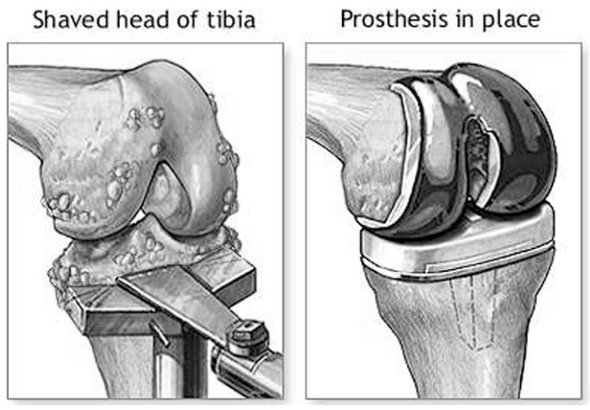
The knee joint is the largest and one of the most complex joint of the body. It is made up of the lower end of the thighbone (Femur) and the upper end of the leg bone (Tibia) along with kneecap (patella). The two ends of the thigh and leg bones glide smoothly on each other and allowing us a smooth, painless movement of the lower limb.

Whenever you walk, sit, run, turn around or similar activities where you depend on the knee for support and mobility, it bears the full load of the body. It means, in a 70kg person the knee experience only 70 kg when he or she stands but it multiply even 210kg during running or sports. It is impossible for anybody to work properly without a pain-free, mobile knee .

For smooth function of the knee smooth gliding surface for the bony ends are mandatory. The surfaces of all three consisting bone come in contact during motion and covered with a thick smooth gliding surface (articular cartilage). Other components for good functioning knee are strong and healthy muscles around knee, ligaments and of course covering membrane (synovial membrane). Normally all these components work in harmony, but disease or injury can disrupt this harmony resulting pain, thigh wasting, repeated joint effasion and decrease or loss of functions of the knee.

The most common causes of the knee pain and disability is osteoarthritis. In Osteoarthritis the gliding surface of the bone become irregular and rough due to age related wear and tear. The painful stiff knee may also develop due to disease like rheumatoid arthritis or after injury or infection.

In the early stages of the usually the pain is relieved by painkillers only or in association with physiotherapy and sometime injection into the joint. But in advanced stage, when the pain is severe, conservative therapy fails and your daily activities become very restricted, you need an operation. Varieties of operations are there; the simplest is arthroscopic washout and the last option is total change of the knee joint and replaced by artificial joint. The artificial joint will give you pain free, mobile joint for quite long time which is more than 15 years.



Replacement of knee joint

What is total knee replacement surgery?

A total knee replacement is a surgical procedure where the diseased knee is replaced with an artificial knee joint (implant). During the total knee surgery the ends of the thighbone is removed and replaced wit the metal shell; the end of the leg bone is replaced with a plastic piece over a metal stem. Depending on the condition of the damage of the kneecap the undersurface is also resurfaced with plastic kneecap. Many design and different material are currently in use for the replacement with varieties of price.

When you need total knee replacement?

- If you are more than 60 years of age with severe knee pain that limits your daily activities including walking, going up and down stairs and getting in and out of the chair. You may find it very difficult to walk more than few steps without severe pain.
- If you are more than 60 years with moderate to severe pain while resting during day or night and deformity in the knee.
- If you are more than 60 years with moderate to severe pain, which is not relieved by drugs or you are taking the drugs for a long time, which is causing side effects.

Before 60 years of age total knee replacement operation is usually not done

Benefit of total knee joint replacement

- Relief of knee pain
- Increase movement of the joint
- Correction of deformity
- More leg strength (If you do exercise)
- Improve quality of life
- Ability to return to normal life

You can run, jump, play or whatever you would like to do after total knee replacement.

Dr M Ali, an arthroscopic surgeon and knee specialist is an Assistant Professor of National Institute of Traumatology and Orthopaedic Rehabilitation (NITOR), Dhaka.

The prospect of knee replacement is very bright here, said foreign specialists

TAREQ SALAHUDDIN

Recently, 19th scientific congress of Bangladesh Orthopaedic Society was held in the capital. Some eminent and renowned doctors from different countries came to attend the congress. They expressed their views to The Daily Star during the congress about the prospect of different fields of orthopaedics in our country.

Dr Kamal Bose, consultant orthopaedic surgeon of Mount Elizabeth Hospital said about some recent advancement in orthopaedics.

