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# **INNOVATIONS IN NEUROLOGICAL SURGERY:** *ADVANCED CERTIFICATION PROGRAM*

**THEME:** FROM PRECISION TO PROGRESS:  
ADVANCING NEUROLOGY AND NEUROSURGERY FRONTIERS

**Date: July 18-19, 2025 | Venue: London, UK**

## **PROGRAM BOOKLET**

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## SCIENTIFIC PROGRAM

July 18, 2025	
09:30-10:00	Registration Desk Opens
10:00-10:30	Opening Ceremony
Keynote Forum	
10:30-11:30	Title: Status of Women in Neurosurgery, All Over the World and in Italy
	Alba Scerrati   University of Ferrara   Italy
11:30-12:30	Title: Controversies in Spinal Surgery
	Ameen Abbas   Ameen Consulting (London) Ltd.   London, UK
Networking & Refreshment Break 12:30-12:45	
Major Sessions: Pediatric Neurosurgery Breakthroughs   Neuroendoscopy for Skull Base Tumors   Tumor Ablation Techniques in Neurosurgery	
Session Chair: Ameen Abbas   Ameen Consulting (London) Ltd.   London, UK	
Session Introduction	
12:45-13:15	Title: The Role of Neuromuscular Ultrasound in the Assessment of Children with Suspected Genetic and Metabolic Neuromuscular Disorders
	Esraa K EL Baz   Menoufia University   Egypt
13:15-13:45	Title: Awake Surgery for Tumors of the Parietal Lobe: A Preliminary Experience with a New Protocol of Intraoperative Neuropsychological Test for the Monitoring of the Sensory Area Function
	Alba Scerrati   University of Ferrara   Italy
Panel Discussion	
Lunch Break 13:45-14:45	

## SCIENTIFIC PROGRAM

Major Sessions: Intraoperative Neurophysiological Monitoring   Neuro Oncology Innovations   Techniques for Minimally Invasive Spine Surgery	
Session Chair: Alba Scerrati   University of Ferrara   Italy	
Session Introduction	
14:45-15:15	<p><b>Title: Effects of Commonly Used Anesthetic Drugs on Intraoperative Transcranial Motor Evoked Potential During Spine Surgeries: A New Balanced Regimen</b></p> <p><b>Samir A Elkafrawy</b>   El Sahel Teaching Hospital   Egypt</p>
15:15-15:45	<p><b>Title: Safety and Efficacy of Proximal Middle Meningeal Artery Embolization with Neurovascular Coils for Acute and Chronic Subdural Hematomas: A Single-Center Retrospective Study</b></p> <p><b>Jeffrey W Miller</b>   Cleveland Clinic   United States</p>
15:45-16:15	<p><b>Title: Vagus Nerve Stimulation Complications and Their Management</b></p> <p><b>Mohammadamin Sabbagh Alvani</b>   Shahid Beheshti University of Medical Sciences in Tehran   Iran</p>
Panel Discussion	
Networking & Refreshment Break 16:15-16:30	
16:30-17:00	<p><b>Title: Morphometric Analysis of the Bregma in Kashmiri Population Using CT Scans: A Cross-Sectional Study</b></p> <p><b>Izat Amin Wani</b>   Government Medical College (GMC)   Srinagar   India</p>
17:00-17:30	<p><b>Title: Anatomical Intricacies of the Sphenoid Sinus: A Clinical Alert to Optic Nerve Vulnerability – A Radiological Study</b></p> <p><b>Izat Amin Wani</b>   Government Medical College (GMC)   Srinagar   India</p>
Panel Discussion	
Closing Ceremony	



# **INNOVATIONS IN NEUROLOGICAL SURGERY:** *ADVANCED CERTIFICATION PROGRAM*

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## **KEYNOTE FORUM**





## **Alba Scerrati**

**University of Ferrara, Italy**

### ***Status of Women in Neurosurgery, All Over the World and in Italy***

**BACKGROUND:** Gender inequity in surgery has increasingly been a matter of debate. Contributions of female neurosurgeons to academic medicine and societies are poorly highlighted. The aim of this study was to evaluate several aspects of the professional and work-life balance of female neurosurgeons in Italy.

**METHODS:** Data of the female neurosurgical population were extracted from a general 83-item questionnaire administered to a total of 3242 respondents. The survey was composed of multiple-choice questions investigating demographics, surgical training and practice, satisfaction, mentorship, discrimination, and harassment.

