

Ganga Hospital

Vision

- To showcase to the world the best in patient care, surgical expertise, academics, medical ethics and state-of-the art technology.
- To be a center which will be a pride of our country.

Mission

- To provide quality treatment at affordable cost so that the expertise will be available to every citizen of our country.

Ganga Hospital

313 Mettupalayam Road, Coimbatore - 641 043, Tamilnadu, INDIA.

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Tel No +91 422 2485000, Fax No +91 422 2451444



Department of Orthopaedic Surgery

Ganga Hospital, Coimbatore, India.

Activity Report 2011 - 2012



Founders



Mrs. Kanakavalli Shanmuganathan & Dr. J. G. Shanmuganathan

Their vision, commitment and hard work laid foundation for this institution ...
...By example, they continue to inspire us.



Dr S Rajasekaran & Dr S Rajasabapathy
Heads of Departments of Orthopaedics and Plastic Surgery

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“When we have a Vision,
we also have an obligation to realize that Vision”

Each passing year brings more progress and 2012 was not different. The clinical work of the Orthopaedic Unit surpassed all previous years with 23,516 new patients, 154,790 total outpatients and 13,446 major orthopaedic surgeries. On the academic front, the Unit has become the first orthopaedic unit outside the medical colleges to be recognised for PhD studies by both The Tamilnadu Dr MGR Medical University, Chennai and University of Madras, Chennai. New Fellowships approved by the Tamilnadu Dr MGR Medical University in spine surgery, Arthroscopy and sports medicine, Limb Reconstruction Surgery and Trauma surgery have also been started.

It was an honour to be appointed as the Hunterian Professor of the Royal College of Surgeons, England for the year 2011-12. Our unit members played leadership role in many national and international societies such as the International Society for the Study of Lumbar Spine, the Indian Orthopaedic Association, Association of Plastic Surgeons of India, the Association of Spine Surgeons of India, the Academy of Regional Anaesthesia and the Tamilnadu Orthopaedic Association.

The Orthopaedic Unit was also in the limelight for its various awards including the prestigious ISSLS Award for Lumbar Spine Research for the third time within the last 9 years.



We are also happy that we are one of the first Members from Asia to be elected to the International Society of Orthopaedic Centres (ISOC), a forum for leading international orthopaedic academic centres. Such honours help us to spur to greater heights.

At this juncture, I thank with pleasure all our referring physicians for their support, our patients for their trust and the God Almighty for His ever abundant blessings. We realize that the only way we can pay back His blessings is to constantly improve and be a centre which will truly be a pride of our country.

Prof. S. Rajasekaran

M.S., DNB., F.R.C.S.(Ed)., M.Ch(Liv)., FACS., F.R.C.S.(Eng)., Ph.D
Chairman, Dept of Orthopaedic & Spine Surgery.

Highlights 2011 - 2012

Salient Awards 2012

- ISSLS Prize 2012
- Lifetime Achievement award, Tamil Nadu 2012
- Prof. M. Ramanathan Gold Medal for Consultants, TNOACON 2012
- Dr RC Rallan Best Basic Science Research Award, IOACON 2012
- Association of Spine Surgeons of India Publication Award 2012
- Dr Balu Sankaran Gold Medal, National Board of Examinations, New Delhi 2012
- Dr. Dolakia Best Paper Award, ROC, Pune, 2012
- Tridecennial Year for Teachers-Teacher’s Day, National Board of Examinations, New Delhi
- Scroll of Honour-Teacher’s Day, The Tamilnadu Dr MGR Medical University, 2012
- Prof. S Rajasekaran Gold Medal 2012

NABH
Accreditation

The hospital was accredited by the National Board of Accreditation for Hospital & Healthcare Institutions

Research Milestones

- Department of Scientific and Industrial Research (DSIR) Recognition
- Department of Biotechnology (DBT) : Approval for DTI project
- Approval for Ph D program by Dr MGR Medical University and the Madras University

Prestigious Orations 2011& 2012

- Hunterian Oration, Dublin, Ireland, 2011
- Presidential Oration,ASSICON 2011
- ISSLS Presidential Oration, Spine Week 2012, Amsterdam
- PT Rao Oration,OOACON 2012, ORISSA
- Presidential Oration, ASSICON 2012, New Delhi
- MOACON 2011, Pune

Election to
ISOC

The Orthopaedic Unit was elected to the membership of International Society of Orthopaedic Centers

Clinical Work

Year	Out patients	In patients	Surgeries
2010	1,11,986	19,317	11,766
2011	1,50,935	20,626	12,489
2012	1,54,790	23,516	13,446

Research Collaborations

- Tamil Nadu Agriculture University, Coimbatore-
Gene analysis in patients with back pain
- University of Hongkong – **Genetic basis of DDD**
- Venkateshwara University, New Delhi –
Biochemical analysis of End-Plate in disc prolapse
- Central Leather Research Institute, Chennai
Analysis of collagen characteristics of Lumbar discs in health & disease
- Tromsø Mine Victim Resource Center
University Hospital of Northern Norway
Study on Open Injuries

Corporate Social Responsibilities

- Project **“Help Line”** - Help for the Helpless
- **“Uyir”** - A People’s Movement
Against Road Accidents
- Inauguration of project **‘SWASAM’** by
Former President, Shri APJ Abdul Kalam
- Road Safety Booths
- **RASTRA** - “Life Without Disability” Project

Conferences Hosted 2011 & 2012

- Ganga Course on Spine Therapy,2012
- Ganga Operative Symposium on
‘Management of Severely Injured Limbs”, 2012
- Visiting Professor Program 2012 - September 2012
- INDO - US Foot & Ankle Surgery, 2011
- Ganga Operative Arthroplasty Course 2011
- Ganga Operative Spine Course 2011
- Update in Pediatric Nursing Care, 2011
- International Conference on Geriatric Nursing, 2011
- IOA-ICL Update in Spine & Musculoskeletal Radiology, 2011

Ganga Hospital - The Journey



1978 - 1991 - Established in 1978 in Ramnagar,
The hospital is named after
Shri. J. S. Gangadharan, father
of the founder of the hospital, Dr. J. G. Shanmuganathan.

- 17 beds
- Two Operating Rooms



1991-1996 The First Expansion

- 42 beds
- Four Operating Rooms



1996-2007 - The Second Expansion

- 135 beds
- Six Operating Rooms
- Intensive Trauma Care Unit

2010...
Ganga Institute of Health Sciences

- Diploma in Nursing & Midwifery
- B.Sc., Nursing – 4 years
- Post Basic B.Sc., Nursing – 2 years
- B.Sc., Physician Assistant
(Emergency and Trauma Management) – 4 years,



Ganga Hospital - The Journey

2007... New premises on Mettupalayam Road, Coimbatore

Paediatric Orthopaedics

Shoulder and
Elbow Surgery

Joint Replacement
Surgery

Trauma
Surgery

Spine
Surgery

Computer
Navigated Surgery

Sports Medicine
and
Arthroscopy

Minimally Invasive Surgery

- 426 In-patient beds
- 18 Operating Rooms
- Intensive Trauma Care Unit
- Regional Blood Bank
- Bone & Tissue Bank
- Spinal injury Rehabilitation Services
- Neurosurgical intensive care unit
- Dedicated Neurosurgical theatres
- In-house Conference facility with
425 seated Auditorium





“ If you want to walk far, walk together ”
- Chinese Proverb

Orthopaedic Team

Dr. S. Rajasekaran and **Dr. S. Raja Sabapathy** head and supervise the clinical work of the orthopaedic and plastic surgery departments respectively. The orthopaedic department consists of six additional consultants who have speciality interests in addition to providing trauma care services. The consultants are ably supported by associate consultants, senior Registrars, Registrars, fellows and post graduates.

Prof. Dr. M. V. Daniel is the Academic Director for the Department of Orthopaedic Surgery. His experience as the former Head of Department, Chrisitan Medical College, Vellore has richly benefitted the unit. He also chairs the Ethics Committee of the department.

Chairman, Dept. of Orthopaedic Surgery
Prof. S. Rajasekaran

Academic Director
Prof. Dr. M.V. Daniel

Consultants

Dr. J Dheenadhayalan

- Complex Trauma Reconstruction
- Upper Limb Surgery

Dr. T Ajoy Prasad Shetty

- Spine Surgery

Dr. SR Sundararajan

- Arthroscopy & Sports Medicine

Dr. P Dhanasekara Raja

- Arthroplasty and Trauma

Dr. N. Rajkumar

- Arthroplasty and Trauma

Dr. G. Balamurali

- Spine & Neuro Surgery

Associate Consultants

Dr. P. Rishi Kanna

- Spine Surgery

Dr. K. Venkatadass

- Paediatric Orthopaedics

Dr. Ramesh Perumal

- Trauma Surgery

Dr. Devendra Agraharam

- Trauma Surgery

Spine Fellows

Dr. C S Vishnu Prasath
Dr. Vijay Tubaki

Dr. Om Prakash Narayan
Dr. Neeraj Gupta

Dr. Denish Patel
Dr. OP Gupta

ASSI Spine Fellow

Dr. Kanniappan N

Trauma Fellow

Dr Mohammed Zackariah

Arthroplasty Fellow

Dr B Prashant
Dr Chittranjan Patel

Arthroscopy Fellow

Dr. Srikanth K.P,
Dr RC Pankaj

Registrars

Dr. Arun Kamal C
Dr. Nagaraju
Dr. S Rajadurai
Dr Vetriganapathy

Dr. K V Arun Kumar
Dr. C Karthikeyan
Dr. Veerabhadra J
Dr Naveen

Dr. Pradeep
Dr. G Chandrasekaran
Dr. Prem James Charles
Dr. Roy Wilson Armstrong

DNB Trainees

Dr B M Venkatdeep, Dr Sudheer Kumar Reddy K, Dr Deepak R, Dr Pankaj, Dr Rathna Mohan Rao M, Dr Srikanth Dallal, Dr Manjunath, Dr Vinay Pawar, Dr Gowri Shankar,

Research Co-ordinator

Dr. Janardhan S. Yerramshetty

Department Secretaries

Mr Mohana Krishnan & Mr G Prabhu

Dr S Rajasekaran

Academic Profile

Academic:

- Chairman, Dept of Orthopaedic & Spine Surgery
- Adjunct Professor, The Tamilnadu Dr MGR Medical University.
- Hunterian Professor, Royal College of Surgeons of England, 2011 - 12
- Member, Faculty of Medicine, Annamalai University
- Member, Board of Studies, Bharathiar University

Professional Bodies:

- President Indian Orthopaedic Association
- President, Association of Spine Surgeons of India
- President, ISSLS, Canada
- President, Tamilnadu Orthopaedic Association
- President, Association of British Scholars, Coimbatore Chapter

International Awards:

- ISSLS Award 2012, 2010, 2004
- EuroSpine Open Paper Award 2008
- Honorary Fellowship, Royal College of Surgeons of England, 2010
- ISSLS Macnab La Rocca Award 2005
- ISSLS Sofamer Danek Award 1996, 2002, 2006
- Harvard Medical International Award, 2007

National Awards

- Golden Jubilee Research Award IOA 2010
- MCI Silver Jubilee Research Award 2002
- Tamilnadu Government Scientist Award 2000
- ASSI Research Awards 2005,06,07,08,09,10
- ASI Hari Om Ashram Alembic Research Award 2004

Textbooks

- Chief Editor, ASSI Textbook of Spinal Infections & Trauma
- Chief Editor, Video Atlas of Spine Surgery

Journals

- European Spine Journal - Editorial Board Member.
- Spine - Deputy Editor.
- Journal of Bone and Joint Surgery(B)-Editorial Member.
- Journal of Orthopaedic Surgery, Hong Kong.
- Journal of Orthopaedic Science, Japan.
- Indian Journal of Orthopaedics.



Prof. S. Rajasekaran

M.S, DNB, F.R.C.S.(Ed), M.Ch(Liv), F.A.C.S, F.R.C.S.(Eng), Ph.D, Chairman, Dept of Orthopaedic & Spine Surgery.

Dr Rajasekaran has been instrumental in building and shaping the orthopaedic department into a very busy clinical unit with strong academic and research components. He had a brilliant academic career and was the 'Best outgoing student' of Coimbatore Medical College and stood first in the University of Madras in the orthopaedic post-graduate examinations. He was awarded the Khazenifer Gold Medal and Norman Roberts Medal for best performance during his M.Ch exams in Liverpool, UK. He completed his Ph.D in 2000.

He has special interest in spine surgery, arthroplasty and clinical research in major trauma. He has led the unit's basic science research in spinal deformities, disc nutrition and biology and genetics of disc degeneration which have been recognised with numerous awards and published in international journals. He was also instrumental in the evolution of 'Ganga Hospital Open Injury Severity Score' which guides critical decisions in saving and reconstructing severely injured limbs.



Orthopaedic Consultants

L to R : Dr. P Dhanasekara Raja, Dr. Ajoy Prasad Shetty, Dr. S. Rajasekaran, Dr. J.Dheenadhayalan, Dr. S.R.Sundararajan, Standing L to R: Dr N Raj Kumar, G Balamurali

Dr. J. Dheenadhayalan joined the department in 1992 after basic training at Mysore Medical College. He had his advanced training at Nuffield orthopaedic center and Milton Keynes general hospital UK, and fellowship training in joint replacement at Tübingen and Regensburg, Germany. A Founder member of the APOA trauma section and holds member position in AO Trauma and Shoulder society of India. Presently he is the editorial secretary of Journal of Tamilnadu orthopaedic association and assistant editor to Indian journal of orthopaedics. His field of interest is shoulder surgery and surgery in complex trauma situations.

Dr. Ajoy Prasad Shetty joined the department in 1994 and became a consultant in 2000. Initially trained in Orthopaedics at Bangalore Medical College, he had advanced training in Spine Surgery at The Queen Elizabeth Hospital, Adelaide, Australia. He was the Organising Secretary for the APOA Operative Spine Course in 2007. He is a regular faculty at AO Spine Courses and was awarded the ISSLS International Fellowship for the year 2007. He is also the co-author of the scientific papers which won the ISSLS Prize 2004,2010,2012 and EuroSpine Award 2008.

Dr. S.R.Sundararajan is a consultant in Arthroscopy and Sportsmedicine. He had his advanced training at Flinders Medical centre in Australia and also short-term training at arthroscopic centers in France and Cape Town, South Africa. He is a regular faculty in National conferences and arthroscopic workshops. He won the Best paper Award in IAS meeting 2008. He was the organizing secretary of Indo US Foot and Ankle course, conducted in Ganga Hospital in 2011. He is a Executive member of Indian association of Sports medicine.

Dr. P. Dhanasekara Raja is a consultant Arthroplasty & trauma surgeon and has been a Consultant since 2006. He joined the department in 2002. He completed Fellowships in Arthroplasty and Arthroscopy at Flinders Medical Centre, Adelaide and Fairedfield Hospital, Sydney, Australia and was the APOA Travelling Clinical Arthroplasty Fellow in 2010. He has done various clinical research work in joint replacement and has won the "Mohandass Weller Gold Medal" for best paper at IGOF Meeting, November 2005, Vyageshwarudu Gold Medal at TNOACON 2009 and Prof. Ramanathan Gold Medal for Consultants at TNOA conference in 2010. He was also the Organising Secretary for the Intelligent Knee Course, 2006, Ganga Operative Arthroplasty Course, 2008.

Orthopaedic Consultants

Dr N Rajkumar is a Consultant in Joint Replacement & Trauma Surgery. He underwent advanced training in Arthroplasty and Traumatology at Flinders Medical Centre, Adelaide and Prince Charles Hospital, Brisbane, Australia. He has been awarded the Traveling Fellowship Award for the Japanese Orthopaedic Association Conference in Japan 2008. He has done AO basic and Advanced trauma courses along with cadaveric course in Complex Pelvic and Acetabular trauma. He was organizing secretary for Ganga Operative Arthroplasty Course in 2011 and has been involved in conducting many conferences.

Dr Balamurali has completed his Neurosurgical training from Manchester, UK and Spinal fellowships over a period of 3 years from Liverpool (UK), Nottingham (UK), San Francisco (USA), Chicago (USA) and Zurich (Switzerland). After working as a Consultant spine surgeon at the Queens Medical Centre, Nottingham he moved over to Ganga Hospital. His main interests are Cervical and Craniocervical pathology, Intradural pathologies, Minimally Invasive Spine Surgery, Congenital abnormalities of the spine and Degenerative pathologies. He has a keen interest in Spinal Cord Injury rehabilitation.

Associate Consultants in Orthopaedics



Dr. Venkatadass .K, Dr. Devendra A, Dr. Ramesh Perumal, Dr. P. Rishi Kanna

Dr Venkatadass K joined the unit in 2006 after completing his MS Orthopaedics from the Manipal University. He had a passion for pediatric orthopedics and underwent short-term fellowships under Dr Ashok Johari, Mumbai and Dr Vrisha Madhuri, CMC Vellore. He also successfully completed a fellowship in Limb Reconstruction Surgery under Dr MGR Medical University. He recently completed his Advanced fellowship in Paediatric and Adolescent Hip Disorders from the Rady Children's Hospital, San Diego, USA He won the Best Paper Award at POSICON 2011 and is actively involved in research activities of the paediatric orthopaedic unit.

Dr Rishi Kanna finished his graduation from the Madurai Medical College in 2002, where he was the best outgoing student with four gold medals. He pursued his post graduation from Post graduate Institute at Chandigarh. He was elected as a member of Royal College of Surgeons of Edinburgh in 2007. He completed the fellowship training in spine surgery at Ganga Hospital and advanced spine surgical fellowship at Nottingham, England. He has special interests in basic spine research and has won several awards both at the national and international level. He has several international publications and authored chapters in international orthopaedic textbooks.

Dr Devendra Agraharam joined the department in 2005 as a Post graduate. He received Best Resident Award in 2005 and was awarded Prof M V Daniel Gold Medal for Exemplary Clinical Care in 2010 and Prof M Natarajan Gold Medal in TNOA 2006. He got trained in Bone banking at TATA Memorial hospital, Mumbai and NUS, Singapore and started Bone bank in Ganga hospital in 2008. He also underwent a fellowship in Trauma surgery at the Department of Trauma, Medical University of Innsbruck, Austria in 2011.

Dr Ramesh Perumal had his basic orthopaedic training at Kilpauk Medical College, Chennai in 2004 and completed his Diplomate National Board in Orthopaedics from Ganga hospital in 2005. He joined the unit as a registrar in 2007 and became a senior registrar from 2009 onwards. He won the PG quiz in 2005 state conference and also the clinical commitment award as the best outgoing student in DNB training period. He has keen interest in research and is actively involved in trauma research and has also presented many papers state and national conferences.