He told about the advancement in reconstructive arthroscopic surgery for young patients suffering from joint pain. He informed that there are tremendous development in the surgical procedures for joint surgery, spine surgery and some other reconstructive surgeries. Now-a-days, patients can get benefit by minimally invasive surgeries for which they experience shorter hospital stay and early recovery. Then he told about the tissue engineering technique for patients suffering from joint pain. He added that in near future surgeries for joint pain would be a history; rather tissue culture will replace surgeries. The work and research is going on for this purpose.


Dr Kamal Bose


Dr Vikash Kapoor

In an answer to a question during the interview, he expressed that this is not very sophisticated or tough job. All we need to develop infrastructural facilities for tissue engineering by skilled and experienced physician.

Dr Vikash Kapoor, senior consulted orthopaedic surgeon of Armenian Church Trauma Center at Calcutta in India expressed his high esteemed hope and spirit to spread the healthcare facilities in order to serve the humanity. He said, "I am very hopeful about the situation of Dhaka. You have good number of skilled and forward thinking orthopaedic doctors and you can get benefit from them. You have the scope to do a lot for the common people". Further he added, "in old age, knee pain is a common phenomenon and obviously there are lots of patients here. I have seen the problem is same all over the world. Doctors can cut short the cost of surgeries by working on more patients. They have to change their perspective from commercial view to give service towards mankind.

He stretched on organising different health camps from which patients will get benefit. This also helps the local doctors to improve their skills and experience. He emphasised on spreading the message that people need not to lose their self-respect as the remedies from knee pain (Knee Replacement Surgery) are quite available here.

Free treatment for breast cancer patients

STAR HEALTH REPORT

In Bangladesh, 24.3 percent female cancer patients are of breast cancer. Many of them are poor who cannot afford the treatment cost, specially operation at early stage. As a result, cancer spread out in other part of the body (metastasis). Then treatment can be of very least benefit for the patients.

Bangladesh Cancer Foundation Hospital, a non-profit private cancer hospital administered by a trustee board has announced a special treatment offer for the poor breast cancer patients to observe the International Women's Day – says a press release.

They will provide operation of 30 breast cancer patients totally free of charge during coming April 2006. They will provide some another 30 operations at half cost. Bangladesh Cancer Foundation Hospital requests the patients to contact the following address for registration. The address is –

Bangladesh Cancer Foundation Hospital, 2/8A, Block A, Road 3, Lalmatia, Dhaka 1207. Phone: 8118138, 9116216, 0176157878 Fax: 9143228.

Besides, specialist doctors will provide free treatment 3-5 pm on Tuesday and Thursday of the week from now.

Notice

On coming issue "Your Doctor" will respond to problems on cardiology. Send your questions to starhealth@thedailystar.net

First Aid

Heatstroke

Heatstroke is similar to heat cramps and heat exhaustion. It is one of the heat-related problems that often result from heavy work in hot environments, usually accompanied by inadequate fluid intake. Older adults, people who are obese and people born with an impaired ability to sweat are at high risk of heatstroke. Other risk factors include dehydration, alcohol use, cardiovascular disease and certain medications.

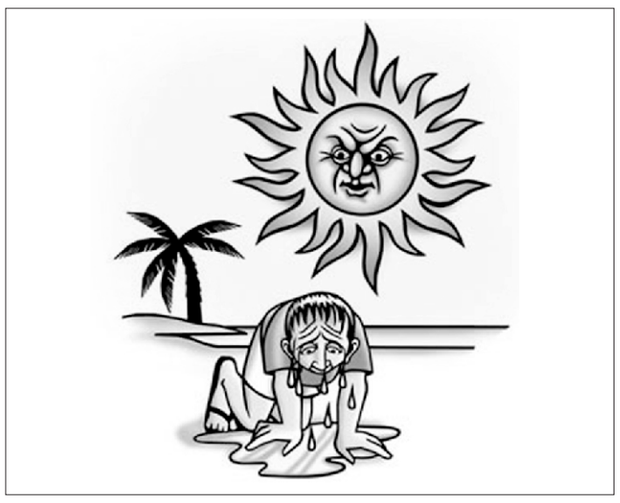
What makes heatstroke much more severe and potentially life-threatening is that the body's normal mechanisms for dealing with heat stress, such as sweating and temperature control, are lost. The main sign of heatstroke is a markedly elevated body temperature – generally greater than 104°F with changes in mental status ranging from personality changes to confusion and coma. Skin may be hot and dry, although in heatstroke caused by exertion, the skin is usually moist.