**RESULTS:** A total of 98 female neurosurgeons were included. Most responders were married or cohabiting (49%). Thirty-nine (43%) were planning to have children, and 15 of them (44%) stated the reason they still didn't have any was because of professional constraints. Seventy (71%) women were neurosurgeons with an academic position (residents or academics) and 28 (29%) were full-time attendings. Most of the female neurosurgeons are satisfied with their work: sometimes (35%), often (20%), and always or almost always (20%). Most of them (45%) stated they are rarely victims of harassment, but 66% think that they are treated differently because they are women. A similar rate for a poor and fulfilling work-life balance (34% and 35%, respectively) was detected. The majority of participants (89%) had encountered a role model during their career, but in only 11% of cases was that person female.

**CONCLUSIONS:** Even though the rate of satisfaction among female neurosurgeons in Italy is high, some of them experienced gender discrimination, including incidents of sexual harassment and microaggressions. Policies including job sharing paradigms, consistent and meaningful options for parental leave, mentorship programs, equal and fair remuneration for equal work, and zero tolerance for harassment should be encouraged.

### **Biography**

Prof. Alba Scerrati currently holds dual roles at the Azienda Ospedaliero Universitaria di Ferrara, where she serves as consultant of Neurosurgery, and at the University of Ferrara, where she was appointed Associate Professor of Neurosurgery on November 1, 2022.

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## **Ameen Abbas Ameen**

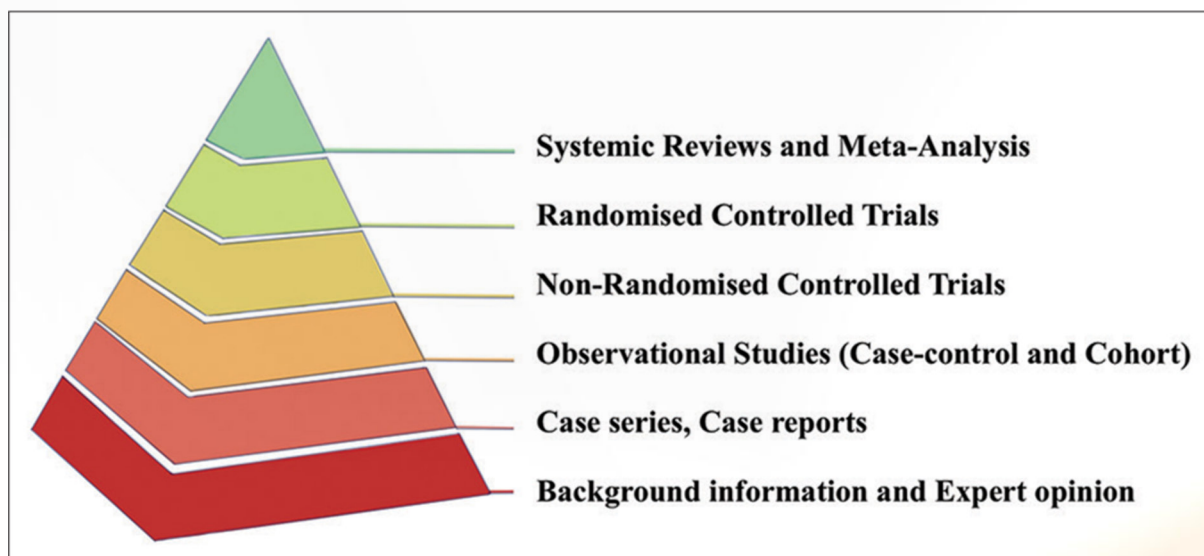
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### ***Controversies in Spinal Surgery***

This presentation aims to draw attention to the growing trend of supporting the use of evidence-based medicine in treating common spinal surgical disorders and to provide guidelines for the most appropriate treatment options.

In many disorders, there is no level one evidence to dictate the ideal approach for a specific spinal disorder.

This presentation provides a brief review of the literature on commonly debated and controversial topics in spine surgery, utilising the evidence-based pyramid from level 1 to level 5.



### **Biography**

Mr Ameen graduated from Baghdad University and he was awarded the FRCS in general surgery from the Royal College of Surgeons in England and Edinburgh in 1977. completed the Higher Neurosurgery training at the Central Middlesex and Charing Cross Hospitals London.