Orthopaedic Registrars



Dr. Vetriganapathy, Dr. Sandeep, Dr. C Karthikeyan
Dr. Veerabhadrar J Dr Natanasabapathy, Dr Nagaraju, Dr Pradeep,
Dr. Arun Kamal C, Dr. Roy Wilson Armstrong, Dr. G Chandrasekaran, Dr. K V Arun Kumar.

Orthopaedic Fellows



L to R: Dr Neeraj Gupta, Dr Zackariah, Dr Kannappan, Dr RC Pankaj
Dr Omprakash Narayan, Dr Denish Patel, Dr Chittaranjan Patel

Department of Anaesthesia

The Department of Anaesthesia is well equipped to offer safe and excellent 24 hours perioperative care to patients undergoing complex and major surgical procedures. The department has on its rolls 20 full time anesthesiologists and 12 Trainee anaesthesiologists, who offer round the clock services. They serve as perioperative physicians and offer comprehensive perioperative care to the surgical patients. The focus is on Acute pain Service which ensures a pain free postoperative course which aids in early rehabilitation and well being of the surgical patients. The department specialises in advanced Regional Anaesthesia, Anaesthetic solutions to major reconstructive spine surgeries and Arthroplasties, Geriatric Anaesthesia, Paediatric Anaesthesia and anaesthesia for major polytrauma victims The Department is a Post Graduate Training Centre for Anaestheisa accredited to National Board of Examination, New Delhi.

Consultants



Dr. C Sekar joined the institution as a Consultant in 1995. His special interest is in anaesthesia for spine surgery and Ultrasound-guided nerve blocks. He has been an invited faculty for the Oman Medical University Conference for the past two years. He materialized the training initiative at our hospital for the anaesthesia Students from Oman in collaboration with The Oman Medical Specialty Board. He was be the President of City Branch of ISA, Coimbatore Chapter in 2011-12.

Dr. J. Balavenkatasubramanian joined the institution as a Consultant in 1995. He is the founder and current President of Academy of Regional Anaesthesia of India, Editorial Board Member of Indian Journal of Anaesthesia, Academic Council member of Indian College of Anaesthesiologists,National Executive Committee Member of International Trauma Care, Indian Chapter,Certified National Faculty for Comprehensive Trauma Life Support, Course Director for the Aesculap Academy Guidance Centre for Regional Anaesthesia and Member of National Resusciation Guidelines Council. He has so far delivered 284 lectures nationally and 17 internationally and has been a faculty in 14 live workshops. Deivered two lectures in the World congress of Anaesthesia 2012 at Argentina.



Dr. Prabu CR joined in the Department of Anaesthesia in 2007 as anaesthetist and intensivist after completing fellowship in UK. He has got special interest in chronic pain management and involved in medical and interventional pain management of such patients in the hospital.

Dr R. Manikandan, Consultant Anaesthesiologist at Ganga Hospital joined in Aug 2008. He did his MD Anesthesiology(2002- 2005) and senior residency (2005- 2008) from the All India Institute of Medical Sciences, Delhi. He did a fellowship in Chronic pain management from the University of Western Ontario, Canada in 2010 -2011. Has presented papers in the American Society of Anesthesiologists annual meetings in 2008 and 2010 in Orlando and San Diego respectively. He has special interest in Pediatric Anaesthesia & pain management.



Dr. P. Gurumoorthi, consultant in the department of anaesthesiology joined the unit in 2008. His areas of interest are anaesthesia for patients with cardiovascular diseases and USG guided regional anaesthesia. He also has a keen interest in Paediatric regional anaesthesia.

Anaesthesia Team



(Left to Right) : Dr Gurumoorthy, Dr Boopathy, Dr Prabhu, Dr. Sekar, Dr. Balavenkat, Dr Venkateswaran, Dr Manikandan, Dr Suman, Dr Hemalatha, Dr Pooja, Dr Maheshwari, Dr Nikhil, Dr Sinduja, Dr Iyyappa, Dr Dahlia, Dr Praveen, Dr Nilesh, Dr Sateesh, Dr Mayank, Dr Naveen, Dr Arun, Dr Amit, Dr Shashank, Dr Sumit, Dr Vivekanandan

Anaesthesia Procedures

The Various Anaesthesia Techniques Performed 2010-12			
Year	2010	2011	2012
Upper Extremity Block	1182	1440	1560
Lower Extremity Block	140	944	1342
Spinal Anaesthesia	6350	6480	7240
Epidural Anaesthesia	1270	1820	1932
Continuous Plexus Block	242	282	306
CSEA	540	664	712
Caudal Epidural	411	421	512
TAP Block	Nil	84	96

Aesculap Academy Guidance Centre for Regional Anaesthesia, Germany has collaborated with the Department for providing short term training in Regional Anaesthesia. The programme was started in 2005 and so far 354 anesthesiologists from various parts of India and 44 Overseas Trainees from Nigeria, Srilanka Pakistan, Oman, Afghanistan, Philippines & Saudi arabia have benefited from this programme. This is the only centre in the country which teaches peripheral nerve blocks under this programme.

Clinical Research

The department has been a part of Phase IV clinical research trial - 'Prospective randomized phase IV open label Comparative study of tranexamic acid vs untreated controls for the reduction of blood loss in patients undergoing surgery for long bone fracture'

Anaesthesia Courses Offered



Diplomate of National Board in Anesthesia (4 seat for year) Session starts in January.



Post Doctoral Fellowship in Nerve block and Pain management
Affiliated to Dr MGR medical University (2 seat for year) Session starts in July.



Ganga Hospital Fellowship in Regional Anaesthesia & Trauma(6Months) Session starts in January/ July



Oman Medical board- Ganga Hospital Observership (6Weeks)



Aesculap Academy, Germany and Ganga Hospital AAGC Training Programme (6Days)

Department of Neurosurgery



Dr . V. Rajeshbabu is a consultant Neurosurgeon and joined the institution in 2010. He completed his M.S .General Surgery in 1994 at Coimbatore Medical College and MCH Neuro surgery at Madras Medical College,Chennai in 2001. He manages all major head injuries in our centre and he is also the project co-ordinator of the Neurological Society of Coimbatore.

Department of Radiology

Dr. Anupama N.V is a consultant radiologist in the Department of Radiology since March 2011. She finished her graduation from the Mysore Medical College in 1999 and pursued her DNB in Radiodiagnosis from Apollo hospitals, Chennai in December 2003. She then qualified as a Fellow in Royal College of Radiology. Her keen interest is in pursuing Musculoskeletal Radiology.



Dr. Kiruthika Chandrasekaran is a consultant radiologist in the Department of Radiology since October 2011. She finished her graduation from the Coimbatore Medical College in 2004 and pursued her MD in Radiodiagnosis from Lokmanya Tilak Municipal Medical College and General Hospital, Sion in Mumbai. She then qualified in the Diploma in National Board (DNB) examination and is a Fellow in Royal College of Radiology. Her special interest is Musculoskeletal Radiology.

Theater Staffs & Technicians



Ms Sharmila, Mr Vellingiri, Ms Anita

The department’s operating theatres are staffed with 123 highly skilled OT nurses, Anaesthesia technicians and theatre technicians. They have to their credit for the maintainance NABH standards in the theatres and are closely involved in the academic and operative courses of the department.



Research Department



Research Coordinator

Dr. Janardhan S. Yerramshetty joined the Ganga Hospital in 2011 as Research Coordinator. He did bachelors in biomedical engineering at Osmania University, Hyderabad and later Ph.D. in bioengineering at University of Toledo, Ohio, US. Even though his background is mainly engineering, he is connected to medical field through his research work at his Ph.D. and Post Doc institutes (Henry Ford Hospital, Detroit, Michigan). A portion of his Ph.D. thesis is printed as a book chapter through springer publications.

Physician Assistants

The research department has five physician assistants who are actively involved in the collection of data and clinical evaluation. The team of physician assistants have completed a four year Basic course and form an integral part of the research work.



From Left to Right: Jilsha Jose, S.Athsal Anna jemi, M.Muthuselvi , A.C Swarnalakshmi, N. Vijayalakshmi

Department of Physiotherapy



The department has 30 physiotherapists who work closely with the surgeons. Apart from providing service to nearly 300 in-patients and 150 outpatients a day, the team also provides training to students from many colleges. The department is well equipped with all the latest therapeutic modalities.

Department Secretaries

Mr Mohana Krishnan & Mr G Prabhu, Support the department in all its academic, research and clinical activities.



Mr G Prabhu & Mr Mohana Krishnan

With more than 150,000 new out-patients and 20,000 major surgeries every year, the unit stands as a leader in the field of orthopaedic surgery in this part of the world. Nearly 50 major orthopaedic surgeries are performed every day with a similar number in Plastic and Hand surgery department. High quality trauma care is ensured by a healthy symbiosis and collaboration between the orthopaedic, plastic, anaesthetic, neuro and facio-maxillary surgery departments. The clinical work is periodically audited to make sure that high standards are maintained at all stages of treatment.

The high clinical load is well supported by excellent infrastructure facilities with 420 beds, 18 operating theatres, state-of-the art radiology department with in-house MRI and CT scan facilities. The operating theatres have two computer navigation surgery platforms, 2D ISO-C 3D C-arms, high end operative microscopes and state-of-the-art operative equipments all of which help to ensure the best possible results to the patients. Excellent recovery of patients is aided by well equipped department of physiotherapy and rehabilitation.

New Elective Out-Patient Registration

2010	2011	2012
51,754	1,50,935	1,54,790

Emergency casualty attendance

2010	2011	2012
19,683	20,626	23,516

Major Orthopaedic Surgeries

2010	2011	2012
11,766	20,049	20,510

Orthopaedic Physiotherapy patients

2010	2011	2012
29,028	32,922	33,814

Wherever the art of medicine is loved, there is also a love of humanity
- Hippocrates

Upper Limb Injuries			
Year	2010	2011	2012
Total	2427	2479	2548

Lower limb Injuries			
Year	2010	2011	2012
Total	4179	4932	4969

Total Trauma Surgery			
Year	2010	2011	2012
Total	6606	7411	7517

October 15 '11 was one of the darkest days in my life where I heard a loud thud from behind and before I realised what was happening I was under a big bus, with my left arm completely crushed.

Suddenly the normal life of a simple girl and family turned upside down. When my dad reached Erode he took a quick decision to shift me to Ganga Hospital in Coimbatore which I consider as the biggest turning point of the entire episode. Ganga Hospital is where I experienced what do you actually mean by "world class care & medication".

To simplify - my normal life is back , I am married now, back to my job and living happily with God's grace. Even today when I show the photographs of accident and my injured arm - even doctors in the biggest hospitals in Bangalore where I live now are astonished by the fact that I am able to move my hands and fingers.

- Brindha, Software Engineer



Dr. Devendra A, Dr S R Sundararajan, Dr. J Dheenadhayalan, Dr. Srikanth KP, Dr.Ramesh P, Dr. Venkatadass, Dr. Armstrong, Dr Zachariah Dr Karthikeyan C, Dr. Arun Kamal, Dr Chandrasekar, Dr Arunkumar, Dr Veerabhadra

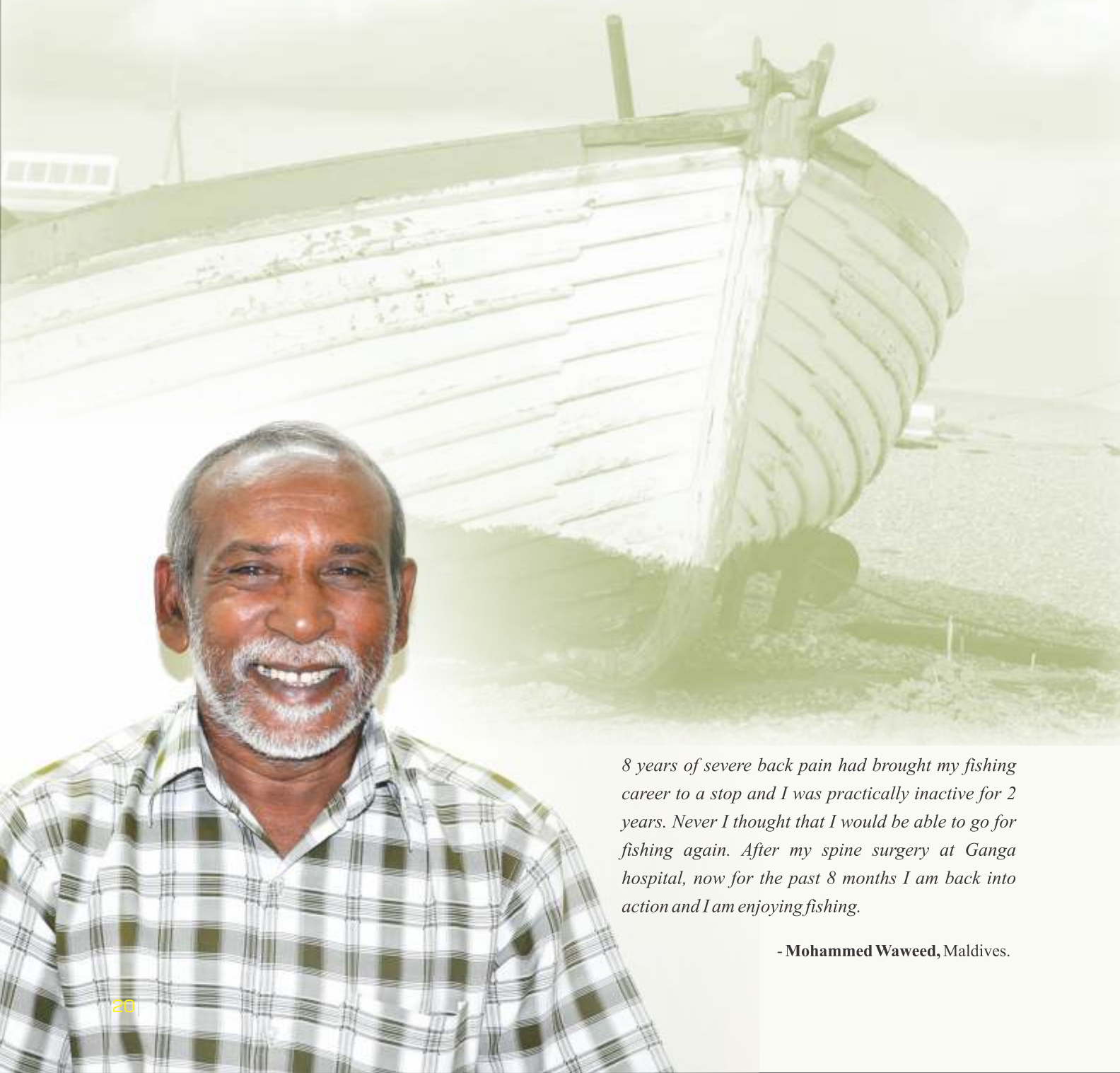
Ganga Hospital is a tertiary referral centre for Trauma for the region. The Unit provides consultant level input to all the patients regardless of severity of injury. The consistent increase in clinical work is a direct evidence of the confidence among the patients. The trauma work load is managed round the clock by Four Trauma Consultants, Four Associate Consultants, 12 Registrars and two trauma fellows. The availability of 11 operation theatres dedicated to trauma and Emergency surgery and in-house trauma anaesthesia team available 24hrs X 7 days makes it possible to do all life and limb saving surgeries immediately without any delay.

Upper Limb Injuries			
Year	2010	2011	2012
Fractures around shoulder	204	232	221
Humerus fractures	186	326	601
Fractures around elbow	318	143	246
Forearm fractures	725	771	623
Distal Radius fractures	851	801	771
Dislocations and Misc. injuries	143	206	86
Total	2427	2479	2548

Lower limb Injuries			
Year	2010	2011	2012
Fractures around Hip and Pelvis	1145	959	929
Femur fractures	626	810	1057
Fractures around Knee	720	1048	849
Tibia fractures	961	775	1387
Ankle fractures	363	865	447
Dislocations and Misc. injuries	364	475	300
Total	4179	4932	4969

Total Trauma Surgeries			
Year	2010	2011	2012
Total	6606	7411	7517

Spine Surgery			
Year	2010	2011	2012
Out-patients	20,321	20,310	22,457
In-patients	1696	1884	2140
Surgeries	1281	1324	2044



8 years of severe back pain had brought my fishing career to a stop and I was practically inactive for 2 years. Never I thought that I would be able to go for fishing again. After my spine surgery at Ganga hospital, now for the past 8 months I am back into action and I am enjoying fishing.

- Mohammed Waweed, Maldives.



Spine Surgery Team

Sitting(Left to Right) : Dr. Ajoy Prasad Shetty, Prof. S Rajasekaran

Standing (Left to right) : Dr. Denish Patel, Dr. Neeraj Gupta, Dr. Kannappan, Dr. Balamurali, Dr Vishnu Prasad, Dr Rishi M Kanna, Dr Vijay Tubaki, Dr OP Gupta

The spine unit of Ganga Hospital is one of the largest tertiary care referral centres for spinal diseases in India. The unit is headed by Prof S Rajasekaran, and comprises of Senior Consultant Dr Ajoy Prasad Shetty, Junior Consultant Dr G Balamurali and Associate Consultant Dr Rishi Mugesh Kanna.

There are also six Spine Fellows accredited to the two year programme of the National Board of Examinations, New Delhi and one Spine Fellow of the Fellowship programme of the Association of Spine Surgeons of India and one Training Fellow of The Tamilnadu Dr MGR Medical Univesity Post Doctoral Fellowship programmes. The outpatient clinics are conducted on all six days in a week. Complex surgeries are performed with safety and accuracy through computer navigation system and intra operative spinal neuromonitoring system. The unit was the first unit in the country to be approved for super speciality training in spine surgery. Apart from numerous traveling fellowships, it also conducts spine microsurgery courses. Operative spine courses are held every other year which attracts delegates from all over the world.

Year	2010	2011	2012
Microdiscectomy	316	310	408
Scoliosis & kyphosis	78	96	117
Spinal infections	32	64	28
Spondylolisthesis	206	241	294
Tumor surgery	21	18	52
Cervical spine	199	213	200
Spine fractures	189	239	330
Lumbar canal stenosis	99	93	193
Miscellaneous	141	50	422
Total	1281	1324	2044

The Unit has a very strong focus in Clinical and Basic Science Research. It has been the proud recipient of many national and international awards such as ISSLS award thrice in 2004, 2010 and 2012, EuroSpine Open Paper Award in 2008, Sofamer Danek award in 1996 and 2002, Silver Jubilee Research Award of Medical Council of India in 2004, Hari Om Alembic Award in 2007 and Golden Jubilee Commemoration Award of IOA in 2010. The unit has also more than 70 journal publications in spine surgery and many important chapter contributions in international textbooks.

