
*With pleasure, I am writing this testimonial for **Dr. Mukul Agarwal**. He worked as Resident Surgical Officer in the department for three years from **June 2010** to **June 2013**. During his tenure in the department I found him to be hard working, sincere and well behaved student. His relationship with colleagues and staff was satisfactory.*

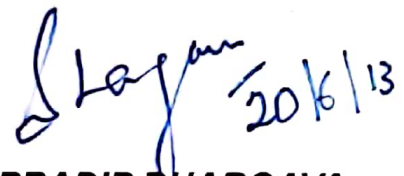
He has assisted in specialized surgeries like Hip/Knee Arthroplasty, Spine Surgeries, Arthroscopic Procedures and advanced Trauma surgeries besides performing routine and emergency trauma surgeries.

He has also attended Rural camps held in periphery for orthopaedically handicapped patients.

*His dissertation for M.S. Orthopaedics was "**Role of Limb Reconstruction System (LRS) in fracture tibia with/without bone loss**" which he has satisfactorily completed and has presented his work in State and National Chapter Conferences. He won **Gold Medal** in state level P.G. Quiz Competition.*

*He passed his M.S. (Orthopaedics) examination in the **First Attempt**. During his tenure he was demonstrator and undertook undergraduate teaching and administrative work as allotted from time to time.*

His character and conduct to the best of my knowledge is good. I wish him success in all his future endeavours.



DR. PRADIP BHARGAVA

Professor & Head
Department of Orthopaedics
M.G.M. Medical College
& M.Y. Hospital,
Indore (M.P.)

Use of limb reconstruction system in the treatment of open tibial diaphyseal fractures with bone loss to achieve union and limb lengthening, simultaneously

Anand Ajmera^{1,2}, Ankit Verma^{1,2}, Mukul Agrawal^{1,2}, Saurabh Jain³, Arunanshu Mukherjee^{1,2}

ABSTRACT

Background: The specific method of treatment of open tibial diaphyseal fractures with bone loss is matter of debate, with the treatment options ranging from external fixators, nailing, ring fixators or grafting, all having their own set of complications, like acute docking problems, shortening, difficulty in soft tissue management, chronic infection, increased morbidity, multiple surgeries, longer hospitalization, mal-union, nonunion, and higher patient dissatisfaction. We evaluated the outcome of the limb reconstruction system (LRS) in the treatment of open fractures of tibial diaphysis with bone loss as a definite mode of treatment to achieve union, as well as limb lengthening, simultaneously.

Materials and Methods: Thirty open fractures of tibial diaphysis with bone loss of at least 4 cm or more with a mean age 32.5 years were treated by using the LRS after debridement. Distraction osteogenesis at rate of 1 mm/day was done away from the fracture site to maintain the limb length. On the approximation of fracture ends, the dynamized LRS was left for further 15-20 weeks and patient was mobilized with weight bearing to achieve union. Functional assessment was done by Association for the Study and Application of the Methods of Ilizarov (ASAMI) criteria. Mean followup period was 15 months.

Results: The mean average bone loss was 5.5 cm (range 4-9 cm). The mean duration of bone transport was 13 weeks (range 8-30 weeks) with a mean time for LRS in place was 44 weeks (range 24-51 weeks). The mean implant index was 56.4 days/cm. Mean union time was 52 weeks (range 31-60 weeks) with mean union index of 74.5 days/cm. Bony results as the ASAMI scoring were excellent in 76% (19/25), good in 12% (3/25) and fair in 4% (1/25) with union in all except 2 patients, which showed poor results (8%) with only 2 patients having leg length discrepancy more than 2.5 cm. Functional results were excellent in 84% (21/25), good in 8% (2/25), fair in 8% (2/25). Poor and failure was seen in none of our patients. Pin tract infection was seen in 5 cases, out of which 4 being superficial, which healed to dressings and antibiotics. One patient had a deep infection which required frame removal.

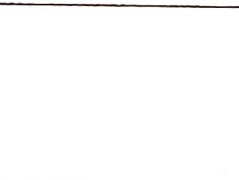
Conclusion: Limb reconstruction system proved to be an effective modality of treatment in cases of open of the fractures tibia with bone loss as definite modality of treatment for damage control as well as for achieving union and lengthening, simultaneously, with the advantage of early union with attainment of limb length, simple surgical technique, minimal invasive, high patient compliance, easy wound management, lesser hospitalization and the lower rate of complications like infection, deformity or shortening.