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**SCIENTIFIC TRACKS & ABSTRACTS**



Session on

**Major Sessions: Pediatric Neurosurgery Breakthroughs | Neuroendoscopy for Skull Base Tumors | Tumor Ablation Techniques in Neurosurgery**

Session Chair

**Ameen Abbas Ameen**

Ameen Consulting (London) Ltd, UK

**Session Introduction**

Title: **The Role of Neuromuscular Ultrasound in the Assessment of Children with Suspected Genetic and Metabolic Neuromuscular Disorders**

**Esraa K EL Baz** | Menoufia University | Egypt

Title: **Awake Surgery for Tumors of the Parietal Lobe: A Preliminary Experience with a New Protocol of Intraoperative Neuropsychological Test for the Monitoring of the Sensory Area Function**

**Alba Scerrati** | University of Ferrara | Italy



# The Role of Neuromuscular Ultrasound in the Assessment of Children with Suspected Genetic and Metabolic Neuromuscular Disorders

**Esraa Kamal EL-Baz**

**Menoufia University, Egypt**

**OBJECTIVE:** To assess the role of neuromuscular ultrasound in the assessment of children with suspected genetic and metabolic neuromuscular disorders.

**METHODS:** This is a prospective analytic cross-sectional study that was conducted on 129 children who suffered from abnormal gait, recurrent falling, difficult walking, muscle weakness, fatigue, myalgia, hyperckemia, delay in motor development and suspected to have neurogenetic or neurometabolic disorder. Muscle thickness, visual assessment of muscle echogenicity, semiquantitative assessment of Muscle echogenicity using neuromuscular ultrasound. Then they were subdivided into neuromuscular disorders (NMD) and non-neuromuscular disorders groups depending on history examination and investigations.

**RESULTS:** Patients with and without neuromuscular disorders could be discriminated with a positive predictive value of 91% and negative predictive value of 80%. patients with neurogenic could be discriminated from myogenic from non-neuromuscular disorders with false negative results percentage 5.4%.

**CONCLUSION:** Neuromuscular ultrasound is a valuable non-invasive toolkit in the diagnosis of genetic neuromuscular disorders in children, because it makes it possible to discriminate between children with genetic neuromuscular disorders from children with non-neuromuscular disorders, in a short time with minimal discomfort. It also can discriminate neurogenic from myogenic and non-neuromuscular disorders. It has a week role in detecting metabolic neuromuscular disorders.

**Keywords:** Neuromuscular ultrasound, neuromuscular disorders, non-neuromuscular disorders.

## Biography

Dr. Esraa Kamal Elbaz, studied at faculty of medicine Menoufia university, graduated at 2013, then spent the year of privilege at Menoufia university hospital, then spent the commissioning period at shebin elkom hospital, then became resident at Menoufia university hospital at 2016, then finished the residence period at 2019 and now becomes staff member at faculty of medicine Menoufia university. This is my second study to publish.

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# **Awake Surgery for Tumors of the Parietal Lobe: A Preliminary Experience with a New Protocol of Intraoperative Neuropsychological Test for the Monitoring of the Sensory Area Function**

**Alba Scerrati**

**University of Ferrara, Italy**

**Background.** Nowadays, there is a lack of studies reporting techniques for the selective monitoring of the primary somatosensory cortex and the adjacent areas of the superior and inferior parietal lobules. We hypothesized a more specific and targeted test for awake surgery for monitoring the sensory area during resection of tumors involving it.

**Materials and Methods.** We collected patients suffering from tumors involving the parietal areas and undergoing awake surgery for the resection. Intraoperative standard neurophysiological monitoring was performed, and we added a new intraoperative test. It consisted of a series of different objects with standard 3D conformations. The patient was asked to recognize the object shape using only the tactile sensibility, without seeing the object itself; in some cases, he was also asked to put the object in the corresponding hole, according to the shape.

**Results.** We collected 6 patients. One patient with a right parieto-occipital lesion, at the stimulation of the anterior cortical margin of the surgical field, showed problems in naming the objects and collocating them in the corresponding spaces, while he was touching them with the left hand. Therefore, the areas of proprioception and perception of the objects were mapped and numbered. This deficit got better in the postoperative days with a total remission of the ideomotor apraxia and the psychomotor slowdown. The other 5 patients did not show an impairment with the new test.

**Conclusions.** This is a preliminary study with the aim of enhancing the specificity of the neuropsychological test performed during awake surgery to allow the surgeon to monitor the neurological functions of the parietal cortex. More cases are needed to validate it.