Joint Replacement Surgeries			
Years	2010	2011	2012
Total	1026	1015	1090

My daughter, Sindhuja had crippling rheumatoid arthritis involving all the joints and was bed-ridden for 6 years. Many doctors had told that she would never walk again. We had lost all hopes till we came to Ganga Hospital. She underwent challenging joint replacement surgeries and we are grateful that her surgery was done with a huge concession under “Project Helpline”. We are now delighted to see her back on her feet and walking happily.

- Sindhuja’s mother



Left to Right: Mohan S.R, Dr. N. Rajkumar, Dr. S. Rajasekaran, Dr. P. Dhanasekara Raja, Dr. Chittaranjan Patel

The Arthroplasty unit has grown rapidly performing 1090 joint replacement surgeries in 2012 compared to a mere 56 joint replacements in 1996. The Unit has three consultants Dr S Rajasekaran, Dr Dhanasekara Raja and Dr N Rajkumar and two Arthroplasty fellows Dr S R Mohan and Dr P Chitranjan Patel

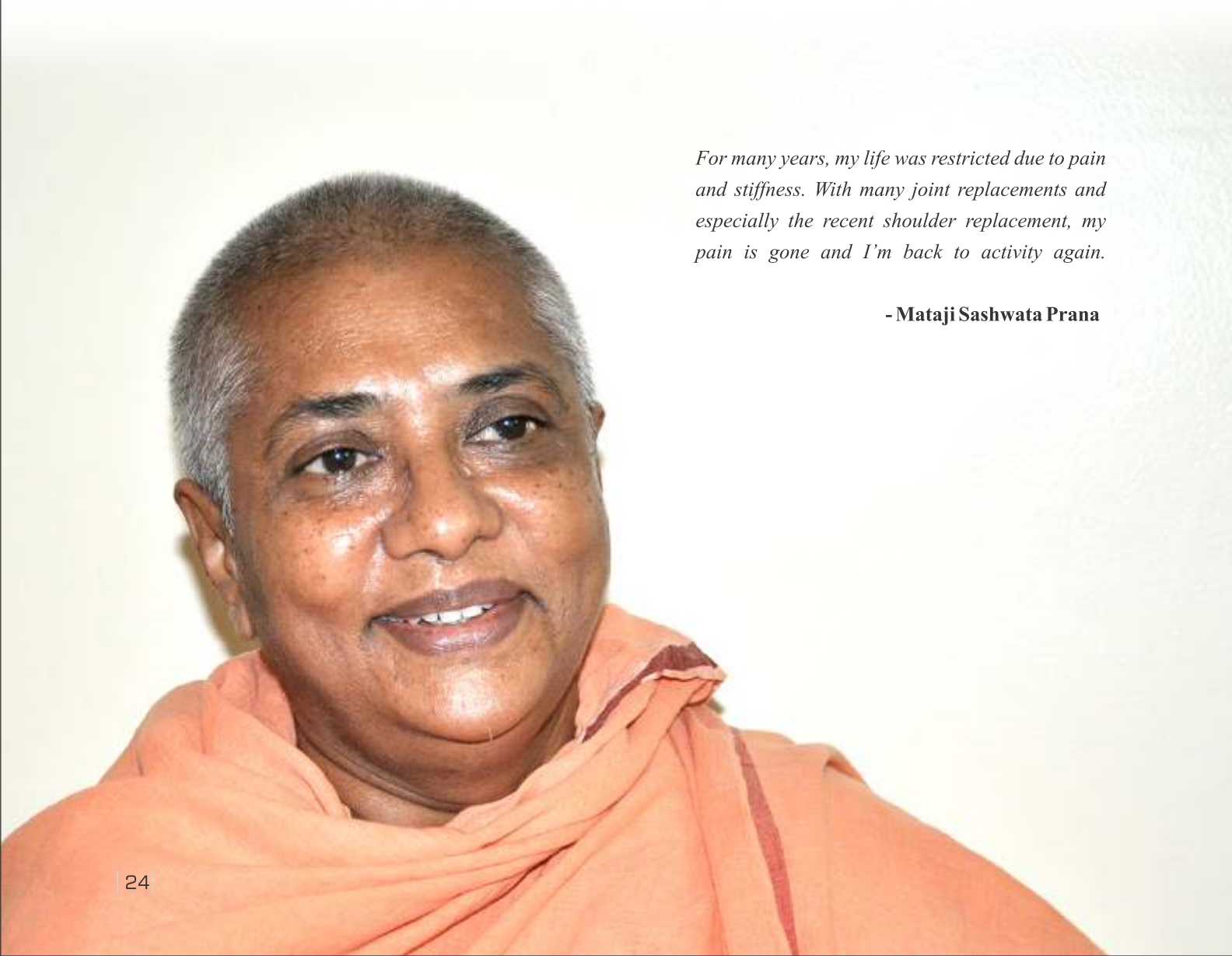
The unit has exclusive ultra clean operating rooms which coupled with strict aseptic techniques and highly trained professionals allow achievement of good results of international standards. Computer navigated joint replacement surgery is routinely performed for both difficult primary and revision surgeries to obtain perfect alignment consistently. The good results obtained have made it possible for us to provide 'Ganga Joint for Life Assurance Programme' – an insurance coverage for our joint replacement patients.

Joint Replacement Surgeries			
Years	2010	2011	2012
Primary Total Knee	781	811	853
Revision Total Knee	24	32	25
Primary Total Hip	198	154	197
Revision Total Hip	18	14	10
Shoulder and elbow	5	4	5
Total	1026	1015	1090

- Computer navigated Joint Replacement with BrainLab Vector vision
- Four Ultra clean operating rooms for joint replacements
- Digital alignment Xrays for planning & templating
- MRI and CT based patient specific instrumentation
- High performance bearing joint replacements

The unit has adopted all recent advances to give the best functional results to the patients. High flexion knees with rotating platforms, joints with newer bearing surfaces like ceramic on ceramic and modular hips with larger heads are all performed routinely in appropriate patients to achieve the best functional results.

Surgical Procedures			
Year	2010	2011	2013
Total	1670	2006	1754



For many years, my life was restricted due to pain and stiffness. With many joint replacements and especially the recent shoulder replacement, my pain is gone and I'm back to activity again.

- Mataji Sashwata Prana

Upper Limb Team



L to R: Dr. Srikanth KP, Dr. Ramesh P, Dr. J. Dheenadhayalan, Dr. Devendra Agraharam

A dedicated Shoulder and Upper Limb Department was inaugurated in April 2007. Dr J Dheenadhayalan heads this unit along with two senior and two junior registrars. The unit runs separate clinics for patients with upper limb problems and works closely with the plastic surgery department for combined clinics and surgeries for upper limb problems including brachial plexus problems.

The clinical work of the Unit is aided by modern diagnostic methodologies including 1.5 Tesla MRI with special softwares, musculoskeletal ultrasound, CT and arthrogram. In the last couple of years, shoulder arthroscopy and minimally invasive surgery are also commonly done to improve patient comfort and treatment outcomes.

The unit is backed by a dedicated physiotherapy section that compliments the surgical team with state-of-art pre and post operative rehabilitation.

Surgical Procedures			
Year	2010	2011	2012
Shoulder	323	441	443
Inferior Capsular Shift	29	62	29
Rotator Cuff	24	7	44
Arthroscopy	17	11	18
Proximal Humerus Fractures	164	174	166
Clavicle Fractures	45	58	38
Acromioclavicular Joint Dislocations	6	4	23
Stiff Shoulders	35	119	166
Arthroplasty	3	6	4
Elbow Surgeries	298	179	152
Wrist Surgeries	726	945	671
Total	1670	2006	1754

Surgical Procedures			
Year	2010	2011	2012
TOTAL	540	587	676



Due to a road traffic accident, I had sustained multiple injuries involving thigh, both knees and feet. I underwent many surgeries at different hospitals but was still unable to walk and carry out my daily activities. In 2009 January, I came to Ganga Hospital and underwent four staged procedures in three months interval including arthroscopic multi-ligament reconstruction in both my knees. Today I can do all normal activities like others.

P. S. Vaidhyalingam



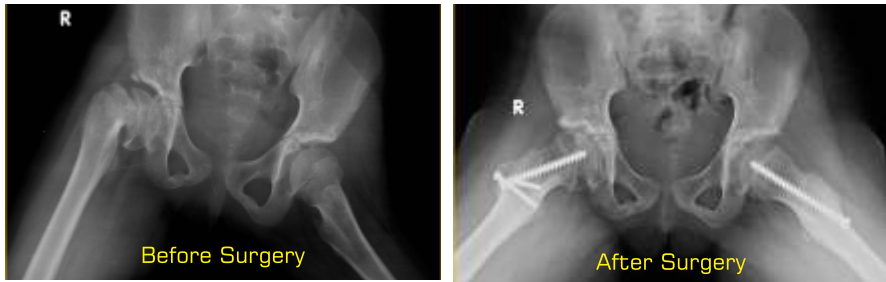
(Left to Right) Dr. K P Srikanth, Dr. S R Sundararajan & Dr. Pankaj RC

The Arthroscopy and Sports Medicine unit of Ganga Hospital is headed by Dr. S.R.Sundararajan. The unit is very efficient in performing routine and complex arthroscopic procedures involving the knee, shoulder, hip, ankle and elbow joints. The unit is a center for learning arthroscopy under The Tamilnadu Dr MGR Medical University Post-Doctoral Fellowship Program. It also has dedicated registrars involved in the clinical and academic activities of the unit. The unit has a fully equipped Operation theatre with experienced theatre staff for effortless performance of procedures. It is backed up by a professional team of physiotherapist trained exclusively in Arthroscopy and Sports Medicine for accelerated rehabilitation.

Year	2010	2011	2012
ACL Reconstruction	305	325	380
PCL Reconstruction	5	6	13
Complex Multiple ligament Reconstruction	71	13	11
Meniscal Injuries	88	84	121
Miscellaneous procedures (hip, knee, shoulder, ankle & elbow)	71	73	63
TOTAL	540	587	668

- Competent Arthroscopic surgical team.
- Fully furnished operation theatre
- Advanced arthroscopic equipment
- Specialized Musculoskeletal radiologists and physiotherapists

Comprehensive post operative rehabilitation for all Sports and Ligament injuries are guided by an exclusive team comprising of 19 trained physio-therapists. The Unit also conducts national level meetings in Sports Medicine and Arthroscopy & Training Courses and Workshops for Physiotherapists



“Will my daughter be able to walk again normally without a limp?” - this was the question I asked my doctor during the first consultation. A chronic slipped capital femoral epiphysis had left her with a bad limp. After a hip preservation surgery with the expertise from Ganga Hospital, she is perfectly normal and is getting ready to dance in the school annual day.

- Srija’s Father Mr Goswami



Of the 1.2 billion population of India, nearly 400 million are children and hence the need and demand for a good comprehensive pediatric orthopaedic unit is huge in India. Apart from the huge disease burden, there is also a challenge of providing cost effective solutions as many of the children belong to the economically weaker sections of the society. The Pediatric Orthopaedic Unit is involved in many social service projects which ensured that no child with deformity is ever left wanting for the best of care.

The work-load of the department is constantly on the increase. Apart from the large number of pediatric trauma involved in the Unit, the department also runs exclusive pediatric outpatient clinic twice weekly and a Club foot clinic once a week.

Dr Venkatadass K has recently completed his advanced fellowship in Paediatric & Adolescent Hip Disorders from the Rady Children's Hospital, San Diego, United States and has joined back the unit. The unit has the infrastructure and training to do Hip preservation surgery which is the growing trend in the specialty and also manages common paediatric orthopaedic problems like cerebral palsy, deformity correction and musculoskeletal infections.



With Dr Harish Hosalkar and Dr Scott Mubarak, at Rady Childrens Hospital, San Diego, USA receiving the fellowship certificate

Paediatric Orthopaedics			
Year	2010	2011	2012
Trauma	362	540	664
CTEV - Ponseti	49	78	43
CTEV Surgery	39	15	12
Cerebral Palsy	70	73	56
Hip Dysplasia	22	12	14
SCFE	5	9	13
Infection	4	21	28
Deformities	61	33	62
Miscellaneous	90	31	66
Total	702	812	958

All congenital problems like Congenital Talipes Equino Varus, Developmental Dysplasia of Hip and Limb deficiencies are addressed by a trained team. Intervention at the appropriate age with adequate expertise in this field forms the basis of success of treatment in these problems.

Paediatric Orthopaedic Services

- Club foot clinic
 - Cerebral Palsy clinic
 - Hip dysplasia
 - Hip Preservation Surgery
 - Femoro Acetabular Impingement
- Skeletal dysplasia
 - Musculoskeletal Infections
 - Paediatric Trauma
 - Congenital deformities
 - Post-traumatic deformities



Dr S Rajasekaran delivered the Hunterian Oration of the Royal College of Surgeons of England 2012

Dr JG Shanmuganathan receiving Lifetime Achievement Award from The Tamilnadu Dr MGR Medical University, 1st July 2011



Dr Sudhir Ganesan was awarded the Dr Balu Sankaran Gold Medal of the National Board of Examinations, New Delhi For securing the Highest marks in the country.



Hunterian Professorship of the Royal College of Surgeons of England 2012

The Hunterian Professorship is considered to be one of the proudest traditional honours of the college bestowed to surgeons of eminence who have richly contributed to the field of surgery by original research or innovations. The honour of delivering the Hunterian lecture is regarded by surgeons around the world as a great privilege and high accolade awarded to recognise their work. Dr Rajasekaran delivered the Hunterian Lecture during the Combined Irish and British Orthopaedic Association meeting in Dublin on September 15, 2011.



Lifetime Achievement award, Tamil Nadu Dr. M.G.R. Medical University, Chennai, 1st July 2011

Prof MV Daniel received the lifetime achievement award for his rich contribution to education and academics in orthopaedics for many decades. Prof M V Daniel headed the Orthopaedic Department of Christian Medical College, Vellore for many years and subsequently has been the Academic Director of Ganga Hospital, Coimbatore from 1992.

The Tamilnadu Dr MGR Medical University SCROLL OF HONOUR – TEACHER'S DAY

Dr S Rajasekaran was awarded the Scroll of Honour in recognition and appreciation of his outstanding contribution in the field of Orthopaedic Surgery. This was presented to him by The Tamilnadu Dr MGR Medical University on the Teacher's Day – 5th September 2012 at the University Campus in Chennai



Dr Rajasekaran receiving the award from the Tamilnadu Speaker and the Vice Chancellor Prof: Mayilvahanan Natarajan



Dr Rajasekaran with Dr Srinath Reddy, President, National Board of Examinations and Dr Bipin Batra, Chief Executive Director of the National Board of Examinations

National Board of Examinations, New Delhi TRIDECENNIAL AWARD FOR TEACHERS TEACHER'S DAY

The National Board of Examinations selected 10 eminent Teachers from all over the country to honour them during the Teachers Day in commemoration of the Tridecennial Year of the National Board. Dr Rajasekaran was the only orthopaedic surgeon selected by the jury in the whole country.



Awards

P. Dhanarajan Gold medal for innovation in trauma, Tamil Nadu Orthopaedic Association - 2011

Dr Dheenadhayalan, Consultant Trauma Surgeon, An innovation for perfect docking in bone transport for grade III B tibia fractures with bone loss. February 2011, TNOA, Madurai.

Best Paper Award AO Trauma - India

Dr Dheenadhayalan, Consultant Trauma Surgeon "Outcome in 3 and 4 Part Proximal Humerus Fracture Managed With Indirect Reduction & Fixation with Plate and Screws" at Chennai April 8, 2012

Consultant Medal Paper Award, Tamil Nadu Orthopaedic Association - 2011

Dr Ajoy .P. Shetty, Consultant Spine Surgeon Minimally Invasive Pelvic Fracture Fixation, Role of CT Based Pelvic Morphometry and Use of Ball Probe February 2011, TNOA, Madurai.

Dr RC Rallan Gold Medal for Basic Science, Indian Orthopaedic Association 2011

Dr Ajoy .P. Shetty, Disc prolapse results from endplate failure rather than rupture of annulus fibrosus - comprehensive clinical, radiological, histopathological and intraoperative microscopic analysis of 147 lumbar disc herniations, Noida December 8-11, 2011

Prof. M. Ramanathan Gold Medal for Consultants - TNOACON 2012

Dr. P. Dhanasekara Raja - Consultant Arthroplasty Surgeon "Treatment of prosthetic infection by 2 stage revision with articulating cement spacers – A midterm follow up study."

Association of Spine Surgeons of India Publication Awards 2011, 2012

Dr S Rajasekaran is the recipient of the ASSI Publication Awards and ASSI Research Awards continuously from the year 2003 to 2011

Dr RC RALLAN Best basic science research award - IOACON 2012

Dr Rishi M Kanna - Quantification of neuronal injury in cervical spine injury patients - Diffusion tensor imaging (DTI) of 35 cervical spine injury patients.

Neuro Spine surgeons association Conference - Best E-poster award- Chennai - 2012

Dr C.S. Vishnu prasath receiving Best Paper Award for Presentation On DTI in Cervical Spine



Awards

Dr. P. Dhanasekara Raja, Consultant Arthroplasty Surgeon receiving the Late. Dr. Dolakia memorial best paper award at Ranawat Orthopaedic Conference, 2012 from Prof C.S. Ranawat.

Late. Dr. Dolakia memorial best paper award at Ranawat Orthopaedic Conference at Pune, Jan 19-21, 2012.

Dr. P. Dhanasekara Raja, Consultant Arthroplasty Surgeon "Coronal Plane Osteometry of South Indian Patients with Arthritic Knees-Results of a randomized controlled trial".

ASSI Best Basic Science Research Award 2011

Dr S Rajasekaran, Dr Rishi M Kanna, Dr Sakthi Kanak
Genetic Basis of Degenerative Disc Disease of Human Lumbar Discs

Best Paper Award in POSICON 2011, Chandigarh, India

Dr K Venkatadass

Ultrastructural changes in intervertebral discs due to altered mechanical loading – an electron microscopic analysis using scoliotic discs as biologic model.

Best Podium Presentation by the British Association of Spine Surgeons Edinburgh, United Kingdom, Feb 2011

Dr Rishi M Kanna

Pediatric Cervical Pedicle Screw Fixation in 16 children

Vocational Excellence Award, Rotary Club of Coimbatore Millennium, 2011

Dr Balavenkata Subramaniam, Consultant Anaesthetist Conferred with the by Rotary Club of Coimbatore Millennium, on the October 20th, 2011.