Key words: Bone loss, fracture tibia, limb reconstruction system

Departments of ¹Orthopaedics Surgery and ²Orthopaedics, Mahatma Gandhi Memorial Medical College and M.Y. Hospital, ³Department of Orthopaedics, Mahavir Hospital, Indore, Madhya Pradesh, India

Address for correspondence: Dr. Saurabh Jain,
Department of Orthopaedics, Mahavir Hospital, Indore, Madhya Pradesh, India.
E-mail: jainrsaurabh@yahoo.com

Access this article online

Quick Response Code: 	Website: www.ijoonline.com DOI: ...
--	--

INTRODUCTION

Tibia being a subcutaneous bone, open fractures of the tibia with massive soft tissue injury and bone loss, has become a problem for all trauma surgeons.¹ The specific method of treatment of these fractures is matter of debate, with the treatment options ranging from external fixators, ring fixators, nailing, plating, tibial synostosis, free or vascularized bone grafting along with allografts or bone substitutes, all having their own set of complications.^{1,4} Ring fixators have given the best results in these fractures but are cumbersome both for the patient as well as the surgeon⁵⁻⁹ and are technically demanding procedures. The



CERTIFICATE

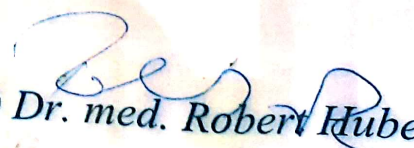
OCM

orthopädische
chirurgie
münchen



*This is to certify that **Dr. Mukul Agrawal** has successfully participated
in a Fellowship program in Knee and Hip Arthroplasty,
Shoulder and Knee Arthroscopy as well as Spine Surgery.*

*He has undergone training in Primary and Revision cases of Total Hip
Replacement and Total Knee Replacement at OCM clinic in Munich Germany
from 7th of January to 07th of April 2015.*


PD Dr. med. Robert Hube

Certificate of Participation

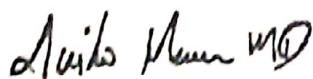
Presented to

DR. MUKUL AGARWAL

for participation in the

3rd AAOS TRAUMA CONCLAVE

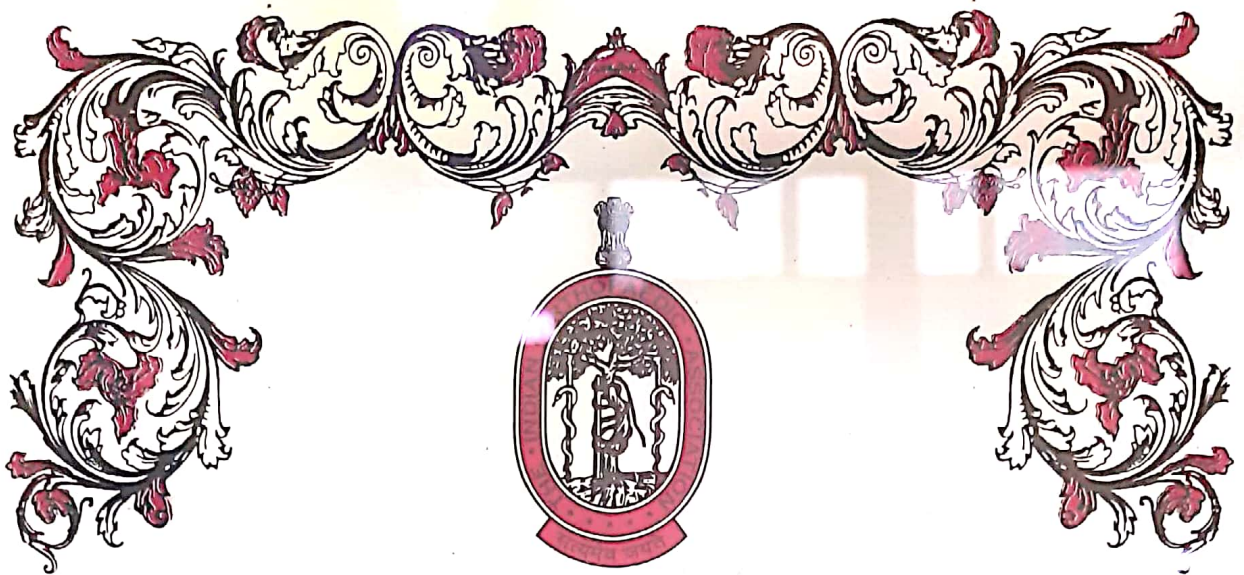
16th and 17th September 2016, Delhi.



