

PULSE

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KNEE REPLACEMENT SPECIAL



**GODREJ
MEMORIAL
HOSPITAL**

COMPASSIONATE CARE FOR ALL
(NABH & NABL Accredited)

From the Editor's Desk

“JOINT” EFFORT

206 bones, about 170 joints, more than 300 pairs of muscles and one brain.... keep us erect, active & mobile.

Anything out of balance & out of sync can affect the other.

To keep the mechanics and dynamics of this Neuro-musculo-skeletal system intact & efficient is paramount for a productive, fulfilling & a good quality of life.

And the fundamental principle of - "Prevention is better than cure" - applies to this, as any other aspect of health, only more easily & directly obvious.

For those already afflicted with disease / deformity / dysfunction we have the experts to treat them. It is a team approach which works best & gives the best results.

But to prevent or postpone serious damage there are certain things that we can / must do.

From in-utero to the first 30 years of your life - that is what is going to determine your health, longevity & quality of life.

- 1) Maternal health & nutrition and antenatal care is going to determine the foundation of your health & programming for your life - so it is vital that pregnant mothers pay attention to this.
- 2) Childhood - nutrition, activity and accidents & illnesses - immunization, supplements, exercises & activities (supervised) to prevent illnesses & deformities.
- 3) Obesity - 1kg extra weight = 4kg extra load on the knee joint. So it is advisable to maintain your BMI around 23.
- 4) Nutrition - whole-grains, proteins & micro-nutrients with adequate hydration cannot be ever over-emphasized or over looked.
- 5) Exercises - Weight bearing / non-weight bearing; low impact, strengthening, Isometric / non-isometric, passive - whatever - must be done- regularly - covering the full range of movement for all joints possible. Stretch before exercise, warm up & cool down. Use the right footwear, gear & equipment. Follow the right technique.
- 6) Rest & Rotation - Rotation of exercise routines prevents R. S. I. (Repetitive stress injuries) & boredom. Rest helps in recovery, repairs & regeneration.
- 7) Relaxation & recreation - sometimes you need to take a break, relax & do something to replenish your body, mind & soul - get away from it all - take stock & review your life - achievements & aims, 'Recreate' your 'strategy' to 'renew' your 'self'.
- 8) Mind, meditation & balance - A stress free mind is a necessity & a basic prerequisite for a healthy body. Health and fitness should not be a source of stress & burden. It has to be a routine way of life which is pleasurable. Do it alone or do it with friends - enjoy it & visualise the benefits & know your limits.
- 9) Correct stance, posture & gait - a vital to wellness of body, bones & joints. This starts from childhood - good training & correction with help from parents, teachers & physiotherapists.
- 10) Remember - God has given us this body to last a lifetime - accidents & abuse determine how long we live healthily.

Dr Kanishka Kapasi
MD, DGO

Every Organ donation is inspirational. It is a selfless act of heroism. Organ donation in India is now gradually moving forward. In the last two years there is doubling of the organ donation rate. The most proud moment for every Indian was on January 13th 2015 when Dr. Subramania Iyer, professor of plastic surgery, department of the Amrita Institute of Medical Sciences and Research Centre, Kochi along with his team of 20 surgeons successfully conducted country's first hand transplant. So far hand transplants and composite tissue transplants have been done only in European countries, USA, China and Australia. This is the first hand transplant in the coloured skin population in the world. The recipient was a 30 year old male who lost both his hands in a train accident. The second bilateral hand transplant was successfully done by the same institute on 10th April 2015.

Dr. Bharti Khandekar
MS, MCH, DNB
Plastic Surgeon

WHERE THERE'S A WILL, THERE'S A WAY!