## **Biography**

Prof. Alba Scerrati currently holds dual roles at the Azienda Ospedaliero Universitaria di Ferrara, where she serves as consultant of Neurosurgery, and at the University of Ferrara, where she was appointed Associate Professor of Neurosurgery on November 1, 2022.

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## Session on

### Major Sessions: Intraoperative Neurophysiological Monitoring | Neuro Oncology Innovations | Techniques for Minimally Invasive Spine Surgery

#### Session Chair

**Alba Scerrati**

University of Ferrara, Italy

#### Session Introduction

Title: **Effects of Commonly Used Anesthetic Drugs on Intraoperative Transcranial Motor Evoked Potential During Spine Surgeries: A New Balanced Regimen**

**Samir A Elkafrawy** | El Sahel Teaching Hospital | Egypt

Title: **Safety and Efficacy of Proximal Middle Meningeal Artery Embolization with Neurovascular Coils for Acute and Chronic Subdural Hematomas: A Single-Center Retrospective Study**

**Jeffrey W Miller** | Cleveland Clinic | United States

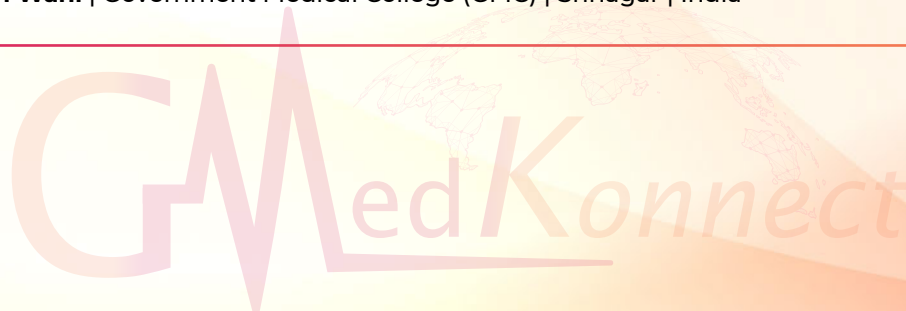
Title: **Vagus Nerve Stimulation Complications and Their Management**

**Mohammadamin Sabbagh Alvani** | Shahid Beheshti University of Medical Sciences in Tehran | Iran

Title: **Morphometric Analysis of the Bregma in Kashmiri Population Using CT Scans: A Cross-Sectional Study**

Title: **Anatomical Intricacies of the Sphenoid Sinus: A Clinical Alert to Optic Nerve Vulnerability – A Radiological Study**

**Izat Amin Wani** | Government Medical College (GMC) | Srinagar | India





# Effects of Commonly Used Anesthetic Drugs on Intraoperative Transcranial Motor Evoked Potential During Spine Surgeries: A New Balanced Regimen

**Samir A Elkafrawy**

**El Sahel Teaching Hospital, Egypt**

During spinal surgeries – especially with the new advanced techniques in complicated spinal deformities and minimally invasive spinal surgeries – several important structures as spinal cord, nerve roots, and even vascular supply can be put in a potential risk of injury. Neurophysiological Intraoperative Monitoring (NIOM) modalities have been introduced aiming to monitor the neural integrity during these surgeries; the term was defined in 1970s. The most frequently used modalities are somatosensory-evoked potentials (SSEP), motor-evoked potentials (MEP), free run or spontaneous myography (SEMG), and triggered electrical myography (TEMG)

Unfortunately, commonly used clinical concentrations of inhalant anesthetics like sevoflurane may interfere through the inhibition of interneuron generators of I-waves in cerebral cortex and anterior horn cells through pre and post synaptic NMDA receptor. Also, intravenous agents, most commonly used is propofol, may suppress  $\alpha$ -motoneurons through GABA<sub>A</sub> receptors. These effects came always in a dose-dependent manner. Induction doses of propofol (2–5 mg/kg) cause amplitude depression of MEP responses, as does high-dose continuous infusion (80–100  $\mu$ g/kg/min). MEPs are greatly affected by halogenated agents and can be ablated even with doses of 0.5–1 MAC. It is documented that generous application of opioids can improve MEP monitoring due to the reduction of spontaneous muscle contraction and lowering of the needed MAC of volatile anesthetic agents and intravenous infusion rate of anesthetics. Unfortunately, other factors may contribute to fallacies of readings as usage of neuromuscular blockade, hypothermia, variations in mean blood pressure and blood carbon dioxide content.