Guido Marra, MD Chairman,
International Committee



Robert Zura,
MD Course Director



his Certificate
is awarded by the



Indian



Orthopaedic



Association

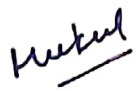
to Dr. Mukul Agarwal who is hereby

elected LIFE MEMBER according to

the Rules of the Association.

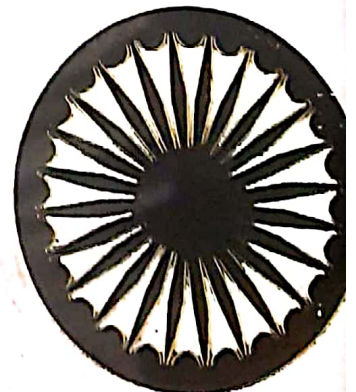
President 

Secretary 

Signature of Member 

Membership No. LM9612

Date 05-12-2013





BRAHMADANDA HEALTHCARE SOLUTIONS PVT LTD
LAKEVIEW HOSPITAL

Multi super specialty hospital
Gandhi Nagar, Belgaum - 590016

Certificate course in Arthroscopy

This certificate is awarded to

Dr. Mukul Agrawal

on successful completion of ***Clinical fellow in Knee and
shoulder Arthroscopy*** course under the mentoring of

Dr. Anil B. Patil, MBBS, M.S, FIMS.

Arthroscopic and Joint Replacement surgeon

From 01st to 10th September 2014

Date: 10/09/2014



Signature

Dr. ANIL B. PATIL
M.S. (Ortho) FMS
Joint Replacement &
Arthroscopic Surgeon
K.M.C. Reg. No. 40122



Certificate of Merit

This Certificate is awarded to *Dr. Mukul Agrawal*.....
for being Best Post Graduate in the department of *ORTHOPAEDICS*..... in the
year *2013*.....

It is in recognition of his / her sincere devotion to learning and knowledge.

DATE - 13-08-13

[Signature]
DEAN

CLINICAL FELLOWSHIP IN ARTHROPLASTY

THIS IS TO CERTIFY THAT

Dr. Mukul Agarwal

has completed six months clinical fellowship in Primary & Revision Arthroplasty of Hip & Knee

From 01st November 2013 to 30th April 2014 at Bombay Hospital & Research Centre, Mumbai.

During this period, he acquired the requisite skills in joint replacement with special emphasis on