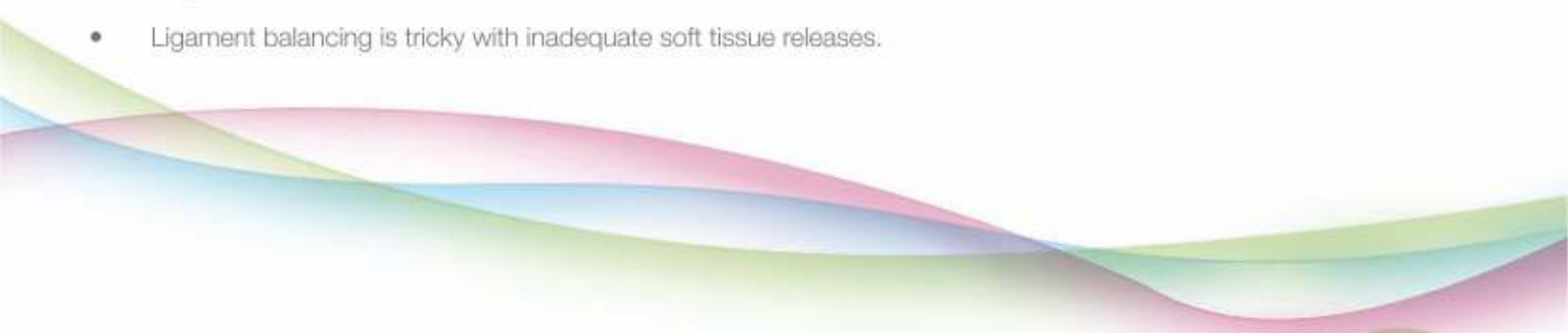
Mr. Appasaheb (name changed), an 85 years old freedom fighter was living his retired life peacefully and happily for last 25 years in Dombivali along with his wife, 2 children and their families. In the last 3 years, he had aggravated his knee pain he was carrying for almost 10 – 15 years. He had neglected it and accepted it to be a part of his life. He had accepted the fact that old age was going to bring its own problems and he had to compromise with it.

In these last 3 years, however, the pain had slowly made his activities limited and he lost confidence to move out of home by himself. The problem became even more severe when he could not leave his bed at all but for attending the nature's calls. He would sit on the bed watching TV or reading something with crouched knees for hours together. As predicted he slowly lost the ability to straighten the knees and had to be carried to toilet everyday; he was practically bedridden and not walked for more than 2 years. The situation was hopeless.

Recently, he was visited by a family doctor for treatment of viral fever he had developed. He suggested the family that they can consult a Joint Replacement specialist and ask whether the situation is salvageable. Appasaheb got very excited about the idea and asked his family to arrange for the same.

He was brought to my clinic in an ambulance and I had to examine him on a stretcher trolley. A thin old gentleman with skinny arms, legs and thighs, he looked to be in a very desperate condition. He had knee deformity with almost 90 degrees of flexion contracture on both sides. X ray confirmed damage to the joints. However, he had not lost power in his thighs and legs. Although atrophic, the muscle were carrying useful tone and strength. Another factor in his favor was his good health. Suffered no systemic problems like hypertension or diabetics. He was advised bilateral total knee replacement with due risks after he was cleared by cardiologist and physician for surgical procedure. Following week, he visited with fitness clearance and we planned for his surgery at Godrej Memorial Hospital. Initially, the plan was for one side at a time and other side after few days.

The major concern with knee replacement in flexion deformities more than 45 degrees is the chance of peroneal nerve injury due to excessive stretching. Other issues are:

- Capsular fibrosis had to be released from all around the knee joint.
 - Muscular contracture release – muscles need to be lifted off the bone completely. This way they could end up useless if they are retracted proximally. If they undergo too much intra-substance stretching, there will be lag effect and they might be ineffective.
 - Ligament balancing is tricky with inadequate soft tissue releases.
- 

- Osteoporosis makes the surfaces for implantation soft and fragile. Intra-medullary extension stems are needed to get additional hold in the bone. This adds to surgical time.
- Recurrence of deformity over a period of time is common.
- Physiotherapy rehabilitation is required for long duration to regain lost muscle tone and strength. Also gait training is crucial to achieve adequate balance while walking.