Diffusion Tensor Imaging of the Spinal cord allows evaluation of the cord at tract level. Ganga Hospital is one of the few centres in the world which is evaluating the clinical application of this novel technology.

Orthopaedic Research Interests



Institutional Review Board (IRB)

(Registered with US Department of Health & Human Services) Regn No. IRB 00004503

Medical research is highly regulated and has to strictly follow the medical ethics and good clinical practices laid down by regulatory authorities. At Ganga Hospital, all research methodologies are approved by an institutional review board formed by eminent members of the society.

Chairman:
Prof Dr M V Daniel
Kumaran Hospital, Coimbatore

Deputy Chairman
Prof S Rajasekaran
Ganga Hospital, Coimbatore

Dr J G Shanmuganathan
Chairman-Ganga Hospital

Sreejaya Nambiyar
Senior Advocate, Coimbatore

Dr Ramkumar Raghupathy
Dean, GKNM Hospital, Coimbatore

Dr Ajoy Shetty
Consultant - Ganga Hospital, Coimbatore

Prof Dr Balasubramanian
TNAU, Coimbatore

Dr J Dheenadhayalan
Consultant - Ganga Hospital, Coimbatore

Dr Vinu Aram
Director-Shanti Ashram, Coimbatore

Member, Secretary
Dr Janardhan Yerramshetty
Consultant - Ganga Hospital, Coimbatore

Research Collaborations

Ganga Hospital has established collaborations with internationally recognized research institutions



Tamilnadu Agricultural University, Coimbatore
Molecular Biology Analysis - Isolation of DNA from blood samples and proteomic analysis of disc specimens



The University of Hong Kong
Selective Nucleotide Polymorphism analysis for genetic study



University of Delhi, India
Biochemical analysis for apoptosis and pro-inflammatory cytokines in Disc Degenerative Disease.



Rush University, Chicago
Functional Element Model Analysis of Post Tubercular Deformity



Cotrel Foundation, Paris
Role of Mechanical stress on the causation of disc degeneration - scoliotic disc study



Siemens India
Diffusion Tensor Imaging studies of Spinal cord, Functional MRI studies and Disc diffusion Analysis.



Microlab, Coimbatore
Histopathological analysis for microstructural changes in Disc Degenerative Disease.



Tromsø Mine Victim Resource Center, University Hospital of Northern Norway
Study on Open Injuries

Ganga Orthopaedic Research & Education Foundation (GOREF)



Dr. S. Rajasekaran PhD.,
Managing Trustee

RESEARCH ADVISORY BOARD:

Prof. M.V. Daniel
Former Professor & HOD,
Dept of Orthopaedics
CMC Medical College, Vellore.

Dr P. Balasubramanian PhD
Director, Centre for plant molecular biology
Tamilnadu agricultural University,
Coimbatore – 641003.

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Coimbatore Medical College Hospital.

Dr Krishna Venkateswaran
Consultant Pathologist
Microbiological Laboratory, Coimbatore

Prof. Kenneth MC Cheung
Clinical Professor, Deputy Chief,
Division of Spine Surgery,
The University of Hong Kong.

Dr. Dilip K Sengupta MD
Ast. Prof., Dept of Orthopaedic Surgery,
Dartmouth Hitchcock Medical Centre,
United States of America.

The Ganga Orthopaedic and Research Education Foundation (GOREF), was established in August 2002 to facilitate research in spine and orthopaedic surgery. The foundation was setup by a large personal donation by Dr S Rajasekaran.

GOREF is approved by Department of Scientific and Industrial Research (DSIR), a department under Ministry of Science & Technology, Government of India in recognition to the high quality research conducted. The foundation has now grown in strength and added to its credit various activities such as academic training of surgeons and paramedical staff, organizing scientific meetings and conferences, funding on-going research activities of the department.

Apart from these, the foundation has taken up social responsibilities. It provides funds to the 'Project Helpline' (a project to support surgical correction of physical deformities in poor children), Projects under 'SWASAM' a social initiative inaugurated by Shri. APJ Abdul Kalam and primary education of under privileged children.

Contribution to GOREF Research and Academic Activities

2009 - 2010 ₹. 7.4 Millions

2010 - 2011 ₹. 6.65 Millions

2011 - 2012 ₹. 12.2 Millions

Diffusion Tensor Imaging (DTI) as a novel method for assessing spinal cord at tract level.

- IOA Golden Jubilee Commemoration Lecture Award – 2011
- Neuro Spine Conference - Best e-poster Award, Chennai – 2012
- IOACON - Basic Science Research Award – 2012

- Conventional MRI assesses the spinal cord as a whole and does not evaluate the spinal cord at the tract level. Hence it is not useful in accurate assessment or prognostication of acute or chronic injuries.
- DTI is a new and emerging technique which can assess individual tracts by following the movement of water molecules.
- This technique has been used widely in the imaging of brain but not in the spinal cord. Our study was aimed at evaluating the sensitivity and specificity of this technique in assessing the extent of damage to the tracts of the spinal cord in both acute injuries and chronic compressive myelopathies.
- We are also aiming to document the DTI data metrics of various parameters like FA and ADC values at various levels of the cervical spinal cord and in different age groups.
- We obtained grants from Department of Biotechnology (DBT), a department of Ministry of Science and Technology, Government of India and AOSpine, Asia Pacific, to support the study.

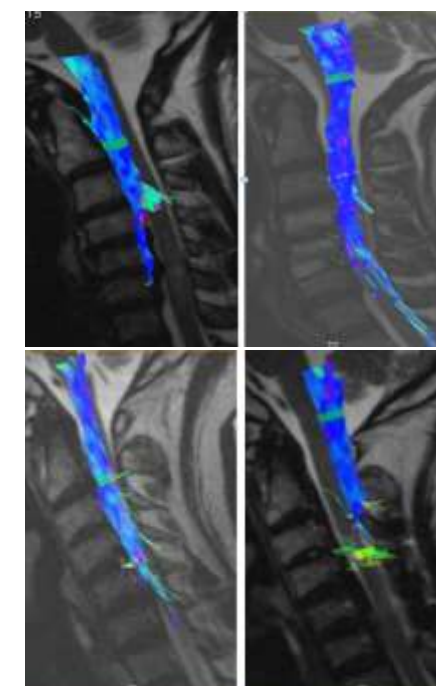


Figure: Texturography images of two cervical myelopathic patients, who improved after surgery (on the top) and who did not improve post-surgery (on the bottom). Patient's pre surgery images are on the left side, respectively.

A multi-modal evaluation of the anatomical site of failure in lumbar disc herniation

- ASSI – Clinical Science Research Award – 2011
- ISSLS – Clinical and Biomechanics Award – 2012

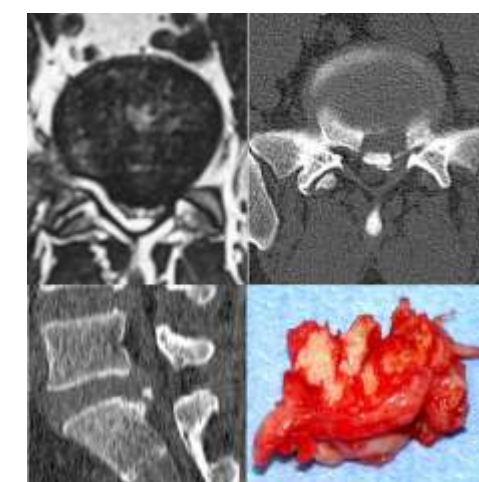
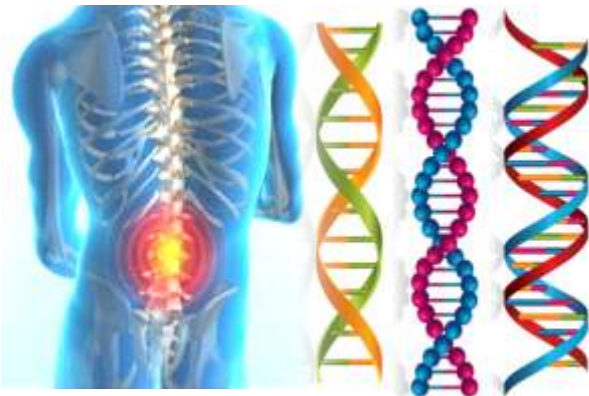


Figure: L5-S1 disc extrusion in the MRI showing a rim avulsion fracture of the end plate in the CT scan as the etiology of the avulsion. The excised disc material clearly shows large end plate fragment attached to the extruded disc.

- It is traditionally believed that lumbar disc herniation is a result of an acute or chronic tear of the annulus which allows the nucleus pulposus to herniate.
- There are cadaveric and animal studies that have shown that the majority of herniations occur as a result of failure of the end plate, as avulsion of the end plate –annulus junction which allows the nucleus to herniate subligamentously.
- This hypothesis was verified by the use of plain radiology, thin slice CT, plain MRI, post contrast serial MRI studies, intra - operative evaluation of the herniated material and histopathological studies of the removed disc material.
- Our results does indicate that avulsion of the end plate may be the primary mode of failure of the disc in majority of the patients. This finding has important clinical and research applications.

Genetic basis of degenerative lumbar disc disease in Indian population

- ASSI – Basic Science Research Award – 2011
- There is growing opinion that disc degeneration has more genetic basis than environmental factors.
- All the genetic studies performed so far were in the Chinese, Japanese and Finnish population and there were no studies on Indian population which accounts for 1/6th of the world population.
- This project aims to study the effects of genetics in the Indian population and to find the association of 57 SNP's within highly selected phenotypes.
- The study included 1000 cases and 400 controls and is being conducted in collaboration with Genetics department of the Tamil Nadu Agricultural University and the University of Hong Kong who have good expertise in this field.



Development and validation of a New Spine Surgery Specific Morbidity Score to predict post-operative morbidity and mortality in elective spine surgery

- ASSI – Young Investigator Award - 2011

	Group	No. of Cases	Major morbid	Scores
Age	1 (<= 70 years)	1133	50	1
	2 (> 70 years)	68	12	4
BMI	1 (< 18.5)	58	6	2
	2 (>= 18.5)	1005	46	1
Blood loss	1 (<= 400 ml)	815	16	1
	2 (<= 1400 ml)	377	42	6
	3 (> 1400 ml)	23	4	9
Instrumentation	1 (0, no instrumentation)	632	12	1
	2 (<= 5 levels)	525	37	4
	3 (> 5 levels)	60	13	11
Duration of Surgery	1 (<= 60 min)	245	1	1
	2 (61 to 120 min)	486	16	8
	3 (121 to 240 min)	399	30	18
	4 (> 240 min)	85	15	43
Ambulation	1 (community ambulators)	865	35	1
	2 (household ambulators)	278	18	2
	3,4 (wheelchair and bedridden)	52	7	3
ASA	1 (normal)	493	10	1
	2 (mild systemic disease)	604	33	3
	3 (severe systemic disease)	110	17	8
	4,5 (incapacitating disease and moribund)	10	2	10

Figure: Table shows scores for various factors depending on the incidence of major morbidity.

- Spine surgery can be associated with significant intra operative and post-operative complications and the risk factors that can help predict their coming is not clear. Although Charlson's Comorbidity Index is used for tumor related surgeries, it is neither sensitive nor specific for spine surgeries.
- In a preliminary study, we have identified the risk actors that can develop post-operative complications and using them we have developed a weighted scoring system based on the risk from each factor.
- This new scoring system will help in directly assessing the risk- benefit ratio of surgery in the older age groups and enables the practicing spine surgeon to adequately inform patients regarding the surgical risk.
- The score was validated in over 500 patients and was found that our new score system was highly specific and sensitive in predicting the post-operative complications and mortality associated with spine surgery.

Coronal Bowing of Femur Makes Fixed Angle of Distal Femoral Cut Unsafe in Indian Patients

- Late. Dr. Dolakia memorial best paper award 2012, Ranawat Orthopaedic Conference, Pune

- In total knee arthroplasty, precise alignment of components is important, which depends on the morphology of bones.
- In general, to compensate for morphology, a standard femoral cut angle is adopted. In India, morphology of bones varies widely and adoption of standard cut for all patients may not be a good option.
- Thus this study was aimed to analyze morphological variations in coronal plane in Indian population and to assess if standard angle distal femoral cut is safe.
- Our preliminary study indicated that coronal femoral bow is common in Indian population and bowing of more than four degrees is associated with abnormal valgus correction angle and consequent mal-placement of implant was noticed if appropriate correction is not done.
- The results of the study may help in designing more accurate instrumentation and implants for TKR in Indian population.

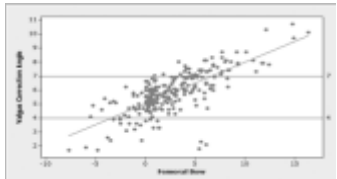


Figure: Bilateral femoral bowing with VCA 11°. Appropriate correction was done with extensive medial release. A plot showing correlation of femoral bowing with valgus correction angle. As bowing increases valgus correction required increases.

Prevalence and Patterns of Degenerative Disc Disease (DDD) in the Whole Spine - Hierarchical Cluster Analysis

- Prof. M.Ramanathan Consultant Gold Medal- TNOACON 2010

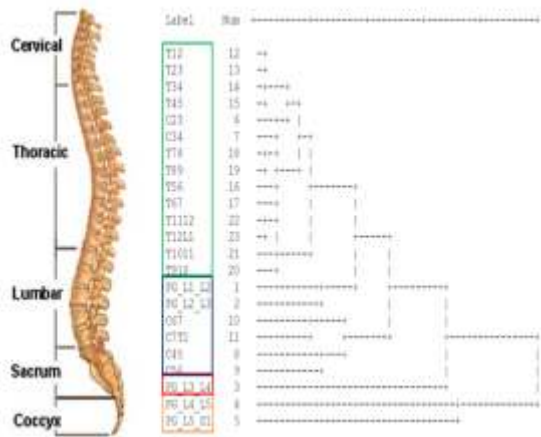


Figure: Left side of the figure illustrates various regions in spine and right side shows groups of disc degeneration levels commonly found in individuals using hierarchical clustering algorithm.

- Disc degeneration is the most common cause of back pain and although well investigated, the exact etiology is still elusive. There are proponents for both the mechanical and genetic basis of the disease and the general consensus is that it is multi-factorial in most patients.
- Understanding patterns and prevalence of disc degeneration helps in better understanding of the etiology of back pain. But so far studies were restricted to only lumbar region, which is under greater biomechanical stress and may not give complete picture about genetic etiology.
- Thus this study includes analysis of disc degeneration patterns in whole spine of patients with back pain and controls using hierarchical cluster analysis. The above knowledge is vital not only for proper understanding of etiology of disc degeneration but also for planning preventive and treatment aspects of the disease.
- The study showed that disc degeneration is a pan spinal disease and not restricted to lumbar spine in patients with low back pain and they have significantly higher incidence of asymptomatic cervical disc degeneration compared to controls.

Effectiveness of Texture Analysis in Assessing Fracture Risk from Radiographs



Figure: Figure shows quality of trabecular structure in osteoporotic and non-osteoporotic individuals. Low density and connectivity of trabecular structures are one of the causes that lead to fragility fractures in vertebrae, hip or other locations.

- Among the elderly (above 50 years), 50% in women and 20% in men sustain fragility fractures that result in debilitating acute and chronic pain, disability and increased comorbidities. Among fractured, 25%-50% suffer mortality within one year after fracture and the mortality rate increases with each year thereafter.
- Regular monitoring of bone health via mass screenings, helps to find individuals who are at risk for fracture and take necessary and timely action. But current available techniques, DEXA or QCT for BMD are costly and not easily accessible, especially in rural areas, to accommodate mass screenings.
- Therefore this study was proposed to find whether radiographs, in conjunction with image analysis, can be used as an alternative technique for fracture prediction. X-ray systems are most widely available and are most cost-effective.
- Initial analysis of available data indicated that texture analysis technique is indeed a promising tool and can be used definitely for the purposes of pre-screening.

The Effects of Using Intravenous Antibiotics Only Versus Local Intra Wound Antibiotics in Addition to Intravenous Antibiotics on Post-Operative Infection Incidence

- Infection is the most dreaded complication following any orthopaedic surgery. It is the most common cause of post-operative morbidity and causes a huge financial strain on the patient's family and hence prevention of infection should be one of our prime concerns.
- Although strict aseptic techniques and perioperative systemic antibiotics have brought down the rates of infection, they still occur in around 4% of instrumented orthopaedic surgeries.
- Intra wound application of vancomycin and gentamycin have been done in cardiothoracic surgeries and have been shown to reduce rates of infection.
- So far results indicate that overall infection rate in this institute is very less compared to other institutes (national or international) and there is no significant effect of vancomycin in controlling infection rate.

Spine Surgeries	Infection	No Vancomycin	Vancomycin
Instrumented	Not-infected	302	297
	Infected	3 (0.94%)	4 (1.35%)
Non-Instrumented	Not-infected	168	132
	Infected	1 (0.60%)	0 (0%)
Trauma Surgeries	Not-infected	140	138
	Infected	3 (2.1%)	4 (2.9%)
Joint Replacement Surgeries	Not-infected	400	398
	Infected	2 (0.50%)	3 (0.75%)

Figure: Incidence of infections in various types of surgeries with and without vacomycin.

The Proposed IMOT STUDY
A Prospective International Multi-centre Open injury Trial

The proposed study is a multi-centre prospective trial conducted across the world at eight Level I Trauma centres to develop new protocols in management of Open fractures and to evaluate the factors that determine the outcome in Open injuries.

A special web based programme for data entry has already been created which will allow the eight centres to fill in the data, including photographs, at the time of admission and also during follow up for two years.



AIMS OF THE STUDY

1. To compare Ganga Hospital Score, OTA and MESS for sensitivity and specificity for salvage.
2. To identify sub groups of injuries which give excellent, good, fair and poor results.
3. To identify instruments to assess function. These instruments must have a mixture of objective and subjective parameters. They should also be simple for easy usage.
4. To identify and add missing parameters like biochemical modulators, patient related factors like psychological profile, education and social support to make the score and our capacity for prediction more robust.
5. To see if early prediction of non-union is possible and to identify the need for early bone stimulating procedures.



The Study Team members discussing the protocol of the study at Ganga Hospital.

Proposed Centers :

- Ganga Hospital, Coimbatore, India.
- Medical University of Innsbruck , Innsbruck , Austria
- University Hospital North Norway
- Dept. of Trauma Surgery, University of Mainz, Germany
- Dept of Trauma and Orthopaedics, University of Leeds UK
- Kings College Hospital, London, UK
- Royal London Hospital, London, UK
- National university of Singapore, Singapore.