## Biography

He is consultant in neuroanesthesiology at AlSahel Teaching Hospital in Cairo. He earned his MD and has a robust track record of research focusing on neuroanesthesia practices during spine and cranial procedures, particularly the use of propofol, sevoflurane, and hyperosmolar therapies to optimize brain relaxation and hemodynamic stability.

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# Safety and Efficacy of Proximal Middle Meningeal Artery Embolization with Neurovascular Coils for Acute and Chronic Subdural Hematomas: A Single-Center Retrospective Study

**Jeffrey W. Miller**

**Cleveland Clinic, USA**

## Objectives:

1. To evaluate the safety of Proximal MMA embolization using neurovascular coils for treating acute and chronic SDH by determining rates of mortality and procedural complications in a cohort of 100 patients.
2. To assess the efficacy of Proximal MMA embolization with neurovascular coils by measuring the rate of SDH recurrence and the need for rescue surgical intervention in the same patient cohort.

**Background:** Subdural hematomas, both acute and chronic, represent a significant neurological challenge (2,9,13). While surgical intervention is a standard treatment, MMA embolization has emerged as a less invasive alternative (22). This study contributes real-world institutional data on the use of neurovascular coils for Proximal MMA embolization in a mixed cohort of acute and chronic SDH patients.

**Methods:** This retrospective study analyzed 100 patients who underwent Proximal MMA embolization with neurovascular coils for acute or chronic subdural fluid collections at Cleveland Clinic Tradition Hospital between March 2023 and March 2025. Data were collected via a detailed review of the Hospital's electronic medical record. Statistical analysis was performed using Excel, with descriptive statistics used to summarize patient demographics, clinical characteristics, procedural details, and outcomes.

**Results:** One hundred patients were included in this study. The rate of SDH recurrence was zero, which compares favorably to an average recurrence rate of 4.1% reported in a meta-analysis by Ku et al. The rate of procedural complications was also zero.

**Conclusions:** Our study suggests that Proximal MMA embolization utilizing neurovascular coils is a promising treatment option for both acute and chronic SDH, demonstrating no procedural complications or SDH recurrence in our cohort of 100 patients. Compared to other embolic agents, coils may also offer advantages by minimizing the risk of non-target embolization. Proximal MMA embolization with neurovascular coils stands as a valuable and effective minimally invasive procedure for managing SDH.

## Biography

Dr. Miller is currently the Director of Endovascular Neurosurgery at Cleveland Clinic Tradition Hospital, Florida based out of Palm Beach, Florida. Dr. Miller has been recognized as an investigator for FDA and NIH Neuroscience / Neurosurgical trials. He has authored numerous publications including articles in World Neurosurgery, Operative Neurosurgery and the Journal of Neuroendovascular Surgery. His contributions include book chapters in multiple medical Neuroscience text books. He has lectured all over the US and in Europe in the field of Neuroendovascular Surgery and Sports related concussions. Dr. Miller is currently involved in research and serves as an Independent Concussion Analyst for the NFL.

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# Vagus Nerve Stimulation Complications and Their Management

## Farzan Fahim

Shahid Beheshti University of Medical Sciences in Tehran, Iran  
Co-authors: Mohammadamin Sabbagh Alvani, MD-MPH

## Mohammadamin Sabbagh Alvani

Shahid Beheshti University of Medical Sciences in Tehran, Iran

Vagus nerve stimulation (VNS) is one of the most significant advancements in the treatment of drug-resistant epilepsy and treatment-resistant depression. Through intermittent electrical stimulation of the vagus nerve—typically via a surgically implanted pulse generator and lead—VNS modulates brain activity to reduce seizure frequency and improve mood regulation.

Despite its growing application and clinical success, VNS is associated with a broad range of complications that require careful understanding and management. These complications span surgical issues (such as infection and vocal cord paralysis), device-related problems (like lead fractures, Twiddler syndrome, and battery depletion), and stimulation-induced side effects (including hoarseness, dyspnea, and sleep disturbances).

This lecture presents a comprehensive overview of these complications, structured through a system-based approach: respiratory (stridor, sleep apnea), cardiac (bradycardia, asystole), gastrointestinal (intractable hiccups, diarrhea), infectious (superficial and deep implant infections), neurological (pain, tremor), and psychiatric (mania, hypomania) complications. For each category, specific clinical cases, management strategies, and preventive measures will be discussed. At the Functional Neurosurgery Center of Shohada Tajrish Hospital, we are actively performing VNS procedures in 2–3 patients each week, giving us direct and ongoing clinical experience with its therapeutic outcomes and associated complications. This real-world setting enhances our perspective on patient selection, intraoperative precautions, and long-term follow-up strategies.