The surgery went on as planned. We could perform both sides in single setting because of good intra-operative patient parameters and excellent surgical team efforts. Patient was shifted to ICU for one day post surgery. Next day he was shifted to room and physiotherapy was started. He had knee brace support for next 6 weeks in view of the soft tissue releases done. He was made to walk with the support of a walker after couple of days of intense physiotherapy. This was first time in 2 years that the patient had walked on his feet. Now it's 4 months since surgery and patient is moving about in the house independently with the help of a walker. He is extremely happy to be back on his feet.

The most important factor, I believe, for the success of his surgery was patient's will and belief that he would walk again after the surgery. In many a case, we find patient satisfaction after total knee replacement depends upon his attitude and willingness to undergo the surgery, irrespective of technically well executed surgery. Mr. Appasaheb wanted to move independently and was ready to undergo a major surgery and painful period of recovery and rehabilitation. Joint replacement is always the solution for painful arthritic knees. It's whether the patient is willing to walk the distance. But for sure, where there's a will, there's a way.

Dr. Sarang Deshpande
MBBS, MS(Ortho), MCh Orth (UK)
Arthroscopic & Joint Replacement Surgeon
Sports Medicine Consultant

BACKBONE OF HOSPITAL

Mr. Appasaheb Upase was operated for FFD (Fixed Flexion Deformity) both knee. Total Knee Replacement was done. After surgical contracture release, patient had lot of pain & weakness. He was treated for mobility & strengthening of both knee joints. Next step was to make him sit, stand and walk. He was brought down to physiotherapy department and gradual rehabilitation was done, starting with electro therapeutic stimulation and he was successfully rehabilitated for walking with walker support.

Dr. Sunita Dave
MPT, PhD
Physiotherapist

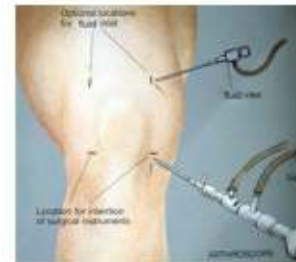


ARTHROSCOPY

Arthroscopy is a minimal invasive surgical procedure by which a small telescope attached to a camera is introduced in the joint to visualise the anatomical structures of the joint and to carry out necessary surgical procedure.

All the large joints in the body can be 'scoped' to get a diagnosis and also to carry out definite surgical procedure. The most commonly scoped joints are:

- ⇒ Knee
- ⇒ Shoulder
- ⇒ Hip
- ⇒ Ankle
- ⇒ Elbow
- ⇒ Wrist



Even the small joints of the hand can be scoped with a small 1.8 mm scope.

In this topic I will cover mainly the knee joint which is the most frequently done surgical procedure.

The indications for doing arthroscopy of the knee joint are as follows :

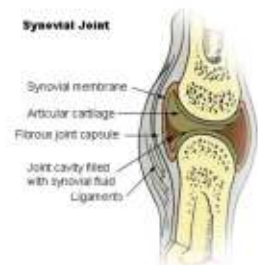
- ⇒ Synovial lesions and growth.
- ⇒ Cartilage lesions.
- ⇒ Meniscal tears, lateral & medial.
- ⇒ Cruciate ligaments tear, anterior or posterior.
- ⇒ Loose bodies in the joint.
- ⇒ Joint lavage for infection in the joint.

The normal knee joint looks like what you see in the image



SYNOVIUM

When there is inflammation of the synovium, there is swelling of the joint associated with increased fluid in the joint. Investigations prove that there is inflammation of the synovium. For proper diagnosis, arthroscopic synovial biopsy can be done for confirmation of diagnosis and further management. In few cases total synovectomy can be done as a therapeutic procedure.