International Study Team Members

Academics has been one of the strong pillars of Ganga Hospital and the high academic standards has helped to place Coimbatore in the world map of training centres in both orthopaedics and hand surgery. The institution was one of the first in the country to be recognised for basic orthopaedic post graduate

training and the first for super speciality training in spine surgery. The orthopaedic unit also is recognised for PhD in orthopaedic surgery and runs numerous fellowships which are fiercely competed for both nationally and internationally.

Courses



National Board of Examinations, NewDelhi

- DNB Orthopaedic Surgery
- FNB Spine Surgery
- FNB Trauma Surgery



The Tamilnadu Dr MGR Medical University, Chennai.

- Ph.D in Orthopaedic Surgery
- Fellowship in Arthroplasty
- Fellowship in Spine Surgery
- Fellowship in Limb Reconstruction Surgery
- Fellowship in Arthroscopy
- Fellowship in Regional Anaesthesia



University Of Madras, Chennai

- Ph.D in Biotechnology and Biochemistry



Avinashilingam Deemed University Coimbatore

Paramedical Courses

- B.Sc Physician Assistant



Ganga Institute Of Health Sciences

- Diploma in Nursing & Midwifery
- B.Sc., Nursing – 4 years
- Post Basic B.Sc., Nursing – 2 years
- B.Sc., Physician Assistant (Emergency and Trauma Management) – 4 years,



Academic Director
Prof. Dr. M.V. DANIEL
MS (GEN). MS (Ortho). FACS (Ortho).



Clinical Director
Prof.S Rajasekaran
M.S.(Orth)., D.Orth., D.N.B, F.R.C.S(Ed)., F.R.C.S(London), M.Ch. (Liverpool)., FACS, Ph.D

The academic activities are supervised by the Academic Director Prof M V Daniel, Former Head of Department of Orthopaedic Surgery, Christian Medical College, Vellore and guided by Dr S Rajasekaran, Clinical Director. Prof Daniel is also the Chairman of the Institutional Review Board of the research wing of the unit. His vast experience in the field for many decades and his passion for discipline and documentation have been a strong strength for the unit.



L to R :Dr Ratnamohan Rao, Dr Rahul, Dr Nibukurian, Dr Phanikuman, Dr Pankaj Rane, Dr Karunakar Reddy, Dr Rizwan Basha, Dr Kiran Chandran, Dr Vishal, Dr Srikanth Dallal

D.N.B POSTGRADUATES

2010

- Dr. Balachandra Gopalan
- Dr. Deepak R
- Dr. B M Venkatdeep
- Dr. Sudheer Kumar Reddy K
- Dr. Sivaraj
- Dr. Radhakrishna V N

2011

- Dr. Rane Pankaj
- Dr. Srikanth Dallal
- Dr. Rathna Mohan Rao M
- Dr. Manjunath
- Dr. Vinay Pawar
- Dr. Gowri Shankar S

2012

- Dr. Kiran Chandran
- Dr. Rahul
- Dr. Nibukurian
- Dr. Santosh
- Dr. Vishal
- Dr. Rizwan Basha Z
- Dr. Phanikumar
- Dr. Karunakar Reddy

FNB SPINE SURGERY

2010

- Dr. Ashok Thomas
- Dr. Sakthikanal
- Dr. Gaurav Khandelwal

2011

- Dr. Vishnu Prasath
- Dr. Vijay Tubaki

2012

- Dr. Om Prakash Narayan
- Dr. Neeraj Gupta

Ph.D in Orthopaedic Surgery

- 2010 Dr. Ramesh Perumal
- 2012 Dr. Rishi Mugesh Kanna

FNB Trauma Surgery

- 2010 Dr. K P Srikanth
- 2011 Dr. Mohammed Zackariah

Fellowships of The Tamilnadu Dr MGR Medical University

- Arthroplasty - Dr Mohan S R, Dr Chittaranjan Patel
- Spine Surgery - Dr Ajay Kothari, Dr Denish Patel, Dr OP Gupta
- Limb Reconstruction Surgery - Dr K Venkatadass
- Arthroscopy - Dr R C Pankaj

Publications

International Journals	13
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Presentations

International	63
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“Medical men must discuss with other medical men - for discussion promotes understanding, removes doubts and increases knowledge”

- Charaka, 6th century B.C

1. Open Injuries of the lower extremity: Issues and unknown frontiers. S Rajasekaran, Peter V Giannoudis, INJURY 2012, Vol 43, Issue 11, Pg 1783-84.
2. Annotation: SPINE Diffusion tensor imaging of the spinal cord and its clinical applications. S Rajasekaran, R M Kanna, Ajoy Prasad Shetty, Journal of Bone & Joint Surg Br 2012; 94-B: Pg 1024-31.
3. Publish to Flourish - Is it corrupting science? S Rajasekaran, Bone & Joint 360, August 2012, Vol 1, Issue 4.
4. Results of Direct Repair of Type II Hangman Fracture Using Iso-C3D Navigation- 20 cases, S Rajasekaran, Vijay R Tubaki, Ajoy Prasad Shetty, Journal of Spinal Disorders & Techniques, 2012, July. 25(5):E134-9
5. Natural History of Pott's Kyphosis. S Rajasekaran, EuroSpine Journal, 2012
6. Drug Therapy in Spinal Tuberculosis. S Rajasekaran, Gaurav Khandelwal, EuroSpine Journal, 2012
7. Safety of Cervical Pedicle Screw Insertion in Children - A Clinico-Radiological Evaluation of Computer Assisted Insertion of 51 Cervical Pedicle Screws including 28 Sub-axial Pedicle Screws in Sixteen Children". S Rajasekaran, Rishi Mugesh Kanna, Ajoy Prasad Shetty. SPINE 2012. Vol 37, Number 4, Pg E216-E223.
8. Abducens Nerve Palsy associated with pseudomeningocele following lumbar disc surgery: A case report. S Rajasekaran. Spine 2012, 37(8), Pg 511-513.
9. Anatomical feasibility of pediatric cervical pedicle screw insertion by computed tomographic morphometric evaluation of 376 pediatric cervical pedicles. J. Rishi Mugesh Kanna, Ajoy Prasad Shetty, S Rajasekaran. Spine 2011. Vol 36, No.16, Pg 1297-1304.
10. Axial translaminar screw placement using three-dimensional fluoroscopy based navigation. Rajasekaran S, Avadhani A, Shetty AP. Singapore Med J 2011, 52(1), Pg 15-18.
11. Lumbar Vertebral Growth is governed by 'Chondral Growth Force Response Curve' rather than 'Hueter-Volkmann Law'. A clinico-biomechanical study of growth modulation changes in Childhood Spinal Tuberculosis. S. Rajasekaran, Raghu N Natarajan, J Naresh Babu, P. Rishi Mugesh Kanna, Ajoy Prasad Shetty, Gunnar B J Andersson. SPINE 2011. Vol 36, Number 22, Pg E1435-1445.
12. "Valgus Slipped Capital Femoral Epiphysis – Report of two cases and a comprehensive review of literature." Dr K Venkatadass, Dr Ajoy P Shetty, Dr S Rajasekaran, Journal of Pediatric Orthopaedics – B, 2011, 20: Pg 291-294.
13. Kanna RM. Reviewer's comment concerning "Dose-response and structural injury in the disability of spinal injury" (doi: 10.1007/s00586-012-2498-2 by M. S. Patel et al.) Eur Spine J 2012.



Publications National

1. Case Report: Computer navigation assisted fixation in neglected C2-C3 dislocation in an adult. Rajasekaran S, Subbiah M, Ajoy Prasad Shetty. Indan Journal of Orthopaedics 2011, Vol.45, Issue 5, Pg 465-469.

2. Direct repair of lumbar spondylolysis by Buck's technique. Rajasekaran S, Subbiah M, Ajoy Prasad Shetty. Indian Journal of Orthopaedics 2011, Vol.45, Issue 2, Pg 136-140.

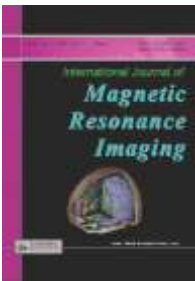
3. Coronal plane osteometry in arthritis knee and clinical implication in total knee replacement. Dhanasekara Raja, Dr S Rajasekaran, Dr Geethan, Dr Jayakumar, Journal of Tamilnadu Orthopaedic Association, 2011.

4. "Displaced anterior cruciate ligament avulsion fractures: Arthroscopic Staple Fixation . Sundararajan S. R, Rajasekaran S, Leo Bernard. Indian Journal of Orthopaedics 2011, Vol 45 Pg 324-329

5. "Successful surgical excision of Heterotopic ossification of hip with extra articular ankylosis in a rare case of moyamoya disease" Dhanasekararaja P, Rajasekaran. S, Arun J, Indian Journal of Orthopaedics 2012, Vol 46, Issue 6, Pg.714.

6. "Coronal Plane Osteometry of Indian Patients with Arthritic Knees – Clinical Implications during Total knee Arthroplasty" Journal of Tamilnadu Orthopaedic Association , 2011. Vol 38.

7. An In-Vivo Study on 'Anatomy of Failure' and a Proposal of a Structural Classification in Lumbar Disc Herniation. A Multi-Modal Prospective Study Including Clinical, Radiological, Serial Post Contrast MRI, Intraoperative Findings and Histo-pathological study of 181 subjects. S Rajasekaran, Dr Rishi M Kanna, Dr Sakthikanal, Dr Raveendran, Dr Senthil Natesan. Journal of Tamilnadu Orthopaedic Association , 2012. Vol 38, Issue 2



TextBook Chapters

1. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Open Injuries of Limbs. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.247-257, 2012

2. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Acromioclavicular Joint Injuries. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.285-287, 2012

3. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Clavicular Fractures. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.288-290, 2012

4. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Sternoclavicular Joint Injuries. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.291-293, 2012

5. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Scapular Fractures. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.294-296, 2012

TextBook Chapters

6. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Dislocations of the glenohumeral joint. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.297-302,2012

7. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Fractures of the proximal humerus. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.303-306, 2012

8. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Humeral Shaft Fractures. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.307-310, 2012

9. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Fractures of the distal humerus. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.311-315, 2012

10. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Fractures and dislocations of the elbow. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.316-321, 2012.

11. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Fractures of the shaft of the radius and ulna. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.322-326, 2012.

12. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Fractures of the distal radius. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.327-331, 2012.

13. Rajasekaran S, Vijay Kamath, Dheenadhayalan J. Dislocations and fracture dislocations of the hip. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.335-339, 2012.

14. Rajasekaran S, Vijay Kamath, Dheenadhayalan J. Femoral neck fractures. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.340-345, 2012.

15. Rajasekaran S, Vijay Kamath, Dheenadhayalan J. Intertrochanteric fractures. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.346-349, 2012.

16. Rajasekaran S, Vijay Kamath, Dheenadhayalan J. Subtrochanteric fractures. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.350-352, 2012.

17. Rajasekaran S, Vijay Kamath, Dheenadhayalan J. Femoral shaft fractures. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.353-357, 2012.

18. Rajasekaran S, Vijay Kamath, Dheenadhayalan J. Distal femoral fractures. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.358-362, 2012.



19. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Patellar dislocation. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.363-364, 2012.

20. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Knee dislocations. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.365-367, 2012.

21. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Patellar fractures and extension mechanism injuries. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.368-371, 2012, 2012

22. Rajasekaran S, Vijay Kamath, Dheenadhayalan J. Tibial plateau fractures. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.372-376, 2012.

23. Rajasekaran S, Vijay Kamath, Dheenadhayalan J. Fractures of the tibia and fibula. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.377-381, 2012.

24. Rajasekaran S, Vijay Kamath, Dheenadhayalan J. Tibial plafond fractures. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.382-385, 2012.

25. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Injuries of the ankle joint. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.386-39, 2012.

26. Sureshan Sivananthan, Rajasekaran S. Talar fractures and dislocation. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.394-397, 2012.

27. Rajasekaran S, Vijay Kamath, Dheenadhayalan J. Fractures of the midfoot.. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.403-406, 2012.

28. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Injuries of the tarsometatarsal (Lisfranc) joint. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.407-410, 2012.

29. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Fractures of the forefoot. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.411-413, 2012.

30. Rajasekaran S, Rishi Mugesh Kanna, Dheenadhayalan J. Metatarsophalangeal joint, phalangeal and interphalangeal joint injuries.. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.414-416, 2012.

31. Rajasekaran S, Rishi Mugesh Kanna, Ajoy Prasad Shetty. Spinal Fractures. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.439-466, 2012.

32. Rajasekaran S, Rishi Mugesh Kanna, Ajoy Prasad Shetty. Spinal Infections. Mercer's Textbook of Orthopaedics and Trauma, Tenth Edition, Pg No.982-992, 2012.

33. Rishi Mugesh Kanna, AP Shetty, S Rajasekaran. Vascular rib graft harvesting. Atlas of spine surgical techniques, Ed: Eck and Vaccaro. Under print.

34. S Rajasekaran, Balamurali, Rishi Mugesh Kanna. Lumbar/Sacral techniques: 4.2.2 Posterior approaches: Microsurgical disc surgery in the textbook, AO Spine's Minimally Invasive Spine Surgery (MISS)—Techniques, Evidence, and Controversies, Ed: R Hartl, under print.

35. S. Rajasekaran, Rishi Mugesh Kanna, AP Shetty. Cervical spine injuries. In Contemporary Surgical Management of Fractures and Complications, Ed. M Ilyas, S Rehman, Jaypee Publications, under print.

36. S. Rajasekaran, Rishi Mugesh Kanna, AP Shetty. Thoraco lumbar spine injuries. In Contemporary Surgical Management of Fractures and Complications, Ed. M Ilyas, S Rehman, Jaypee Publications, under print.

Combined 33rd SICOT & 17th PAOA Orthopaedic World Conference, Dubai,28-30 Nov 2012
Dr S Rajasekaran

- Thoracolumbar Burst Fractures treated with Posterior Short segment fixation - Is Surgical Arthrodesis required? – A Prospective Study
- What is the optimal treatment of the odontoid fracture?
- A Validated New Spine Surgery Specific Morbidity Score to Predict Postoperative Morbidity and Mortality in Elective Spine Surgery
- Evidence Based Update on the Management of Bilateral / Unilateral Facet Dislocation
- Cervical Pedicle Screw Fixation in Children in the Management of Complex Cervical Deformities
- Case Presentation of a Burst Fracture – I will Conserve
- The Problem of Deformity in Childhood Spinal Tuberculosis
- Moving Beyond Gustilo's Classification – Ganga Hospital Score in Decision Making in Open Injuries
- Intraoperative ISO-C- arm based navigation in challenging cervical spine fixations

7th International Congress of Chinese Orthopaedic Association (COA 2012), Beijing, China, Nov. 2012
Dr S Rajasekaran

- Navigation in Spine Surgery - Fact or Fiction

27th Annual Meeting of NASS (North American Spine Society) October 2012, Dallas, USA
Dr S Rajasekaran

- Advancing spine care worldwide
- Evolution and Management of Post Spinal Tuberculosis Kyphosis

4th Chinese International Conference on Lumbar Spine Surgery, Beijing, China, June 15-16, 2012
Dr S Rajasekaran

- About ISSLS (International Society for the Study of Lumbar Spine)
- Current status of genetic studies on DDD



Prof. S. Rajasekaran



Prof. S. Rajasekaran at ISSLS 2012 Meeting



Dr. P. Dhanasekara Raja

Advanced AO Course, Kuala Lumpur Sep, 2012
Dr Ajoy P Shetty

- C1&2 lateral mass, pedicle, translaminal screw,
- Fractures in ankylosing spondylitis
- Unifacetal & bifacetal dislocation
- Coservative treatment of thoracolumbar fractures
- Nonfusion vs fusion in thoracolumbar fractures
- MIS in thoracolumbar fractures

AOSpine Interactive Courses: Cervical Spine, Buenos Aires, Argentina, 26-28 July, 2012
Dr S Rajasekaran

- Neurosurgical issues in congenital scoliosis management
- Congenital scoliosis (hemivertebra)
- Deformity, Lecture, Osteotomies: Types and indications
- Deformity, Lecture, Post-infectious deformity: Treatment strategy
- Deformity, Case presentation, Case presentation: Lenke 1 type curve
- Role of Navigation in Challenging Cervical Spine Trauma
- DTI in Acute and Chronic Injuries of the Spinal Cord

World Forum for Spine Research 2012, Helsinki, Finland, June 18-21, 2012
Dr S Rajasekaran

- Assessment of Disc Nutrition and it's Clinical implications
- Prevalence and Patterns of Degenerative Disc Disease (DDD) in the Whole Spine - Hierarchical Cluster Analysis of Pan-spine MRI Images of 785 subjects

Spine Week 2012, Amsterdam, Netherlands, May 28- 1st June, 2012
Dr S Rajasekaran

ISSLS Presidential Address:

- Publish to Flourish – Is it Corrupting Science? Scoliosis Research Society Session:
- Wiring Techniques in Spine

8th Advanced Deformity Meeting, Secondary Deformity, Zurich, Switzerland, April 26-27, 2012
Dr S Rajasekaran

- Risk factors and evolution of severe kyphotic deformity in spinal tuberculosis
- Options and Decision Making in Surgical Correction of Kyphotic Deformities

The 3rd Annual Meeting of Cervical Spine Research Society, Asia Pacific Section, Japan, 2012
Dr S Rajasekaran

- Diffusion Tensor Imaging for Cervical Spine in Acute and Chronic Disorder
- Diffusion Tensor Imaging (DTI) indices of cervical spine of normal individuals and factors affecting them

2012 AAOS Annual Meeting, San Francisco, 2012
Dr S Rajasekaran

- A New Spine Surgery Specific Score To Predict Morbidity And Mortality In Elective Spine Surgery

SICOT XXV Triennial World Congress, Prague, Sep 3-9, 2011
Dr S Rajasekaran

- TB Spine – Current evidence for treatment strategies
- Intraoperative ISO-C-C arm based navigation in challenging Cervical spine fixations
- Therapeutically refractive cases of TB Spine Principles of treatment
- Prognostic value of Signal Intensity Change in Cervical Spondylitic Myelopathy
- Novel Techniques in Spinal Imaging - Assessment of Fiber Tract Integrity in Spinal Cord by Diffusion Tensor Imaging

R&R 2011- Spine & Multidisciplinary Rehabilitation VII Evidence Base Meeting, 26th March 2011, Milan Italy
Dr S Rajasekaran

- Management of spinal deformities in India
- Assessment of low back pain patients with serial diffusion MRI



Dr & Mrs. Rajasekaran with Dr Takahashi at Spine Week 2012

34th Annual Scientific Meeting of Singapore Orthopaedic Association, Grand Copthorne Waterfront Hotel, Singapore, 2011
Dr S Rajasekaran

- Classification of Open Fractures – Gustilo Vs Ganga
- Lessons learnt from Management of Kyphosis in Spinal Tuberculosis

Combined Congress of the British and Irish Orthopaedic Association, Ireland, Sep. 2011
Dr S Rajasekaran

- Hunterian Lecture – Biomechanical Analysis of the Evolution of Buckling Collapse of Pediatric Spine and its Clinical Implications

Trauma Symposium, Medical University Of Innsbruck, Austria in 2011.
Dr Devendra

- Ganga Hospital Open Injury Severity Score

Kenyan Orthopaedic Association Scientific Conference, 7-10 June 2011, Kenya
Dr S Rajasekaran

- Decision making in scoliosis surgery
- Complications of scoliosis surgery
- Key note address – Ganga Hospital Compound Fracture score
- Plenary lecture – What is “in and out” in lumbar disc surgery?
- Management of severe kyphosis in spinal TB

The 11th Pacific and Asian Society of Minimally Invasive Spine Surgery, Aug 18-20, 2011, Lotte Hotel, Busan, Korea
Dr S Rajasekaran

- The role of navigation surgery on the minimally invasive spinal surgery

Arthroscopy cadaver workshop held in Bangkok, April 2011
Dr S R Sundararajan

- PCL reconstruction technique
- Complications of ACL reconstruction - How to avoid?



