

Indian Journal of Neurotrauma

Official Publication of Neurotrauma Society of India



Editor-in-Chief

Deepak Agrawal

Department of Neurosurgery and Gamma Knife
All India Institute of Medical Science
New Delhi, India

Associate Editors

Kanwaljeet Garg

Department of Neurosurgery and Gamma Knife
All India Institute of Medical Science
New Delhi, India

Harsh Deora

Department of Neurosurgery
National Institute of Mental Health and Neurosciences, Bangalore, India

Assistant Editors

Nishant Goyal

Department of Neurosurgery
All India Institute of Medical Science
Rishikesh, India

Mayank Garg

Department of Neurosurgery
All India Institute of Medical Science
Jodhpur, India

Chinmaya Das

Department of Neurosurgery
All India Institute of Medical Science
Bhubaneswar, India

Pradeep Chouksey

Department of Neurosurgery
All India Institute of Medical Science
Bhopal, India

Saqib Azad Siddiqui

Department of Neurosurgery
Mediversal Superspeciality Hospital
Patna, India

Anil Kumar Sharma

Department of Neurosurgery
All India Institute of Medical Science
Raipur, India

Past Editors

Pradipta Tripathy

Department of Neurosurgery
Institute of Medical Sciences and
SUM Hospital, Bhubaneswar, India

Brig. H. S. Bhatoo

Department of Neurosurgery
Fortis Hospital, Noida, India

Yashbir Dewan

Department of Neurosurgery
Shri Guru Ram Rai Institute of Medical &
Health Sciences, Dehradun, India

Section Editors

Education & Policy

Mathew Joseph

Christian Medical College
Vellore, India
Pathology

Arulselvi Jayakumar

Blood Bank, J.P.Narayan Apex Trauma Centre
All India Institute of Medical Science
New Delhi, India
Neuroanatomy

Swati Singh

SR, New Delhi, India
Neurophysiology

Ashok Kumar Jaryal

Department of Physiology
New Delhi, India
Neurointervention

Girish Rajpal

Neurointervention Max Hospital -
Vaishali & Patparganj
New Delhi, India
Neuronursing

Metilda Jose

Head Nurse,
All India Institute of Medical Science
New Delhi, India

Editorial Board Members

Ajay Choudhary

Department of Neurosurgery
Dr. Ram Manohar Lohia Hospital
New Delhi, India

H. S. Bhatoo

Department of Neurosurgery
Fortis Hospital, Noida, India

Prem S. Bhandari

Plastic and Brachial plexus Surgeon
Brij Lal Multispeciality Hospital and
Research Center
Haldwani, India

Sanjay Behari

Department of Neurosurgery
Sanjay Gandhi Postgraduate Institute of
Medical Sciences, Lucknow, India

Sunil K. Gupta

Anesthesiologist, Chandigarh, India

Yashbir Dewan

Department of Neurosurgery
Shri Guru Ram Rai Institute of Medical &
Health Sciences, Dehradun, India

International Board Members

Aaron Mohanty

Pediatric neurosurgery
United States

Ash Singhal

Department of Neurosurgery
University of British Columbia Vancouver
Canada

Do-Sung Yoo

Department of Neurosurgery
Catholic university, Korea

Ian Gary Roberts

Department of Neurosurgery
Director of signal Biometric
United Kingdom

Jeffrey V. Rosenfeld

Department of Neurosurgery
Alfred Hospital
Australia

Krishna Sharma

Department of Neurosurgery
Kathmandu university
Nepal

Mark Fitzgerald

Department of Neurosurgery
Alfred Hospital, Australia

Milan Spaic

Department of Neurosurgery
University clinical center,
zemun Serbia

Pragnesh M. Bhatt

Department of Neurosurgery
Imperial College London
United Kingdom

Advisory Board

A. K. Mahapatra

Former Director,
All India Institute Medical Science
Bhubaneswar & Sanjay Gandhi
Postgraduate Institute of Medical Sciences,
Lucknow, Bhubaneswar, India

Sanjay Kumar

Neurosurgeon
Paras Hospital, Ranchi, India

Prem S. Ramani

Neurosurgeon
Lilavati Hospital and Research Centre
Mumbai, India

Anil K. Singh

Neurosurgeon
Max Super Speciality Hospital
Dehradun, India

NTSI Executive Committee

President

V. Sundar

Department of Ocean Engineering
Indian Institute of Technology,
Chennai, India

President Elect

Yashbir Dewan

Department of Neurosurgery,
Shri Guru Ram Rai Institute of Medical &
Health Sciences
Dehradun, India

Past Presidents

V. D. Sinha

Department Neurosurgery
Sawai Man Singh Medical College,
Jaipur, India

P. K. Sahoo

Brain, Spine and Radiosurgery
Apollo Hospitals
Bhubaneswar, India

Secretary

Sumit Sinha

Department of Neurosurgery
Jai Prakash Narain Trauma Center
New Delhi, India

Treasurer

Rashim Kataria

Department of Neurosurgery
Sawai Man Singh Medical College,
Jaipur, India

Executive Members

Deepak K. Singh

Indian Institute of Technology Lucknow,
India

Amit Chakrabarty

Neurosurgeon, Brain Surgeon &
Slip Disk Treatment, Jaipur, India

Anil Kumar

Rajendra Institute of Medical Sciences
Ranchi, India

© 2023. The Author(s). This journal is published by Thieme under the Creative Commons license CC BY (Attribution), permitting unrestricted use, distribution, and reproduction so long as the original work is properly cited. (<https://creativecommons.org/licenses/by/4.0/>).

Indian Journal of Neurotrauma is published two times a year in June and December by Thieme Medical and Scientific Publishers Pvt. Ltd., A-12, 2nd Floor, Sector 2, Noida-201301 UP, India. Tel: +91-120-4556600, Fax: +91-120-455-6649.

Subscription: Open access journals available online for free at <http://open.thieme.com>.

Advertisers contact: Marketing, Thieme Medical and Scientific Publishers Pvt. Ltd., A-12, 2nd Floor, Sector 2, Noida-201301 UP, India, marketing@thieme.in.

Indian Journal of Neurotrauma is indexed in Emerging Sources Citation Index (ESCI), Indmed, EBSCO, and ProQuest. Thieme Medical Publishers is a member of the CrossRef initiative.

Editorial comments should be sent to journals@thieme.com. The content of this journal is available online at www.thieme-connect.com/products. Visit our Web site at www.thieme.com and the direct link to this journal at www.thieme.com/ijnt.

Typesetting: Thomson Digital, Noida, India

Printing and Binding: Replika Press Pvt. Ltd.

Printed in India