CARTILAGE

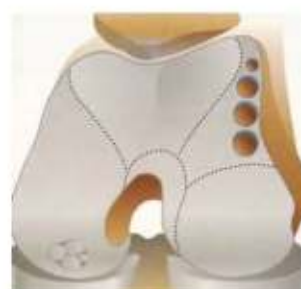
The cartilage can develop defects especially in the medial femoral condyle due to osteonecrosis and at times due to trauma. Most common is the osteonecrosis. This cartilage defect can be filled up with either the cartilage taken from non weight bearing part of the bone and implanted in the affected area or the cartilage (chondrocytes) can be grown in the labs and reimplanted in the defect so as to allow the new cartilage to achieve the quality of repair to mimic the original cartilage and delay the onset of arthritis in the knee joint.

The first procedure whereby the cartilage is directly implanted is called mosaicplasty (OATS).

The second method of growing the cartilage in the labs and then reimplanted is called (ACI)



Chondral Damage



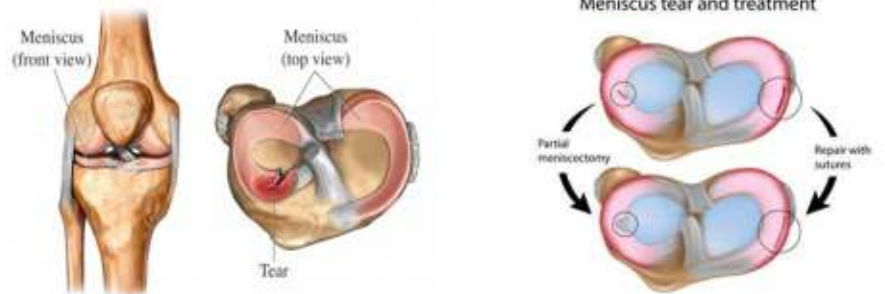
Mosaicplasty

MENISCI

The meniscus which acts as a shock absorber in the knee joint can get torn due to various reasons and present with symptoms of locking and at times pain in different range of movements, a clinical diagnosis is confirmed by doing an MRI, the type of tear is noted and arthroscopic therapeutic treatment is carried out.

There are several types of tears as follows :

- ⇒ Bucket handle tear
- ⇒ Flap tear
- ⇒ Parrot beak tear
- ⇒ Radial tears
- ⇒ Horizontal tears
- ⇒ Peripheral tears
- ⇒ Root tears



The peripheral tears are by and large repaired by using tack sutures using all inside technique through arthroscope, results are very satisfying with this procedure.

The other tears are treated arthroscopically whereby the torn part is excised, the rim of the meniscus is left behind. In recent times the meniscus replacement procedure is picking up fast which again will delay the onset of arthritis in a knee which has a torn or a degenerative torn meniscus.

CRUCIATE LIGAMENTS

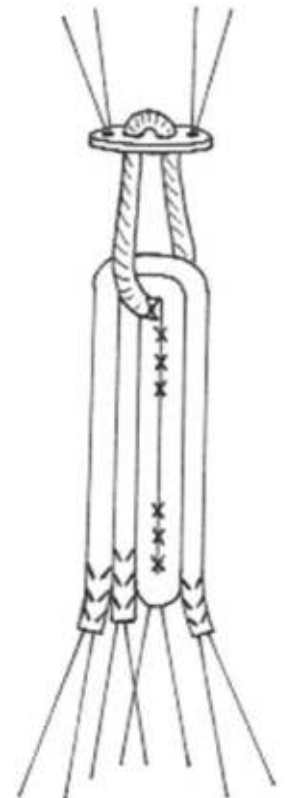
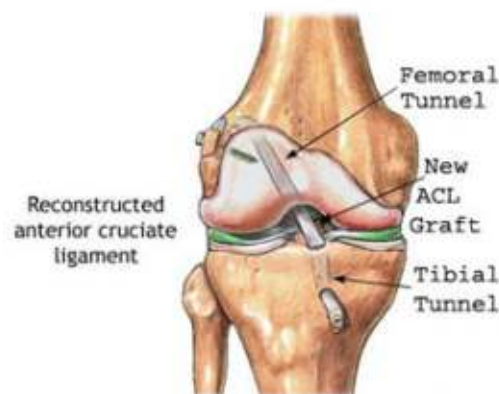
The anterior cruciate ligament is most commonly injured ligament which if left untreated will definitely cause the arthritis to set in earlier. This ligament should be reconstructed as soon as all other soft tissues have healed and the knee has regained full range of motion with good quadriceps power.