Other signs and symptoms may include:

- Rapid heartbeat
- Rapid and shallow breathing
- Elevated or lowered blood pressure
- Cessation of sweating
- Irritability, confusion or unconsciousness
- Fainting, which may be the first sign in older adults.

If you suspect heatstroke:

- Move the person out of the sun and into a shady or air-conditioned space.
- Call for emergency medical assistance.
- Cool the person by covering him or her with damp sheets or by spraying with cool water. Direct air onto the person with a fan or newspaper.



Stem cell therapy sparks hope in ailing hearts

REUTERS, *Bangkok*

Esteban Bonilla feels no trepidation as he is wheeled into the operating room of a Bangkok hospital, despite the fact he is only minutes away from starting an experimental stem cell procedure he hopes will keep him alive.

"I really don't feel nervous at all," said the 37-year-old scuba instructor from Florida, who discovered his heart was failing at 32. "For the last five years, I've been waiting to die. This is the first time I've been hopeful to live."

The source of Bonilla's new-found hope is a novel therapy that involves injecting stem cells culled from the patient's own blood into the heart to try to regenerate ailing heart muscle.

The two-hour procedure, which involves a patient's own adult stem cells, skirts the risk of rejection by the body and thorny ethical issues surrounding the use of embryonic stem cells posed by some who equate using embryos with destroying human life.

"We have not lost a single patient," said Suphachai Chaithiraphan, chairman of Chao Phya Hospital and president of the Heart Association of Thailand. "If you can offer help to desperate people, then I think you should."

The destination for many of the heart patients seeking stem cell therapy is Thailand, where doctors have staked their reputations on a procedure they say could save thousands of people but has yet to be approved in the United States.

"With stem cell therapy, people who have not had access to heart transplants or resources to go to the hospital on a regular basis can be helped," said Kitipan V. Arom, chief cardio-thoracic surgeon at Bangkok Heart Hospital.

But the use of stem cells – master cells in the body which can develop into any cell type – remains a touchy subject for many since very early human embryos are considered the most promising for treating human diseases.

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Body building blocks

Some scientists fret the controversy over Hwang's case could provide fodder for opponents of embryonic stem cell research, which is seen as a vital step toward treatment of a host of ailments such as spinal injuries.

The stem cell controversy is a world away for Wisconsin crop duster pilot George Efaw, 65, who thinks this particular treatment works.

"I thought I would die when I went to sleep. I feel better now than I did," said Efaw, whose heart was only working at 20 percent of its capacity before the surgery.

"I'd probably be dead in six months, maybe a year. I would have sat in my house, listened to my doctor like everyone else and died," said Efaw, who took out a mortgage on his home to help pay for the $31,500 operation.

Theravitae, the company whose technology separates adult stem cells from the blood, said the focus should be on therapy proven to work in humans.

"Embryonic cells, by their very definition, are not from your body," said Robert Clark, Theravitae's chairman. "Right now, inside your body, you have everything necessary to build what you need now."

Next up: Parkinson's disease by mid-2006 and some forms of blindness in the first quarter of 2007. Eventually, Theravitae thinks, the technology could be used to treat emphysema, broken bones, renal failure and diabetes.

A day after his own heart surgery, Bonilla is looking forward to returning home to his family.

"I would love to just get back into the water and dive again," he said.

Medical Interesting

Happy 150th birthday: A new era looms for old age

REUTERS, *Oxford*

Modern medicine is redefining old age and may soon allow people to live regularly beyond the current upper limit of 120 years, experts said.

It used to be thought there was some inbuilt limit on lifespan, but a group of scientists meeting at Oxford University for a conference on life extension and enhancement dismissed that idea.

Paul Hodge, director of the Harvard Generations Policy Programme, said governments around the world - struggling with pension crises, graying workforces and rising healthcare costs - had to face up to the challenge now.

"Life expectancy is going to grow significantly, and current policies are going to be proven totally inadequate," he predicted.

Just how far and fast life expectancy will increase is open to debate, but the direction and the accelerating trend is clear.

Richard Miller of the Michigan University Medical School said tests on mice and rats - genetically very similar to humans - showed lifespan could be extended by 40 percent, simply by limiting calorie consumption.