Prof. S. Rajasekaran with eminent faculty at China International Conference on Lumbar Spine Surgery

Annual Meeting of ISSLS (International Society for the Study of Lumbar Spine), 14-18 June 2011, Gothenburg, Sweden
Dr S Rajasekaran

- Single nucleotide polymorphism in the Nerve Growth Factor Beta (NGFB) gene predisposes to lumbar disc degeneration
- A validated new spine surgery specific morbidity score to predict postoperative morbidity and mortality in elective spinesurgery

BRIT Spine Annual Conference, Liverpool, UK April 2011
Dr Rishi Mugesh Kanna

- British Association of Spine Surgeons meeting, Edinburgh, United Kingdom, Feb 2011
Anatomical feasibility of pediatric pedicle screw fixation

World Congress of Anaesthesia, Buneos Aires, Argentina March 2012
Dr Balavenkat

- Management Strategies of pain relief in Geriatric Patients with Hip Fractures
- Blood Conservation Strategies in Revision Hip Arthroplasty
- Chairman for the session on Orthopaedic Anaesthesia

International Conference of Pain and Regional Anaesthesia Ipcra, Cochin, November 2012
Dr Balavenkat

- TAP BLOCK: Is it useful?

South Asian Confedration Anaesthesiologist, Bangalore August 2011
Dr Balavenkat

- Upper Extremity Block: How To Get It Right



Dr S Rajasekaran with Mr Martyn Porter, President, British Orthopaedic Association



Prof. S. Rajasekaran with faculty at China International Conference on Lumbar Spine Surgery



Dr J Balavenkat, World Congress of Anaesthesia 2012, Argentina

Asia Pacific Orthopaedic Association 2012, 4-6 October 2012, Delhi
Dr S Rajasekaran

- Modern trends in Open Fractures Management
- Pledge to Give : Indian Experience
- TB Spine –Deformity Consideration
- Spine at Risk Signs and Growth Modulation in Spinal Tuberculosis
- Pubish and Flourish
- The Challenges in Spinal Navigation

Dr Dhanasekaraja

- Two staged revision in infection with articulating cement spacer: Midterm results
- Medial piecrusting technique for varus knees

International Spine and Spinal Injuries conference, New Delhi 2012.
G Balamurali

- Anterior thoracic foraminotomy through mini-thoracotomy for the treatment of giant thoracic disc herniations.
- The presence of undiagnosed cervical myelopathy in patients referred for surgical evaluation of lumbar stenosis.
- Minimally invasive posterior cervical discectomy for cervical radiculopathy: indications and clinical results.
- level cervical disc revision surgery – techniques and outcomes
- Minimally invasive microsurgical resection of intradural spinal tumours using a tubular retraction system.

International Conference on “Biomaterials and Implants: Prospects and Possibilities in the New Millennium at Central Glass & Ceramic Research Institute, Kolkatta, July 21 & 22, 2011
Dr S Rajasekaran

- Biomaterials in Spine Surgery

IOACON 2012, Chennai Dec 12-16, 2012

Dr S Rajasekaran

Presidential Address:

- Standing Tall - on our own Feet
- Debate - Surgeon's Experience is Best For Patient
- Are the Orthopaedic Needs of the Patients in Advanced and Developing Nations Same – For the Motion

Dr. J. Dheenadhayalan

- Management of Nonunion and Malunion in proximal humerus fractures
- Live demonstration of PFNA2 nailing in subtrochanteric fracture
- Open shoulder instability repair

Dr Ajoy .P. Shetty

- A surgeons outlook to classification . how do I plan my approach in thoracolumbar fractures

Dr. S.R. Sundararajan

- Isolated PCL injuries. Is it Benign?

Dr Rishi Mugesh Kanna

- Moderator for basic and advanced spine sessions
- Evidence for fusion after cervical discectomy
- DTI in cervical spinal injuries and its prognostic value

Dr K Venkatadass

- How I do it? – 6 yr old child with Type III SC fracture humerus with soft tissue swelling and no deficit, Pediatric Session.
- Cost-effective Radiography Combined With Image Processing Can Differentiate Fractured and Non-fractured in Non-osteoporotic Individuals.

Dr. Ramesh Perumal

- The forces that force the talus out- cadaveric study to unlock the door

Dr Devendra

- One Bone forearm Reconstruction in challenging situations, a Simple solution

Dr. Vijay R Tubaki

- Long term outcomes of benign vertebral tumour patients treated with surgical resection

Dr C S Vishnu Prasath

- Neurological recovery patterns in CSM patients and correlation with changes in DTI indices

ICS 2012, Srinagar, Aug 24-28, 2012

Dr S Rajasekaran

- Video session: Anterior odontoid screw fixation
- Planning surgery in primary cervical vertebral tumors

Spine Symposium at Depuy institute, Chennai, December, 14th 2012

Dr Ajoy .P. Shetty

- Faculty at Pediatric Spine Symposium

Dr Rishi Mugesh Kanna

- Fusion in stenosis - What is the evidence?
- Vascular and Access Related Complications of Anterior Lower Lumbar Spine Surgeries - An Analysis of 399 Anterior Lumbar Interbody Fusions and Disc Replacements in 298 Patients

MOACON (Maharashtra Orthopedic Association Conference) 2012, Pune, Nov 2, 2012

Dr S Rajasekaran

- Surgical failures (cause and prevention)
- Pediatric disease (problems)

NSSI 2012 Conference at Chennai - 2012

Dr. Vijay R Tubaki

- Our results of direct fixation of Type 2 Hangman fracture using Iso C navigation

Dr C S Vishnu Prasath

- Navigation assisted C1 osteosynthesis for jeffersons fracture – a novel surgical technique.
- DTI in evaluation of cervical spine pathologies

CME - Salem Medical college and Hospitals, 2012

Dr S R Sundararajan

- Paediatric sports knee injuries



Dr. J. Dheenadhayalan



Dr S Rajasekaran



Dr. P. Dhanasekara Raja

Midterm CME of TNOA 2012, Erode Ortho Club

Dr S Rajasekaran

- Locking Plate – Where it Falls

Dr. S.R. Sundararajan

- Functional Outcome of one stage reconstruction of Posterior Cruciate Ligament Combined Injuries of the Knee in chronic instabilities

Dr Srikanth KP

- Morphometric analysis of ACL Attachments in Indian Population – An MRI based study in 60 cases.

OASICON Bangalore, 24 – 26 August – 2012

Dr. J. Dheenadhayalan

- Open reduction techniques in type 3/4 proximal humeral fracture
- 3 part proximal humerus fracture – With failed fixation, how I will manage ?
- Interesting case discussion, My worst case

Dr Ajoy .P. Shetty

- Surgical site infection

POACON 2012 second annual conference of Pondicherry Orthopaedic Association Nov. 2012

Dr. J. Dheenadhayalan

- Fracture neck of femur in young Adult – DHS vs Cancellous Screw
- How to avoid disaster in plating of proximal humerus fractures
- Distal humerus fractures

Spine 2012, September 14th 2012, Chennai

Dr Ajoy .P. Shetty

- TB of the cervical spine

VOSCON 2012, Annual Vidarbha orthopaedic society conference Nagpur, Oct. 2012

Dr. J. Dheenadhayalan

- Assessment and Resuscitation in pelvic fracture
- External fixation of pelvic fracture
- Managing Bone loss in distal femur fracture
- Optimising results in four part shoulder injuries



Dr. C. Sekar



Dr. S. Raja Sabapathy



Dr. Balavenkat

Management of Severely Injured Limbs, Ganga Hospital, Coimbatore, July 19-22, 2012

Dr S Rajasekaran

- Gustilo Classification – Current Status – Amputation or Salvage?
- Primary Closure, Ganga Experience – Early Flaps
- The IMOT Study – “International Multicentre Open Injury Trial”

Dr. J. Dheenadhayalan

- What to do and what not to do in casualty
- Side swipe injuries
- Management of bone defects – ganga experience

Dr S R Sundararajan

- Management of bone defects in open fractures
- Tips and tricks in External fixator and its definite role in open fractures.

Dr. Devendra

- Post traumatic One Bone Forearm Reconstruction in severely mangled extremities

Dr Ramesh Perumal

- Economics of salvage versus amputation in periamputation threshold open injuries.

Prof. TKS CME 2012 , Erode, 12th August 2012

Dr. J. Dheenadhayalan

- Acute bone gap management

CAPE Nov 4th 2012, Cochin

Dr Ajoy .P. Shetty

- Disc Dilemma
- Lumbar Fusion Techniques

Traumacon 2012, Mumbai, Aug 15 – 19 2012

Dr. J. Dheenadhayalan

- Status of distal femur nail
- How to proceed when stuck with subtrochanteric fracture
- AC joint injuries
- Grade III compound fracture tibia with vascular injury

National Presentations

Ganga Course on Spine Therapy, Ganga Hospital, Coimbatore June 9 & 10, 2012

Dr S Rajasekaran

- Clinical evaluation of lumbar spine

DMH-IORAS Update Series 2012 on 'What is New in Orthopaedics', Madurai, 19 & 20 May 2012

Dr S Rajasekaran

- Current Trend in Surgical Management of T B Spine
- Minimally Invasive Surgery of Spine Pros and Cons

6TH National Congress of Indian Society of Hip & Knee Surgeons, Hyderabad, April 2012

Dr S Rajasekaran

- Establishing a Bone Bank

Current Concepts in Trauma 2012, Hotel Maurya, Patna, Bihar, 23-25 March 2012

Dr S Rajasekaran

- Management of Polytrauma – Beyond the Golden Hour
- Controversies in management in spinal injury

Annual Conference of Orthopaedic Surgeons of Andhra Pradesh (OSSAPCON 2012), GSL Medical College & General Hospital, Rajahmundry, Andhra Pradesh, 9-11 March 2012

Dr S Rajasekaran

- Management of Compound Fracture of Tibia

Annual Conference of Association of Spine Surgeons of India (ASSICON), New Delhi 2012

Dr S Rajasekaran

- Lumbar Spine Research and the role of ISSLS
- Modern Methods of Imaging of Discs
- Research – Its Conduct, Misconduct and the role of Scientific Bodies
- President's Lecture : Let's Pledge to Give
- Role of Navigation in Challenging Cervical Spine Surgery

Dr Ajoy P. Shetty

- Imaging in spinal canal stenosis
- Growth rod techniques in scoliosis

Dr. Vijay R Tubaki

- Results of Direct Repair of Type 2 Hangman Fracture Using Iso-C3D Navigation: 20 Cases

Trauma masters meet, Mumbai, Jan 22nd 2012

Dr. J. Dheenadhayalan

- Interesting case presentation on femoral neck fracture

45th Annual Conference of Tamilnadu Orthopaedic Association(TNOACON 2012), Scudder Auditorium, Christian Medical College, Vellore, February 2012

- Degenerative Lumbar Spinal Stenosis – Surgical options
- Results of Direct Repair of Type 2 Hangman's Fracture Using Iso-C3D Navigation-20 cases

Dr. J. Dheenadhayalan

- Radiological Correlation to the Functional Outcome In 3 and 4 Part Proximal Humerus Fracture. Managed With Indirect Reduction & Fixation With Plate And Screws.
- Management Of The Complex Distal Femur Fracture

Mangalore orthopaedic course, June 2012

Dr Ajoy .P. Shetty

- Spondylolisthesis - general principles & management
- Bone bank

45th Annual Conference of Tamilnadu Orthopaedic Association(TNOACON 2012), Scudder Auditorium, Christian Medical College, Vellore, February 2012

Dr Ajoy .P. Shetty

- Global reconstruction of TB spine by all posterior approach

Dr C S Vishnu Prasath

- Patterns of disc degeneration in patients with back pain



Dr Ajoy Prasad Shetty



Dr. P. Dhanasekara Raja



Dr Ramesh Perumal

National Presentations

45th Annual Conference of Tamilnadu Orthopaedic Association(TNOACON 2012), Scudder Auditorium, Christian Medical College, Vellore, February 2012

Dr. Ramesh Perumal

- The forces that force the talus out- cadaveric help to unlock the door

Symposium on Spinal TB KMC Mangalore, 2012

Dr Ajoy .P. Shetty

- Chemotherapy of tuberculosis spine
- Global reconstruction in TB spine
- Surgical pathology of TB spine

KMCH Update – January, 2012

Dr Ajoy .P. Shetty

- Radiology of lumbar spine
- How to read Lumbar Spine MRI
- Positioning of a spine patient

2nd AO Trauma India conference ,Chennai, april , 6th – 8th 2012

Dr. J. Dheenadhayalan

- Outcome In 3 and 4 Part Proximal Humerus Fracture Managed With Indirect Reduction & Fixation With Plate And Screws

AO Principles Course, Hyderabad, July 2012

Dr Ajoy .P. Shetty

- Upper cervical spine injuries
- TB of the spine
- Evaluation of pain generators

Annual Conference of Gujarat Orthopaedic Association(GOACON 2012), Mirasol Lake Resort, Daman, 3-5 February 2012

Dr S Rajasekaran

- Decision Making in Open Injuries of Tibia

AO Trauma principles course, Kolkata, May 16 -18, 2012

Dr. J. Dheenadhayalan

- Relative stability – Extramedullary techniques
- Management of open fractures
- Subtrochanteric fractures



Dr Ramesh Perumal



Dr. S.R. Sundararajan



Dr. A. Devendra

KOACON 2012 February at Belgaum, Karnataka.

Dr. Vijay R Tubaki

- Surgical Approach in the Management of Resistant Pyogenic Spondylodiscitis: Analysis of Radiological and Functional Outcome

31st Annual Conference of Kerala Orthopaedic Association(KOACON 2012), Shakthi Auditorium, Arattuvazhi (Meluvallil Auditorium Complex), Alappuzha, 27-29 January 2012

Dr S Rajasekaran

- Discectomy
- Controversies in Spinal Injuries

36th Annual Conference of Odisha Orthopaedic Association(OOACON 2012) Great Valley Club, MCL Talcher, 14th to 15th January 2012

Dr S Rajasekaran

- Oration: (PT Rao Oration) – Can India lead the World in Orthopaedic Academics
- Ganga Hospital Score in the Management of Open Injuries
- Childhood Spinal Tuberculosis

Indian Orthopaedic Innovations & Bone and Joint Conclave 2011, Delhi, 6th Dec 2011

Dr S Rajasekaran

- The Road Ahead and Future Plans

IOACON 2011, Noida- 6th to 11 December 2011

Dr S Rajasekaran

- Symposium on TB Spine – Principles of Deformity Correction in TB Spine
- Hunterian Lecture – Growth modulation in Childhood Spinal Deformities
- Subspeciality meeting of ASSI – Management of Extension Injuries in the subaxial cervical spine

Dr. J. Dheenadhayalan

- KT Dholokia IOA CME 2011 – Management of complications in proximal tibia fractures
- The evidence on fixation vs. Replacement for intertrochanteric fracture

National Presentations

Dr Ajoy .P. Shetty

- Disc prolapse results from endplate failure rather than rupture of annulus fibrosus - comprehensive clinical, radiological, histopathological and intraoperative microscopic analysis of 147 lumbar disc herniations
- Clinical algorithm for acute lumbar disc prolapse
- Post traumatic cervical instability

Dr Sudhir G

- Ultrastructural changes in intervertebral discs due to altered mechanical loading – an electron microscopic analysis using scoliotic discs as biologic model,

Baroda Ortho Meet, December 2011

Dr Ajoy P. Shetty

- Cervical extension injuries
- Decompression in thoracolumbar fractures, when & how
- Post Operative Spine Infections
- Percutaneous augmentation of osteoporotic fractures
- Far Lateral Disc
- Management of TB Spine

ICS, Chennai, August 2011

Dr Ajoy .P. Shetty

- Role of Interbody fusion in degenerative lysis

CME Kerala Orthopaedic Association, Trichur-2011

Dr Ajoy .P. Shetty

- Dilemmas In Disc Surgery
- Farlateral Disc
- Fusion In Lumbar Disc Disease

All India IMA Meet, Erode, 11th, November, 2011

Dr Ajoy .P. Shetty

- Recent trends in the management of spinal trauma

OASISCON 2011, Hotel Taj Krishna, Hyderabad, 26 August 2011

Dr S Rajasekaran

- Navigation in Orthopaedic surgery: the present and its future

Dr. J. Dheenadhayalan

- How I manage Neer's 3 / 4 part fracture in a 45 year old man
- Interesting case discussion

AO Synthes Symposium in fractures around knee and ankle 2011, Delhi, Sept 24-25, 2011

Dr. J. Dheenadhayalan

- Fibular fracture fixation in pilon fractures
- Supracondylar femur fractures – Nailing vs. Plating
- Weber c fractures

CME on current concepts in elbow disorders SPOT Hospitals 2011, Chennai, September 18th 2011

Dr. J. Dheenadhayalan

- Side Swipe injuries
- Live surgical demonstration of fixation of intercondylar fracture of humerus

CME on recent advances in orthopaedics 2011, Dharmapuri. September 29th 2011

Dr. J. Dheenadhayalan

- Modern trauma management

Instructional Course in Spine Mahalipuram, Chennai, 12-14 August 2011

Dr S Rajasekaran

- Controversies in the management of spinal trauma
- Acquired and degenerative scoliosis in adults- Surgical management

Sri Sathya Sai International Orthopaedic Conference in Pelvis and Lower Extremity Trauma, Puttaparthi, July 23 & 24, 2011

Dr S Rajasekaran

- Beyond Gustilo Classification - Ganga Hospital Score in deciding salvage and reconstruction
- Guest lecture: Beyond the Golden hour-silver day in the management of polytrauma
- Large Bone Defects of Tibia- Comparison of L.R.S. vs Free Fibular Graft



Dr. J. Dheenadhayalan



Dr. S.R. Sundararajan



Dr Ajoy Prasad Shetty

National Presentations

Dr Ramesh Perumal

- Does the timing of intervention influence the Avascular necrosis in Talar neck fractures ???