This injured ACL is reconstructed using the hamstring tendon mainly SEMITENDINOSUS muscle to recreate the anatomy of the original ACL so one can go back to playing sports.

The posterior cruciate ligament is also reconstructed in the similar fashion to enhance the stability of the knee joint if and when it is torn.

We can remove loose bodies from the knee joint arthroscopically. In case of infection, arthroscopic lavage can be given to control and treat joint infection.

All the above procedures can be done arthroscopically with satisfying results.



Dr. Kishore Manek
MBBS,MS (Ortho)
Orthopaedic

Events of JULY & AUGUST

Various Camps

DATE	EVENT	VENUE	SERVICES OFFERED
26th July 2015	Free Cardiac Diagnostic Camp	Lokseva Pratishthan, Park Site, Vikhroli	BP, Blood Sugar, ECG, Medical Consultation & Medicines

CME / Workshops & Conferences

DATE	EVENT	VENUE	SPEAKER
19th July 2015	A) Pre conception care B) Surrogacy - Is it the easy way out..?	Godrej Memorial Hospital	Dr. Kanishka Kapasi Dr. Jay Mehta
26th July 2015	A) Laparoscopic treatment of different Hernias & advance laparoscopic procedures B) Recent trend in management of heart failure	Godrej Memorial Hospital	Dr. Sanjay Sonar Dr. Chetan Shah
5th August 2015	Scientific Debate on Angioplasty vs CABG	Godrej Memorial Hospital	Dr. Deepak Mishra Dr. Shantesh Kaushik Dr. Amit Sanghvi

Health Talk

DATE	EVENT	VENUE	SPEAKER
31st July 2015	Occupational Stress Management	Capita India Pvt Ltd	Ms Tejswi Kamble

Celebrations, Events & Competitions

DATE	EVENT	VENUE
1st July 2015	Elocution	Godrej Memorial Hospital
1st July 2015	Dr's Day Celebration	Godrej Memorial Hospital
29th July 2015	Antakshari	Godrej Memorial Hospital
30th July 2015	Ramp Walk	Godrej Memorial Hospital
6th & 7th August 2015	Blood Donation Drive	Godrej Memorial Hospital
25th August 2015	Skit Competition	Godrej Memorial Hospital
29th August 2015	Singing Competition	Godrej Memorial Hospital

Events of September & October

Various Camps

DATE	EVENT	VENUE	SERVICES OFFERED
5th-21st Sept 2015	Teachers Day	Godrej Memorial Hospital	
20th Oct 2015	Free Cardiac Diagnostic Camp	Birla College, Kalyan	BP, Blood Sugar, ECG, Medical Consultation & Medicines

Events of September & October

CME / Workshops & Conferences

DATE	EVENT	VENUE	SPEAKER
19th July 2015	A) Optimal Medical Management: Beta Blockers and RAAS Inhibition, before Digoxin and Ivabradin	Godrej Memorial Hospital	Dr Ashish Agarwal
	B) Echocardiography in HF: Revascularize, Resynchronize, Replace (TAVI) or Repair (Mitralclip)		Dr Amit Sanghvi
	C) Cardiac Resynchronization Therapy: Retuning HF		Dr Ashish Nabar

Health Talk

DATE	EVENT	VENUE	SPEAKER
9th Sept 2015	Stress Management	Capgemini	Dr. Kanishka Kapasi
12th Sept 2015	Stress Management	Godrej Memorial Hospital	Ms. Sonam, ICFAI

Celebrations, Events & Competitions

DATE	EVENT	VENUE
15th Sept 2015	Dance Competition	Godrej Memorial Hospital
25th Sept 2015	Pharmacy Day	Godrej Memorial Hospital
1st Oct 2015	10th Anniversary Celebration of Hospital	Godrej Memorial Hospital

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