Translated into humans, that would mean average life expectancy in rich countries rising from near 80 to 112 years, with many individuals living a lot longer.

Aubrey de Grey, a biomedical gerontologist from Cambridge University, goes much further. He believes the first person to live to 1,000 has already been born and told the meeting that periodic repairs to the body using stem cells, gene therapy and other techniques could eventually stop the aging process entirely.

De Grey argues that if each repair lasts 30 or 40 years, science will advance enough by the next "service" date that death can be put off indefinitely - a process he calls strategies for engineered negligible senescence.

His maverick ideas are dismissed by others in the field, such as Tom Kirkwood, director of Newcastle University's Center of Aging and Nutrition, as little more than a thought experiment.

Kirkwood said the human aging process was intrinsically malleable - meaning life expectancy was not set in stone - but researchers had only scratched the surface in understanding how it worked.

The real goal is not simply longer life but longer healthy life, something that is starting to happen as today's over-70s lead far more active lives than previous generations.

Jay Olshansky of the University of Illinois in Chicago is confident that longevity and health will go hand in hand and that delaying aging will translate into later onset for diseases like cancer, Alzheimer's and heart disease.

Ethically, the extension of life is controversial, with some philosophers arguing it goes against fundamental human nature.

But John Harris, Professor of Bioethics at the University of Manchester, said any society that applauded the saving of life had a duty to embrace regenerative medicine.

"Life saving is just death postponing with a positive spin," he said. "If it is right and good to postpone death for a short time, it is hard to see now it would be less right and less good to postpone it for a long while."

MEASLES CASE REPORT

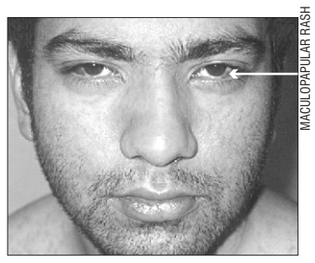
Complications can develop even in adults

DR MAJOR (RTD) MD JULHASH UDDIN
and DR S M A RAZZAQUE

Measles is a viral infection and is endemic world-wide. It is the most infections of all microbial agents. Before immunisation campaigns, it occurred in almost 100 percent of children. WHO has set the objective of eradicating measles by the year 2010 as part of Extended Immunisation Programme (EPI).

A medical student Md Shariful Alam, aged 21 of Munshiganj was admitted in Shahabuddin Medical College Hospital on 21st February, 2006 with the complaints of fever for three days, rashes for two days along with cough and loose motion. Fever fluctuates up to 103°F-105°F and continuous in nature with severe prostration. On the following day of the fever rose-coloured maculo-papular rash appeared all over the body, starting from the head to lower limbs. No history of itching. Alongwith fever and rashes there were history of dry, irritating cough and frequent loose motion. Patients remained although conscious but developed severe subconjunctival hemorrhage (blood accumulation in conjunctiva) in both eyes. There was no history of blood with vomiting, in stool and urine, gum bleeding. The patient did not visit CHT nor suffered from malaria.

On physical examination there was high fever, typical measles rashes, koplick spot (bluish white spot, found in mouth in early stage of measles), subconjunctival hemorrhage. Blood counts including platelet, dengue antibody, liver function testes, haemostatic profiles were within normal limit except mild leucopenia. Sonologically liver and spleen were normal in size. Provisionally the case was diagnosed as adult measles, confirmed subsequently, by measles antibodies test.


MACULOPAPULAR RASH
The Patient has developed complications of Measles (Maculopapular Rash)

Regarding management only symptomatic and supportive treatment with a broad spectrum antibiotic to prevent secondary bacterial infections were given. Patient responded well and started better feeling from the third day of hospital admission. Rashes faded away, temperature subsided. Subconjunctival hemorrhage may take couple of days to resolve. The patient resumed class on the next day of discharge from hospital.

Points to consider

Measles is naturally a disease of Childhood and, like many other viral infections, is more severe in adult than in children. Hepatitis and bronchospasm are more common among adult with measles than among children and the rash is more severe. Bacterial super-infections is more common among adults, specially respiratory tract infections.

Incomplete vaccination of only 70-80 percent of the population may lead to outbreaks in older children and adults, in whom complication are more frequent. This necessitates mass immunisation campaigns or second dosing of vaccination in an older age group.