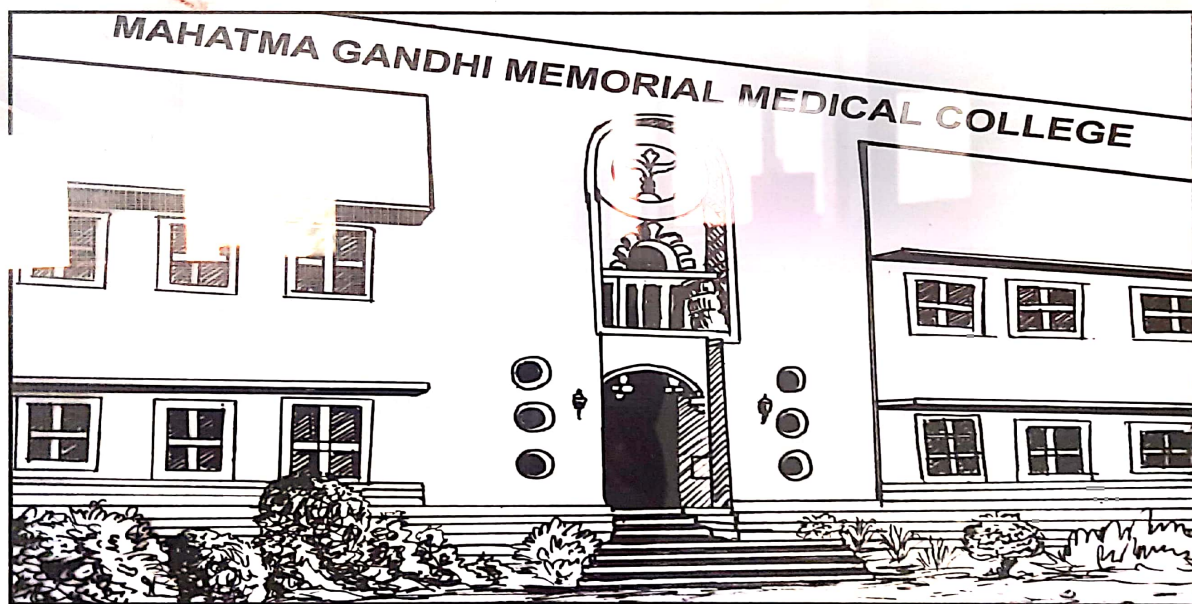
Minimally invasive subvastus technique in knee arthroplasty.

Nilen Shah

Dr. Nilen A. Shah

**M.ch. Ortho (Liverpool), M.S. Bom. (Gold Medalist)
Consultant Joint Replacement Surgeon**

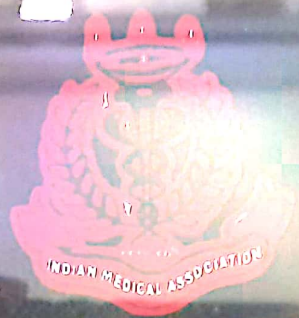
Dr. Mukul Agrawal



Mahatama Gandhi Memorial Medical College, Indore

college was initially established in 1878 as a medical school known as King Edward Medical School along with the first allopathic dispensary of central India. In July 1948 it was converted into present medical college from 50 students in the first batch. It has reached its present intake of 140 undergraduate (MBBS) and 117 post-graduate (MD/MS/Diploma).

इन्डियन मेडीकल एसोसिएशन



मथुरा ब्रान्च

डा. मुकुल अग्रवाल

को

शिक्षा के क्षेत्र में अर्जित विशिष्ट उपलब्धि के लिये सम्मानित करती है।
हमारी मंगल कामना है कि आप निरन्तर प्रगति के पथ पर अग्रसर हों।

डा. अवधेश अग्रवाल
अध्यक्ष

2011

डा. राकेश कुमार गुप्ता
सचिव

Name of Candidate	AGARWAL MUKUL
F/H Name	PRAKASH AGRAWAL
Category/Class	UR /X
Gender	Male
Date of Birth	18/1/1987
Course	MD/MS
In-Service Candidate	NO

Marks		
Part A	Part B	
58.00	109.00	

**MERIT/WAITING POSITION
UNRESERVED CATEGORY**

Autonomous Government Colleges		Private Coll	
OPEN	HANDICAPPED	OPEN	
Merit		Merit	

केडी मेडीकल कॉलेज में कूल्हे का ट्रांसप्लान्ट

कल्पतरु समाचार सेवा

मथुरा। केडी मेडीकल कॉलेज हॉस्पिटल एण्ड रिसर्च सेन्टर अकबरपुर के डाक्टरों ने चिकित्सा विज्ञान के क्षेत्र में कमाल दिखाते हुए 28 वर्षीय युवक के कूल्हे के पूरे जोड़ को ही ऑपरेशन से ट्रांसप्लान्ट (टोटल हिप्स रिप्लेसमेंट) कर दिया।

इस चिकित्सकीय चमत्कार को अंजाम दिया के डी मेडीकल कॉलेज हॉस्पिटल एण्ड रिसर्च सेन्टर के हड्डी रोग विशेषज्ञ डॉ. मुकुल अग्रवाल ने। ऑपरेशन में डा. अंकित कुमार का भी सहयोग रहा। आम तौर से किसी अंग की हड्डी टूटने पर चिकित्सक प्लास्टर आदि द्वारा उसका उपचार करते हैं, परन्तु के डी मेडीकल कॉलेज हॉस्पिटल एण्ड रिसर्च सेन्टर में हुये इस ट्रांस प्लान्ट में पूरे के पूरे कूल्हे के जोड़ को बदलने की ही चुनौती थी।