Particular attention will be given to practical solutions such as stimulation parameter adjustment, surgical techniques to reduce mechanical stress, lead and generator positioning strategies, intraoperative neuromonitoring, and the importance of interdisciplinary follow-up. The presentation will also address rare but critical complications like VNS-induced asystole or near-SUDEP events and explore decision-making in deactivation or device revision scenarios.

By integrating clinical experience with evidence-based practices, this lecture aims to equip neurosurgeons, neurologists, and epilepsy specialists with actionable insights to enhance patient safety, reduce complication rates, and optimize long-term outcomes of VNS therapy.

## Biography

**Dr. Farzan Fahim** is a neurosurgery resident at Shohada Tajrish Hospital, Shahid Beheshti University of Medical Sciences in Tehran, Iran. He ranked among the top 1% in Iran's national residency entrance exam in 2023. Dr. Fahim received his MD with distinction from Shahid Beheshti University and completed additional training in Health-MBA and a Master of Public Health (MPH) under the supervision of Professor Hossein Hatami. He is the founder and director of the Iranian Student Neurosurgery and Spine Surgery Association, the largest student-led neuroscience organization in Iran. Through this platform, he leads nationwide educational programs, academic events, and interdisciplinary collaborations focusing on training, mentorship, and scientific leadership in neurosurgery and neuroscience.

**Dr. Mohammadamin Sabbagh Alvani** is a medical doctor and MPH graduate from Shahid Beheshti University of Medical Sciences in Tehran, Iran. He currently serves as Co-Executive of the Iranian Student Neurosurgery and Spine Surgery Association, the largest student-led neuroscience organization in Iran. In this role, he actively contributes to the organization's national initiatives in neurosurgical education, academic content creation, and interdisciplinary collaboration.

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# Morphometric Analysis of the Bregma in Kashmiri Population Using CT Scans: A Cross-Sectional Study

**Izat Amin Wani**

**Government Medical College (GMC), Srinagar, India**

**Background:** The bregma, formed by the intersection of the coronal and sagittal sutures, is a vital craniometric landmark in neurosurgery, radiology, forensic anthropology, and physical anthropology. Despite its clinical and anthropological importance, normative morphometric data for the Kashmiri population are lacking.

**Objective:** To establish population specific normative values for bregma related linear and angular dimensions in adult Kashmiris and to assess sex and age variations.

**Methods:** In this cross sectional study, 300 adults (150 males, 150 females; age range 18–65 years) undergoing cranial CT at a tertiary care hospital in Kashmir were analysed. Exclusion criteria included cranial deformities, prior skull surgery, and fractures. A multi slice CT scanner (1.0mm slice thickness, 120kV, 200mA) was used to measure eight bregma related dimensions: Bregma–Nasion (BN), Bregma–Lambda (BL), Bregma–Inion (BI), Bregma–Pterion (right/left), Bregma–Asterion (right/left), height from the external acoustic meatus (H–EAM), sagittal suture angle, and coronal suture orientation. Means  $\pm$  standard deviations were calculated for the total cohort and by sex. Independent t tests compared sexes, and one way ANOVA assessed age band (18–30, 31–50, 51–65 years) effects;  $p < 0.05$  was deemed significant.

**Results:** Mean age was  $38.4 \pm 12.1$  years, with no sex difference across age bands ( $\chi^2 = 0.64$ ,  $p = 0.73$ ). Overall means ( $\pm$ SD) were: BN  $99.5 \pm 4.8$  mm, BL  $72.3 \pm 3.7$  mm, BI  $120.6 \pm 5.2$  mm, BP–R  $68.4 \pm 4.1$  mm, BP–L  $68.1 \pm 4.2$  mm, BA–R  $79.2 \pm 4.5$  mm, BA–L  $79.0 \pm 4.6$  mm, H–EAM  $89.7 \pm 5.1$  mm, sagittal suture angle  $88.2 \pm 5.6^\circ$ , coronal suture orientation  $76.5 \pm 4.2^\circ$ . Males exhibited significantly larger BN, BL, BI, BP–R, and BP–L (all  $p < 0.001$ ); angular measures and H–EAM showed no sex differences. No significant age effects on linear measures were found (all  $p > 0.05$ ); only the sagittal suture angle showed a marginal increase in the oldest group ( $F = 3.12$ ,  $p = 0.04$ ).