Dr Srikanth KP

- Post-traumatic bone loss – Role of LRS and Free fibula graft

Arthroscopy Sports Medicine meeting held in Jaipur 2012

Dr S R Sundararajan

- Single bundle vs Double bundle vs Tibial inlay PCL Reconstruction. what is your preference and why?

Indian foot and ankle society meeting in Chennai- 2011

Dr S R Sundararajan

- Tips and Tricks in the management of Talar neck Fractures

AO Advanced Course, Chennai, March, 2011

Dr Dheenadhayalan

- Fixation dilemma in open fractures
- Deal with difficult proximal humerus fractures
- Compartment Syndrome

Trauma society of India AT Kodaikanal April 2011

Dr Dheenadhayalan

- Scoring in polytrauma patient

OASIS ICL 2011 Madurai, June – 26th, 2011

Dr Dheenadhayalan

- Septic arthritis in adults

Lakeshore Trauma update, Cochin, June - 2011

Dr Dheenadhayalan

- Approach for fixation of proximal humerus
- MIPPO technique and indirect reduction tips and tricks
- Common associated injuries and its management

Update in Musculoskeletal Radiology, July 16 & 17, 2011, Ganga Hospital, Coimbatore

Dr S Rajasekaran

- Degenerative Lumbar canal Stenosis
- DTI (Diffusion Tensor Imaging) & it's applications

Indian Academy of Regional Anesthesia, April 16 & 17, 2011, ITC Grand Central, Parel, Mumbai

Dr S Rajasekaran

- Can India lead in Academics

Ortho Clinics, Live WEBCAST on Spine Fractures, Mumbai, Feb 19, 2011

Dr S Rajasekaran

- Controversies in the Management of Spinal Fractures'

Tamilnadu Orthopaedic Association Conference (TNOACON) 2011, Madurai, Feb 11-13, 2011

Dr S Rajasekaran

- Principles of Surgical Management in spine
- Surgery for Spinal Tuberculosis – Anterior or Posterior approach
- Spinal Deformity Correction

Dr. J. Dheenadhayalan

- Minimal invasive surgery - distal tibia
- An innovation for perfect docking in bone transport for grade III B tibial fractures with bone loss

Dr Ajoy .P. Shetty

- Management of healed tuberculosis with deformity
- Minimally Invasive Pelvic Fracture Fixation, Role of CT Based Pelvic Morphometry and Use of Ball Probe

Dr. S.R. Sundararajan

- Neglected Patella Tendon Ruptures Reconstruction with Hamstrings Graft



Dr Srikanth K P



Dr. N. Rajkumar



Dr Gowri Shankar

National Presentations

INDO-US Ankle&Foot Course Ganga Hospital 2011 Dr Dheenadhayalan

- Open talar dislocation

Dr S R Sundararajan

- Talar fractures
- Pantalar arthrodesis

Musculoskeletal Radiology conference held in Ganga Hospital, Coimbatore in July 2011 Dr Dheenadhayalan

- How imaging influences the treatment plans in shoulder surgery

Dr Rajkumar Natesan

- Imaging in painful joint replacement Surgery

Sathyasai international orthopaedic conference on "Pelvis and Lower extremity trauma" Puttaparthi, July 22 – 24, 2011 Dr Dheenadhayalan

- Beyond the Golden hour – The Silver Day
- Beyond the Gustillo scoring – Ganga hospital score in deciding salvage and reconstruction

Prof. TKS CME 2011 , Tirupur, July 31st 2011 Dr Dheenadhayalan

- Proximal humerus fractures – How I Do It

CME on Paediatric Hip on 6th March, 2011 at KMC Mangalore Dr K Venkatadass

- Surgical Approaches to Paediatric Hip.
- Interesting Cases in Paediatric Hip.

GOACON (Gujarat Orthopaedic Association Conference) 2011), Mount Abu, Feb 4-6, 2011 Dr S Rajasekaran

- Ganga Hospital Trauma Score
- Pediatric Koch's Spine – at risk signs
- Assessment of spinal cord tract integrity by a novel method of Diffusion Tensor Imaging

Traumacon 2011, Mumbai , Aug 12-15, 2011 Dr Dheenadhayalan

- Wave Plate – Patella fracture fixation
- Austin Moore prosthesis removal
- Classification of tibial plateau fracture
- Complication of proximal tibial nailing
- Orthofix in primary bone loss deformity correction

Silver Jubilee Annual Meeting of the Association of Spine Surgeons of India (ASSICON 2011), Mumbai, Jan 27-30, 2011 Dr S Rajasekaran

- Presidential Oration : Can India lead the world in Academics & Health Care Delivery
- Management of giant cell tumor of the spine
- Planning deformity correction in post-tubercular kyphosis
- Diffusion tensor imaging – future of spinal imaging
- All pedicle screw construct Vs Hybrid construct for posterior surgery for AIS
- Workshop: Nerve integrity monitoring
- Dr S Rajasekaran participated in this workshop on complete & safe spine solutions

Dr Ajoy .P. Shetty

- Patient factors in failed disc surgery.
- Lumbar canal stenosis- role of intermnal decompression.

CME-Shoulder update 2011, Madurai, Nov 2011 Dr. J. Dheenadhayalan

- Management of Neer's Grade 3 and 4 proximal humerus fractures

Neuro spine surgeons of India (NSSI), Chennai. Dr G Balamurali

- Qualtification of neuronal injury in cervical myelopahty using diffusion tensor imaging (DTI).

Neuro Spine Surgeons of Association (NSSA) conference Chennai 13-16 September 2012 G Balamurali

- Anterior thoracic foraminotomy through mini-thoracotomy for the treatment of giant thoracic disc herniations.
- The presence of undiagnosed cervical myelopathy in patients referred for surgical evaluation of lumbar stenosis.
- Minimally invasive posterior cervical discectomy for cervical radiculopathy: indications and clinical results.
- Adjacent level cervical disc revision surgery – techniques and outcomes.
- Minimally invasive microsurgical resection of intradural spinal tumours using a tubular retraction system.
- Posterior C1 Osteosynthesis for Jefferson fracture - a technical note.

Post graduate teaching programme at Coimbatore Orthopaedic Society Meeting, 2011 Dr Dhanasekaraja

- "Principles & Steps of Total knee replacement"
- "Infected Total Hip: A treatment Algorithm"

Orthopaedic Society meeting, Salem, Nov 2011. Dr Dhanasekaraja

- "Role of Trenaxamic acid in joint replacement"
- "Soft tissue balancing in total knee replacement"

Ganga Operative Arthroplasty Course, 19-22nd, May 2011, Ganga Hospital, Coimbatore. Dr Dhanasekaraja

- Conducted a panel discussion on " Revision hip replacement"

POSICON 2011, Chandigarh, India Dr K Venkatadass

- Ultrastructural changes in intervertebral discs due to altered mechanical loading – an electron microscopic analysis using scoliotic discs as biologic model, BEST PAPER AWARD.

Day to day Paediatric Orthopaedic CME & IOA Abbott workshop, 1st & 2nd Oct 2011, Madurai Dr K Venkatadass

- How to assess and do Pirani scoring?.
- Management of supracondylar fractures with absent pulse and/or nerve injury.
- Physeal injuries - management of acute fractures.
- How do I manage? 12 year old with grade 2 SCFE
- Workshop on TEN Nailing.

Indian Society of Anaesthesiologists (ISA) National Conference, Mumbai, December 2011 Dr J Balavenkat

- Improving Safety and Precision in Regional Anaesthesia
- Sevoflurane and Day Care Anaesthesia
- Golden Hour Management of Polytrauma
- Current Issues in Resuscitation
- Anaesthesia for Major Spine Surgeries
- Polytrauma Management: Critical Issues

National Conference of Academy of Regional Anaesthesia of India, April 2012 Dr J Balavenkat

- Essentials of Regional Anaesthesia

Mumbai anesthesia society conference, MASCON, Mumbai, October 2012 Dr J Balavenkat

- Pain Barrier: A new Initiative
- Recent advances in Nerve Localisation
- LAST: Current treatment

GISACON, Gujarat State Conference, Oct. 2011 Dr J Balavenkat

- Recent Advances in Regional Anaesthesia
- Sevoflurane: Is it the Ideal Anaesthetic Agent
- Live Workshop in Regional Anaesthesia



Honourable Justice P Sathasivam, Chief Postmaster General Rameshwari Handa, Honourable Minister for State
Shri Gandhiselvan & Dr S Rajasekaran during the release of special cover for Bone & Joint Day
on 4th August 2012.



Dr Vijay Tubaki



Dr K Venkatadass



Dr C S Vishnu Prasath

Visiting Professors

Every year, eminent Professors from all over the world are invited as Visiting Professors. The distinguished Professors deliver lectures, conduct ward rounds and participate in surgical demonstrations in their areas of specialization. This gives an opportunity for all staff members of the team to update themselves and learn new tips for better results.



Visiting Professor 2012
Prof. K. Daniel Riew, USA

- ✦ Mildred B. Simon Distinguished Professor of Orthopedic Surgery.
- ✦ Professor of Neurological Surgery.
- ✦ Chief of Cervical Spine Surgery, Washington University School of Medicine and Orthopedics.
- ✦ Director, Orthopedic-Rehab Institute for Cervical Spine Surgery and the current
- ✦ President of Cervical Spine Research Society (CSRS).



Visiting Lecturer 2012
Dr. Emiliano Vialle, Brazil

- ✦ Deformity Correction Spine Surgeon, Curitiba, Brazil.
- ✦ Fellowship Program Coordinator for Spine Surgery Group
- ✦ Cajuru Hospital, Brazil, Research Officer and Lumbar Degenerative Expert Group Member, AOSpine

Dr Riew and Dr Vialle visited the hospital in September 2012 and shared their wealth of knowledge and experience in spine surgery. They actively participated in out-patient clinic discussions, operating theatre work and visited patients in the wards. Dr Riew, who is an expert in cervical spine surgery demonstrated complex live surgeries of the cervical spine to an exclusive audience of spine surgeons from around the country and also delivered lectures. The technology of Cervical nerve root injection techniques was demonstrated by Dr Vialle.

Dr Riew's Live Surgical Demonstration



International Visitors

The Japanese Society for Spine Surgery and Related Research



Dr Shoji Fukuta, Japan
I am very pleased to having sophisticated experience and thank you for your kindness and hospitality



Dr Takashi Tsuji, Japan
Thank you for your great kindness and academic experience. I will never forget this experience forever.



Dr Kota Watanabe, MD, Keio univerisy, Japan
I was very impressed not only with medicine here but also your attitude for medicine. I want to come back in the near future



Dr Hideaki Nakajima, Fukui university, Japan
I am very happy to have the chance of visiting Ganga Hospital. It is very impressive for me to see and discuss various cases. Thank you for your kindness.

International Fellows



Dr Nick Russell, Australia
Thank you for a four week observership in spine and Arthroplasty surgery. Amazing pathology by gifted surgeons. A great learning experience



Dr Franke Jorg, Germany
I was very impressed by your facility and passion about caring for your patients. Many thanks for hosting me.



Dr Coen Jaspars, Netherlands
Thank you for the extreme warm and hospitable stay. It was a very useful experience to learn the differences and similarities of our health systems. The level of knowledge and skill is extremely high and I am curious where the level will be in five years time. Thanks again.



Dr Chien-Wen Liew, Australia
Thank you for the great experience. This place is a temple of medicine.



Dr Taiwo Aofolajuwonlo Adejumobi, Nigeria
It was a very fulfilling fellowship programme Had the opportunity for hands-on. The Consultants were all dedicated to work and shown extreme professionalism in the discharge of their work. Excellent & memorable experience.



Dr Zhang Chi, China
Thanks to Dr S Rajasekaran for providing me such a wonderful opportunity to study here. I really learnt a lot not only surgery techniques but also your working attitude and living philosophy. The three months will be one of the most beautiful fragments of my memory.



Prof David Marsh
UK



Prof Nenad Tajsic
Norway



Dr J C Peerbooms
Australia



Prof Paul Taylor
Australia



Dr. Rohit Arora
Austria



Dr Taiwo Aofolajuwonlo
Adejumobi
Nigeria



Dr Harjanto Effendi
Indonesia



Dr Andre Kabulo
Congo



Dr Abraham Ajimzo
Anejukwo
Nigeria



Indian Orthopaedic Association
Presidential Theme Activity
'Knowledge is Power; Skill is Strength'

As a part of the Presidential theme activity short term fellowships were awarded to many young orthopaedic surgeons from all over the country. In our institution about 103 fellowships were awarded in various specialties.

Short Term Fellows under IOA, 2012

Dr. Thatavarthi Srinivasa Rao, Andhra Pradesh	Dr. Tapas Kumar Panigrahi, Orissa	Dr. Santosh Soni, Madhya Pradesh
Dr. Ch. V. Murali Krishna, Andhra Pradesh	Dr. Sakti Prasad Das, Orissa	Dr. Gopendra Singh Dixit, Madhya Pradesh
Dr. Pavan Kumar, Andhra Pradesh	Dr. Bikram Keshri Kar, Orissa	Dr. Fenil Doshi, Madhya Pradesh
Dr. B. Udaya Kumar, Andhra Pradesh	Dr. Muhammad Shahid, Rajasthan	Dr. Vinod Kumar H. Jain, Maharashtra
Dr. Ashok Kumar, Andhra Pradesh	Dr. Bharat Kumar, Tamil Nadu	Dr. Sameer Mansukhani, Mumbai
Dr. Rama Raju, Andhra Pradesh	Dr. Anil Kumar Gupta, Uttar Pradesh	Dr. Gurudip Das, Mumbai
Dr. D. B. Aditya Somayaji, Andhra Pradesh	Dr. Om Prakash Gupta, Uttar Pradesh	Dr. Nitu Borgohain, Assam
Dr. Chandan Soni Sinha, Bihar	Dr. Bipinjit Singh Saluja, Uttar Pradesh	Dr. Muduppu partha sarthy, Andhra Pradesh
Dr. Sanjay Panda, Bihar	Dr. Sujit Narayan Nandi, West Bengal	Dr. Eswar Babu, Andhra Pradesh
Dr. Prasoon Anand, Bihar	Dr. Abhijit Bandopadhyay, West Bengal	Dr. Chandrashekar, Tamil Nadu
Dr. Sudhir Mahapatra, Delhi	Dr. Kunal Shah, Gujarat	Dr. Shashidhar Reddy, Karnataka
Dr. Hari Menon, Gujarat	Dr. Bhadresh Rathod, Gujarat	Dr. Shreepad Kulkarni, Karnataka
Dr. Sriji Padmanabh, Karnataka	Dr. Pulak Sharma, Delhi	Dr. S. N. Sarraf, Bihar
Dr. K. S. Rao, Karnataka	Dr. K. C. Gagal, Rajasthan	Dr. Yakshat Ramanbhai Shah, Gujarat
Dr. Mohammad Niaz, Karnataka	Dr. Harish Murthy, Karnataka	Dr. Madan Ballal, Karnataka
Dr. Ishwara Keerthi, Karnataka	Dr. Virendra Bhasme, Karnataka	Dr. Nargesh, Rajasthan
Dr. Shyam Sunder Bhat, Karnataka	Dr. Anil Rathi, Rajasthan	Dr. John Ebnezar, Karnataka
Dr. Joji Krishnan, Kerala	Dr. Kishore Meragani, Karnataka	Dr. Ashok Nayak, Karnataka
Dr. Sreejith Krishnan, Kerala	Dr. O. P. Lakhwani, Delhi	Dr. G. Srinivas, Andhra Pradesh
Dr. Shiby John, Kerala	Dr. Vikram Ojha, Rajasthan	Dr. N. Ramesh, Andhra Pradesh
Dr. Shameer Ali. T. P., Kerala	Dr. Shankar E., Karnataka	Dr. Satish Chandran, Kerala
Dr. Santosh Kumar, Kerala	Dr. Najeeb Drabu, Kashmir	Dr. Joji Krishnan, Kerala
Dr. Krishna Kumar, Kerala	Dr. Aju Bosco, Tamil Nadu	
Dr. Girish Gopinath, Kerala	Dr. Pabitra Kumar Sahoo, Orissa	



Major Courses & Conferences 2011-2012

Ganga Operative Arthroplasty Course 2011 May 20 - 22, 2011



Ganga Operative Arthroplasty Course was held from May 20 to May 22, 2011. The conference was well attended by about 300 national and international delegates. The highlight of the course was the 20 live surgical demonstrations. There were different modules for basic arthroplasty, complex arthroplasty and revision arthroplasty. The course content was well appreciated by all the delegates and recognised by MCI for CME credits..

National Faculty

Dr. Dhanasekararaja	Dr. Prof. Devadoss	Dr. Sancheti. K.H.
Dr. Guruva Reddy	Dr. Raj Kumar	Dr. Sanjay Pai
Dr. H. Bende	Dr. Rajesh Malhotra	Dr. Sharan Patil
Dr. Jacob Varghese	Dr. Ram Prabhoo	Dr. SKS Marya
Dr. NS Laud	Dr. S. Rajasekaran	Dr. Vijay Bose

International Faculty



Dr Alfred J Tria
USA



Dr Phil Hirst
UK



Dr Luca Marega
Italy



Dr Jens Boldt
Germany



Dr K S Sivananthan
Malaysia



Dr Michael O' Sullivan
Australia



Dr Graham Mercer
Australia



Dr Jegan Krishnan
Australia

Major Courses & Conferences 2011-2012

Ganga Operative Spine Course 2011 June 30 - July 3, 2011



The Ganga Operative Spine Course 2011 was held from the 30th of June to the 3rd of July 2011. The course had about 350 delegates from India and abroad. There were 22 live surgical demonstrations by eminent National and International faculty. There was wide range of cases starting from basic spine surgery to complex deformities of the spine. The course was well appreciated by all the delegates. The course was recognised by MCI for CME credits.