दिल्ली तथा आगरा के बीच में यह सबसे बड़ा अस्पताल है, जहां पर हड्डी तथा जोड़ों के दुरबीन तथा चीरा



28 वर्षीय युवक के
कूल्हे के पूरे जोड़ को
किया ट्रांसप्लान्ट

लगाकर सभी प्रकार के आपरेशनों को अन्जाम दिया जा रहा है। मेडिकल कालेज में सैकड़ों मरीज वीमारियों का समुचित इलाज करा रहे हैं। मरीज केवल 10 रुपये का पर्चा बनवाकर समुचित चिकित्सकीय परामर्श प्राप्त कर सकता है। संस्थान के चैयरमेन डॉ. रामकिशोर अग्रवाल ने डाक्टरों को बधाई दी।



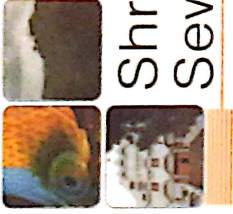
Kalp Taru 29-09-14

केडी अस्पताल में किया हिप रिप्लेसमेंट

मथुरा (ब्यूरो)। केडी मेडिकल कालेज हास्पिटल एंड रिसर्च सेंटर में डाक्टरों ने 28 वर्षीय युवक का टोटल हिप्स रिप्लेसमेंट कर दिया। इस चिकित्सकीय चमत्कार में सेंटर के हड्डी रोग विशेषज्ञ डॉ. मुकुल अग्रवाल ने अहम भूमिका निभाई। ऑपरेशन में डा. अंकित का भी सहयोग रहा। आम तौर पर हड्डी टूटने पर चिकित्सक प्लास्टर आदि द्वारा उपचार करते हैं लेकिन केडी मेडिकल कॉलेज में इस ट्रांसप्लांट में पूरे के पूरे कूल्हे के जोड़ को बदलने की चुनौती थी। अस्पताल की खासियत है कि इसमें सभी प्रकार के अंतर्राष्ट्रीय स्तर की अत्याधुनिक मशीनों को स्थापित किया है। संस्थान के चेयरमैन डॉ. रामकिशोर अग्रवाल ने समस्त डॉक्टरों को ऑपरेशन की सफलता पर बधाई दी है।

अमर अजाली

28-09-2014



Shri Maan Mandir Sewa Sansthan Trust

MAAN MANDIR, Gahvarvan, Barsana, Dist. Mathura - Pin: 281405, U.P. INDIA
Tel. (India) 91-9927338666, 91-5662-246146, (USA) 408-254-2220 (h) 408-209-7955 (c)
E-mail : brajraj@brajdhamsewa.org, Website : www.brajraj@brajdhamsewa.org

15.11.13


TO WHOM SO EVER IT MAY CONCERN

This is to certify that Dr. Mukul Agarwal, Orthopaedic Surgeon is actively involved in social welfare activities of Maan Mandir Seva Sansthan Trust from 20th June 2013.

Maan Mandir Seva Sansthan Trust is an NGO being run under divine inspiration of His Holiness Saint Sri Ramesh Baba Maharaj of Gahvarvan, Barsana (Mathura). The trust is deeply involved in preservation, protection and development of Lord Krishna's land Braj with projects like revitalisation of River Yamuna, restoration of Heritage buildings and stopping illegal mining.

Dr. Mukul Agarwal serves our NGO selflessly as a treating doctor by providing treatment services to thousands of pilgrims, devotees that visit Braj every day from all over the world. He is also actively involved in ground work associated with these projects.

He is a sincere, honest, hardworking and dedicated doctor. I wish him all the success in his future endeavours.


शुभचतः
नाम मंदिर सेवा संस्थान (रजि.)
गहवर चन बरसाना (मथुरा)

BEFORE AFTER BEFORE AFTER BEFORE AFTER