**Conclusion:** This study provides the first normative CT based bregma morphometry for Kashmiri adults, demonstrating clear sexual dimorphism in linear distances but stability of angular parameters and height across sex and age. These data will enhance the accuracy of neurosurgical navigation, forensic identification, and radiological orientation for this population. Future research should include paediatric cohorts and 3 D surface scanning validation.

**Keywords:** Bregma; Craniometry; Cranial morphometry; Computed tomography; Kashmiri population; Sexual dimorphism; Age variation

## Biography

Dr. Izat Amin Wani is a committed and accomplished medical professional currently serving as a Senior Resident in the Department of Anatomy at Government Medical College (GMC), Srinagar, India. She completed her MBBS and subsequently her MD in Anatomy from the same prestigious institution, demonstrating a deep-rooted dedication to academic excellence and medical education.

With a strong foundation in anatomical sciences, Dr. Wani plays a vital role in teaching and mentoring undergraduate medical students, while also contributing to departmental academic and research activities. Her continued association with GMC Srinagar reflects her passion for advancing anatomical knowledge and fostering the next generation of healthcare professionals.

Residing in Srinagar, Dr. Wani remains deeply engaged in the academic and healthcare landscape of the region.

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# Anatomical Intricacies of the Sphenoid Sinus: A Clinical Alert to Optic Nerve Vulnerability – A Radiological Study

**Izat Amin Wani**

**Government Medical College (GMC), Srinagar, India**

**Introduction:** Injuries to the optic nerve during functional endoscopic sinus surgery (FESS) can result in devastating visual loss. The proximity of the optic nerve to the sphenoid sinus—and its wide anatomical variability—makes detailed preoperative radiological assessment essential. This study analyzes the anatomical relationships between the optic nerve and sphenoid sinus, with special attention to variants that increase surgical risk.

**Aims and Objectives:** To study anatomical variations of the optic nerve in relation to the sphenoid sinus using high-resolution computed tomography (CT).

**Methods:** A retrospective cross sectional study was conducted on 200 non-sinus-related high-resolution CT scans (400 optic nerves) from adults aged 20–70 years. Axial, coronal, and sagittal bone-window images ( $\leq 1\text{mm}$  slice thickness) were reviewed. Each nerve was classified per Delano's system; sphenoid pneumatization (conchal, presellar, sellar), optic canal dehiscence, and presence of Onodi cells were recorded. Descriptive statistics and chi square tests were performed using SPSS v25.0, with significance at  $p < 0.05$ .

**Results:** our study revealed Delano Type I in 176 nerves (44%); Type II in 112 (28%); Type III in 72 (18%) and Type IV in 40 (10%). 50 of 72 Type III nerves (69.4%) were linked to sellar pneumatization. Optic Canal Dehiscence was observed in 58 nerves (14.5%). Onodi Cells were present in 40 nerves (10%), most commonly with Type IV configurations. As far as Symmetry is concerned, Bilateral Delano type concordance was seen in 156 patients (78%) and asymmetry was seen in 44 (22%).

**Conclusion:** Delano Type I remains the most frequent variant, but higher risk configurations (Types II–IV) and optic canal dehiscence are more common than traditionally reported, especially among North Indians. The strong link between extensive sphenoid pneumatization and Type III nerve courses further elevates surgical risk. These findings reinforce the need for meticulous high resolution CT evaluation—identifying side specific anatomy and dehiscence—to guide safe sinus and skull base surgery.

## Biography

Dr. Izat Amin Wani is a committed and accomplished medical professional currently serving as a Senior Resident in the Department of Anatomy at Government Medical College (GMC), Srinagar, India. She completed her MBBS and subsequently her MD in Anatomy from the same prestigious institution, demonstrating a deep-rooted dedication to academic excellence and medical education.

With a strong foundation in anatomical sciences, Dr. Wani plays a vital role in teaching and mentoring undergraduate medical students, while also contributing to departmental academic and research activities. Her continued association with GMC Srinagar reflects her passion for advancing anatomical knowledge and fostering the next generation of healthcare professionals.

Residing in Srinagar, Dr. Wani remains deeply engaged in the academic and healthcare landscape of the region.

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