National Faculty

Dr Abhay Nene	Dr Ajoy Prasad Shetty	Dr Arvind Jayaswal
Dr Atul Goel	Dr Gautam Zaveri	Dr Raghava Dutt M
Dr Ram Chadda	Dr S Rajasekaran	Dr Sajan Hegde
Dr Samir Dalvie	Dr Satish Gore	Dr Saumyajit Basu
Dr Shekhar Y Bhojraj		

International Faculty



Dr Luiz Roberto Vialle
Brazil



Dr Stephen Lewis
Canada



Dr Jacob Buchowski
USA



Dr Masato Tanaka
Japan



Dr Munish Gupta
USA



Dr Andreas Schmitz
Germany



Dr Cody Bunker
Denmark



Dr Sang-Hun Lee
Korea





Major Courses & Conferences 2011-2012

Management of Severely Injured Limbs July 20 to 22, 2012



The Ganga Orthopaedic Trauma Conference 2012 on "Management of Severely Injured Limbs" was a unique course which combined lectures, symposia, case discussions and also surgical demonstration of complex trauma problems. Experts in the field from all over the world were faculty members and there were more than 250 delegates from all over the country and also the neighbouring countries. On the eve of the course, faculty members who were also members of IMOT Trial had a protocol meeting where the protocol for IMOT trial was discussed in detail

National Faculty

Dr Amit Ajgaonkar
Dr Dheenadhayalan
Dr Dilip Tanna
Dr Hari Venkatramani

Dr Rajasekaran
Dr Shantharam Shetty
Dr John Mukhopadhyaya
Dr Raja Sabapathy

Dr Siva Shankar
Dr S.R Sundararajan
Dr Sunil Kulkarni
Dr Sushrut Babhulkar

International Faculty



Prof Alexander Hofmann
Germany



Prof Michael Blauth
Austria



Prof Nenad Tajsic
Norway



Prof Venu Kavarthapu
UK



Prof Peter Giannoudis
UK



Prof J.S. Thambiah
Singapore



Prof Hans Husum
Norway



Prof Peter Bates
UK

Major Courses & Conferences 2011-2012



Indo-US Advances & Techniques in Foot & Ankle Surgery January 14 to 16, 2011



Selene G. Parekh
USA



Judith Baumhauer
USA



Jonathan T. Deland
USA



Nirmal C. Tejwani
USA



TV Raja
Chennai, India



Mandeep Dhillon
India



Nikesh Shah
Vadodara, India



Rajiv S. Shah
Vadodara, India



Amarnath
India



Malhar Dave
Vadodara, India



Update in Spine & Musculoskeletal Radiology July 16 & 17, 2011



Dr. Anbarasu



Dr. Boopathi V.



Dr. Chandramohan



Dr. Ilayaraja



Dr. Mathew Cherian



Dr. Kannan



There is a huge demand for bone graft at our hospital due to the enormous number of polytrauma and tumor patients who need complex reconstructive procedures..

The Tissue Bank at the Department of Orthopedics at the Ganga Hospital was launched with the technical assistance from Tissue Bank at the Tata Memorial Hospital Mumbai. Located within the hospital premises, it is a self-funded, non-profit tissue bank aimed at servicing the allograft needs of the department. The bank follows International Atomic Energy Agency (IAEA) standards followed by most of the Tissue banks in the world.

Dr. P. Dhanasekara Raja has received the Degree of Diploma in Tissue banking from National University of Singapore. Dr. Devendra is the Scientific Officer in charge of preparation, processing, storage and transportation of the allografts. He has received training in the Tata Memorial Bone Bank in Mumbai and has also undergone training in the National University, Singapore.

What are the advantages of Tissue Bank?

- Avoids the disadvantages of surgical prodeure for harvesting autograft like blood loss, pain, increased operating time.
- Avoids sacrifice of the patient's normal structures.
- Provides vast quantity and morphology of allografts.

Allografts Processed at Tissue Bank			
Type of Graft	2010	2011	2012
Femoral heads	67	117	78
Tibial slices	45	144	37
Strut Grafts	15	20	10



Dr. Devendra using the Wet Laboratory with ultrasonic cleanser, Incubator & Water Shaker bath



Dr. P. Dhanasekara Raja receiving the Diploma in Tissue Banking Certificate from Prof Aziz Nather, Director of Tissue Bank, National University of Singapore.



Fresh frozen allografts: Long bones with triple wrap and bone slices packed in PE boxes are stored after gamma irradiation



Grade IIIB Open comminuted fracture of distal femur with 13cm bone loss treated by single stage reconstruction with fibular strut graft and autograts.



Photograph taken during the inauguration of the Ganga Spine Microsurgery Training Centre in January 2008.



Dr Ajoy Shetty guiding trainees at the spine microsurgery wet lab

Ganga Spine Microsurgery Training Centre was inaugurated by Prof. Gunnar Andersson, Chairman, Dept. of Orthopaedic Surgery, Rush University Medical Centre, USA in January 2008. To transfer the knowledge and experience of the unit, the spine department of Ganga Hospital in collaboration with Carl Zeiss started a unique microsurgical training centre equipped with a permanent wet lab utilizing the latest Zeiss operating microscopes and high quality surgical instruments, which will be first of its kind in the world.

The purpose of the course is to establish and strengthen the foundation of microsurgical skills in spine surgery. The course has two modules. In the clinical training module, the trainee spends two days in the operating theatre assisting and observing spinal microsurgeries along with other spinal instrumentation surgeries. In the lab module, the trainee is given hands-on training in the wet lab. The course is designed to benefit practising orthopaedic surgeons, spine surgeons and neurosurgeons by teaching them the nuances and techniques of basic microsurgical procedures like lumbar microdiscectomy, micro decompression, anterior cervical microdi scectomy, intra dural surgeries and repair of dural tears.

Trainees in the past four years..

International

- Dr Abdul Halim Yusof, Malaysia
- Dr Abu Baker, Bangladesh
- Dr Ahmed Tajuddin, Abdullah, Malaysia
- Dr Ali Saadun Al Khaykany, Iraq
- Dr Anukul Kumar Deb Goswami, UK
- Dr Coen Jaspers, Netherlands
- Dr David Kilonzo, Kenya
- Dr Harjanto Effendi, Indonesia
- Dr Khoo Eng Hooi, Malaysia
- Dr Kishore Kumar M, Muscat
- Dr Lim Phaik Gan, Malaysia
- Dr Paul M. Atienza, Philippines
- Dr Ramachandran Arumugham, Malaysia
- Dr Shree Kumar Dinesh, Singapore
- Dr Tushar Dholakia, Dubai

National

- Dr Abdul Jaleel T K,Kerala
- Dr Ajay Krishnan, Surat
- Dr Akshay Jain, Indore
- Dr Antony Joseph Thoppil, Kerala
- Dr Arul Durai Arasu, Dindigul
- Dr Ashok D, Trivandrum
- Dr Ashok M Ghodke, Mumbai
- Dr B V R N Varma, Vizag
- Dr Bangari Swamy, Karimnagar
- Dr Bikram Kar, Cuttack, Orissa
- Dr Chandrappa M, Bangalore
- Dr Gautam Prasad, Mumbai
- Dr Gowrishanker Swamy LG,Bangalore
- Dr I Satish Raju, Vizag
- Dr Jay Deep Ghosh, Kolkatta
- Dr Jim F Vellara, Thrissur
- Dr K Sambasiva Rao, Tenali
- Dr K. Shanmugasundaram, Pollachi
- Dr Karthikeyan R, Coimbatore
- Dr M Narayana Reddy, Chennai
- Dr Madan Temker D, Bangalore
- Dr Mallikarjuna Reddy, Karnataka
- Dr Mathew P Daniel, Kerala
- Dr Muthuraj, Nagercoil
- Dr N.Dheen Mohamed Ismail, Chennai
- Dr Natarajan S, Erode
- Dr Natesh J, Bangalore
- Dr P Gnanaprakash, Coimbatore
- Dr P P Sunil, Thrissur
- Dr Pankaj G Gujar, Maharashtra
- Dr Pankaj Kandwal, Mumbai
- Dr Rahul Singh, Saharanpur
- Dr Rajeev Naik, Bangalore
- Dr Rajendra U Mehta, Rajkot
- Dr Rajesh Khanna G, Chennai
- Dr Rajiv Shah, Vadodara
- Dr Ramanand Mishra, Gorakhpur
- Dr Rashid A S, Kerala
- Dr Ravi K, Kerala
- Dr Renjit Kumar J, Kerala
- Dr S Jagadeesh Babu, Hyderabad
- Dr Sachithanandam V, Erode
- Dr Saheel Maajid, J & K
- Dr Sandeep Surana, Ahmednagar
- Dr Saurabh Chaudhary, Salem
- Dr Shameer Ali.T.P, Kerala
- Dr Shanmugasundaram P, Chennai
- Dr Sudheer U, Kerala
- Dr Sundararajan N D, Gopichettipalayam
- Dr Sunil Kumar H,Bangalore
- Dr Thiraviam T, Nagercoil
- Dr Tushar J Deore, Pune
- Dr V.Surya Prakash Rao, Hyderabad
- Dr Venugopal S, Bangalore
- Dr Veushj Sharma, Punjab
- Dr Vignesh Jayabalan S, Chennai
- Dr Vishal Prakash Thakur, Mumbai



Prof. S. Rajasekaran
ISSLS President



President - The International Society for the Study of the Lumbar Spine (ISSLS), 2012.

Dr S Rajasekaran was the President of the ISSLS for the year He presided over the society during the year of SpineWeek 2012 in Amsterdam and delivered the Presidential Oration on the topic "Publish to Flourish – Are we corrupting Science?"

(youtube link : <http://www.youtube.com/watch?v=NIAY3-xYOQ4>)



Dr Rajasekaran with the six Past Presidents of ISSLS (from left to right) - Dr Marek Szpaski, Dr Howard Ann, Dr Rajasekaran, Dr Kaneda, Dr Edward Hanley and Dr Margreta Nordin and Dr Scott Boden at the ISSLS Banquet, Amsterdam.



President - Association of Spine Surgeons of India (ASSI) 2008 - 2012



Prof. S. Rajasekaran
ASSI President

Dr S Rajasekaran was the President of the ASSI for two terms (from 2008 to 2012). During this period, many academic and research activities were started in the association and he was responsible for introduction of the following:

- ◆ ASSI Awards for Basic Science and Clinical Science Research
- ◆ ASSI Young Investigator Award
- ◆ ASSI Best Publication Award
- ◆ ASSI Textbook of Spinal Infections and Trauma
- ◆ Indian Spine Surgery Registry
- ◆ Two year ASSI Spine Surgery Fellowships



Prof. S. Rajasekaran
President



President - Indian Orthopaedic Association 2011 - 2012

Dr Rajasekaran was the President of IOA for the year 2012. His Presidential Theme for the year was ' Knowledge is Power, Skill is Strength'. Under the Presidential banner, the following activities were conducted:

1) 136 short term internal fellowships in the country

A record of 136 fellowships were conducted which allowed surgeons from all parts of the country to travel to centres of excellence of their choice to upgrade their knowledge and skills.

2) Bone & Joint Day Declaration

August 4, the day the IOA Charter was signed was declared as the Bone & Joint Day and a special day cover was released by the Department of Posts and Telegraphs. To commemorate the occasion, members of IOA conducted one surgery free of charge. A total number of 6542 surgeries were done carrying a value of free surgeries of nearly 22 Crores. In addition, numerous health camps and public education activities were conducted across the country.

3) Public Interest Litigation to increase Road Safety

Dr S Rajasekaran, as President of IOA, challenged the Government by a PIL requesting for 11 prayers which will improve road safety and also the care of the road accident victims. The petition was accepted on 4th of September and hearing is going on.

'Pledge to Give' Programme of IOA

**Each Surgeon,
One surgery Free**

**Total - 6652
Surgeries free
Total Value
22.5 crores
(US\$ - 4.5million)**



Stronger Bones for
a Stronger Nation



Cabinet Minister Shri Ghulam Nabi Azad with Prof. S. Rajasekaran, President of IOA with the model of the Special Cover to be issued on the Bone and Joint Day.



Honourable Justice P Sathasivam and the Chief Postmaster General Rameshwari Handa releasing the Special Day Cover on 4th August 2012. Honourable Minister for State Shri Gandhiselvan was the Guest of Honour for the event.



Treasurer and Board member SICOT

SICOT – Treasurer 2012-15

Dr Rajasekaran will be the Treasurer and the Board of Director for SICOT. He will also be the Scientific Committee Chairman for the Spine Section of the Society.



President – Tamilnadu Orthopaedic Association

The Tamil Nadu Orthopaedic Association (TNOA)

Dr Rajasekaran was the President of the Tamilnadu Orthopaedic Association for the year 2012.

Secretary, Association of National Board Accredited Institutions

ANBAI, is an association formed to promote and integrate the academic activities and interests of the National board institutions in 2011. Dr Rajasekaran is the Founder Secretary of the Association till date.



Indian Orthopaedic Association - Executive positions



Dr J Dheenadhayalan - Trauma Committee Member

He organised the IOA-Synthes Trauma Travelling fellowships for IOA Members under which 4 weeks of Intensive Training was provided in Basic & Advanced Trauma Surgery

Dr Ajoy Shetty - President's Theme Committee Member

Dr Ajoy Shetty was the Educational Fellowship Committee member and 126 successful short-term fellowships were completed by IOA members from various parts of the country under this programme.



Dr Venkatadass K - Website Committee Member

The IOA website was completely revamped and for the first time abstracts for the IOACON 2012 was submitted completely through the IOA website.

Dr Rishi Kanna - Road safety Committee Member

He helped in the preparation of the Public Interest Litigation for enforcing Road Safety in India



Dr J.Dheenadhayalan



Assistant Editor Indian Journal of Orthopaedics (IJO)

Editor - Journal of Tamilnadu Orthopaedic Association

Dr J Dheenadhayalan is the Editor of TNOA from

During his tenure, he has significantly improved the standard of the Journal and has also added an additional issue of the Journal last year.



Dr Ajoy P Shetty



Co-opted Member of executive committee of Spine Surgeons of India (ASSI)



Community Development Officer - AO Spine

Dr Ajoy Prasad Shetty is the Community Development Officer of the AOSpine, Indian Chapter from 2012 to 2014.



Dr Balavenkat



Founder and the serving President of Academy of Regional Anaesthesia of India AORA INDIA.



He is a National Executive Committee Member of
International Trauma Care, Indian Chapter.



Course Director, Aesculap Academy Regional Anaesthesia
Guidance Centre



Member of the National Resuscitation Guidelines Committee
Editorial Board Member of Indian Journal of Anaesthesia



Dr Dheenadhayalan handing over the First Copy of the TNOA Journal to Thiru R Vaithilingam, Minister for Urban Development and Housing



Dr Balavenkat Delivering the Presidential Address at AORA INDIA Conference.



Dr APJ Abdul Kalam seeing the patients being treated in SWASAM ward

8 Projects under 'SWASAM'

- Project Helpline - Free deformity correction surgeries
- "Help for the Hands in Need" Project
- UYIR – People's Movement against road accidents.
- Road Safety & First aid awareness programs for school children and college students
- Project 'Smile train'
- Ganga Hand Injury Support Group
- Educational activities under Ganga Orthopaedic Research & Education Foundation (GOREF)
- Rural Health programs.

" We are here to add what we can to life, not to get what we can from life "

At Ganga Hospital, we believe that our ability to make a difference extends beyond our hospital walls. Both as an organization and as individuals, we have been sensitive to the obligations in the society and actively been a partner in many social service projects. Each day, we're discovering new ways to make an impact in the lives of others and we have realized just how rewarding it can be for us also. Several projects have flourished and continue to grow from strength to strength.



Project SWASAM was inaugurated by former President of India Dr. APJ Abdul Kalam. 'SWASAM' is a constellation of several ongoing as well as new projects in the Orthopaedic and Plastic Surgery Departments which are started with the basic idea of helping our patients from low socio-economic status. These projects have brought in a 'breath of new hope and life' to hundreds of patients who are poor and not able to afford the benefit of modern treatment.

A People's Movement Against Road Accidents

In India, road traffic accidents are continuously on the rise. Approximately one death happens in India every 5 minutes and is expected to rise to one every 3 minutes by 2020. Road traffic accidents are most common in young adults between the ages of 25-40 yrs. A study by the hospital revealed that 60% of the accidents were caused by driver mistakes and non-adherence to road safety rules. UYIR is a project in collaboration between Ganga Hospital and Rotary Clubs of Coimbatore to increase public awareness and compliance to road safety rules. Many awareness meetings are periodically held with public transport drivers, policemen, school and college students about road safety rules and on first aid measures.



- 1,60,000 deaths per year on Indian roads
- Every five minutes, there is one death and 6 disabled persons



Demonstration of triage and treatment of mass casualty to school students under UYIR.



Articles published by "UYIR" in THE HINDU promoting Road safety issues

Life Without Disability Project

“RASTRA” – Rotary Aid for Spinal Treatment and Rehabilitation, is a combined project of Rotary club Saicity and Ganga hospital for patients with spinal cord injury. Spinal cord injury (SCI) causes a complete or incomplete paralysis of all function below the level of injury. Rehabilitation is the only hope to provide them with new skills to cope with their disability.



Rotary Aid for Spinal
Treatment &
Rehabilitation



Padmashri Thiru.D. R. Karthikeyan lighting the kuthuvilakku and inaugurating project Rastra on 20-10-2012



Dr APJ Abdul Kalam receiving a portrait from Dr G Balamurali, at the LEAD INDIA 2020 awareness program for the disabled.

The vast majority of spinal cord injury patients are from a low socio-economic background and more than 80% of them are males below the age of 40 who are the bread winners of the family. Vocational training is essential to get them back to a new or previous work.

Under RASTRA, patients undergo a structured rehabilitation program and vocational training over a period of 2 months to gain confidence and the skills needed for an independent living. With the help of vocational trainers they are taught new skills like drawing, painting, tailoring, computers, electronic repairs, front desk assistant etc.

This project will bear all the costs from the start of his rehabilitation until he is placed in a suitable job. He/she will be provided with the necessary calipers, exercise equipments, wheel chairs and other aids on discharge. The cost is estimated to be about Rs. 60,000 to 1 lakh per person with subsidized treatment from the hospital.



Patient undergoing rehabilitation and vocational training in art work.



Dr Ravindra Bhat
Chief Anaesthetist



Born on: 06-06-1963

Died on: 05-05-2012

To live in the hearts of those who love you
is never to die...