MEWSLETTER



Our Reader Is Our Leader

The broad aim of this newsletter is to advance the science of neurological surgery and enhance patient's safety

JUME 2

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Eid Mubarak to all of you

May Allah accept your good deeds and reward you with his unlimited generosity

> A message from SANS Newsletter Team

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Issue's Message

We hope this issue finds you, your families, and your staff in good health. Despite the challenges from the COVID-19 Pandemic, we still had a very successful year. Our 15th Annual Meeting was held virtually in March 2021, and it was a success. This latest Newsletter, includes highlights from this meeting, and we are giving you a review of the first of its kind virtual event.

Neurosurgery in Saudi Arabia features a contribution from Dr. Mahmoud Karmi who tells us about his neurosurgical experiences.

In this issue, Dr. Mahmoud Taha examines a topic you may find interesting: Establishing a Neuro-Oncology Multi-disciplinary Team Meeting (MDT).

In our Neurosurgical Guidelines section, We want to draw your attention to the updated guidelines on the management of Hydrocephalus in the paediatric population.

National Stroke Awareness Month is celebrated in May to raise awareness about the causes and effects of stroke. Hence, our May 2021 issue reflects on this topic. SANS Newsletter team and Dr. Ismail Babelli shared some of the signs of a stroke to look out for as well as other valuable information. In Book Shelf section, We take you through a journey of a stroke survivor!

If you are interested in exploring the history of Brain surgery through nasal cavity, please refer to Dr. Hanadi AlKathiri's article. In Resident's Corner, we also hear about two of our graduated residents and their valuable lessons learnt from Residency.

Finally, we spotlight one of our members Dr. Abdulaziz Alarifi who retired in early 2021.

As always, we welcome your contributions, feedback and suggestions as we continue to improve upon our newsletter. Please click **HERE** to contact us about submitting your contribution.



We are glad to announce that SANS Newsletter will issue **Certificates of Contributions** for residents. The final decision on what gets published and who earns a certificate is with the editorial board members.



#iSANS2021 A REVIEW OF THE 2021 SANS ANNUAL MEETING

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COVID-19 pandemic took in-person events out of the equation. In response to our current reality, the 15th SANS Annual Meeting was a fully virtual meeting.

This year's event looked different from other years but the intentions are the same, to make our attendees to SANS Annual Meeting feel engaged and connected.

In 2021, SANS pushed the boundaries of online meetings, enabling the most immersive experience possible. More than 1000 attendees gathered virtually, to explore iSANS: Stay Connected at the 15th SANS Annual Meeting. iSANS provided a virtual experience where attendees could connect with others, share best practices, and advance their knowledge in the field of Neurosurgery.

Despite the challenges from this pandemic, we still had a very successful event. It was essential that attendees could easily navigate the experience ensuring it was engaging. SANS achieved this goals by transforming the experience into a virtual space: iSANS was born. During our 3-day meeting we covered some of the most pressing topics in neurosurgery today, with speakers in neurosurgery's subspecialties delivering the latest updates in their area of expertise.

Speakers at the 2021 SANS Annual Meeting directly addressed the meeting theme, *Stay Connected*, and shared individual insights and experiences.

We thank the speakers and session chairs for sharing their knowledge and you for your participation; making our first online annual meeting a successful one.

Better times will come, and we now hope to see many of you in person at our next Annual Meeting, chaired by Professor Ahmed Alkhani, and hosted by King Abdulaziz Medical City 2022.

DR. NABEEL

NAGHMOOSH

DR. ABDULKARIM

ALRABIE.

ORGANISING COMMITTEE

15th SANS 2021

DR. KHALID SIDDIQUI, MD

President of the Conference - SANS21

SCIENTIFIC C	OMMITTEE
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15th SANS 2021

DR. MOHAMMED BAFAQUH

Chair of Scientific Committee - SANS21

				127			
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	ALNEFAIE			DR.	DR VAHVA		
MS. SUMAYAH ABUNAYYAN					ABDULRAHMAN ALDAKKAN	KHORMI	

15th Annual Meeting Highlights In Coming Pages

#iSANS2021

Speakers

#iSANS2021

Workshops

#iSANS2021

Sessions

#iSANS2021

Award Winners



OPENING CEREMONY

19 March 2021

2021 Annual Meeting Highlights

On Friday, March 19, attendees gathered virtually to be part of the SANS21 Annual Meeting. Dr. Khalid Siddiqui, President of SANS21, welcomed the neurosurgical world-class delegates locally and internationally.

The total number of participants in the SANS 2021 was 1192. This first of its kind Virtual Meeting was a huge success and attendee feedback indicated that events like this would be welcomed again in the future.



PROFESSOR KHALAF ALMUTAIRI LECTURE

This lecture honoured legacy of Professor Khalaf AlMutairi, a true luminary of neurosurgery. This session featured a lecture led by Dr. Christopher S. Oglivy. He is Professor of Neurosurgery, Harvard Medical School and the Director of Endovascular and Operative Neurovascular Surgery at the Beth Israel Deaconess Medical Center Brain Aneurysm Institute in Boston, US. He has been in practice for more than 20 years.



iSANS 2021: SPEAKERS

11 International Speakers60 Local Speakers



SANS21: SESSIONS

There was an immense amount of content designed to keep you up to date in the rapidly evolving field of neurosurgery. The meeting program included several different types of sessions, including:

- Thought-provoking lectures
- Panel discussions
- Video Presentations

The topics covered and discussed included n e u r o o n c o l o g y , cerebrovascular, spine, skull base, functional neurosurgery, peripheral nerve surgery, paediatric neurosurgery, Stroke and vascular disease and Robotics in neurosurgery.

click here to view all speakers

iSANS 2021: WORKSHOPS

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The Saudi Association of Neurological Surgery continues to support the highest level of professional excellence through various workshops and courses. There were five workshops that were held virtually during the meeting and attended by more than 1000 participants. These workshops were conducted by eminent neurosurgeons in their respective fields.



NEURORADIOLOGY COURSE FOR RESIDENTS

Mar 18,2021 | Virtual

Course directors: Dr. Fahad Essbaiheen, Dr. Abdullah Alrashed, Dr. Abdulrahman Aldakkan

Number of Attendees: 253

PRINCIPLES AND PRACTICE OF INTRAOPERATIVE NEUROMONITORING

Mar 18,2021 | Virtual

Course director: Dr. Faisal Jahangiri

Number of Attendees: 228

NEURO NURSE CRASH COURSE

Mar 18,2021 | Virtual **Course director**: Dr. Ibrahim Alhalal.

Number of Attendees: 230

3rd NEUROSURGERY STUDY WORKSHOP

(PERIPHERAL NERVE)

Mar 20,2021 | Virtual Course director: Dr. Bassam Addas Number of Attendees: 189

STUDENTS NEUROSURGICAL BOOT

CAMP

Mar 20,2021 | Virtual

Course director: Dr. Wisam Al-Issawi

Number of Attendees: 240

iSANS 2021: AWARD WINNERS



SANS and the award committee warmly congratulate the award winners for their outstanding contributions.

#1 SANS RESEARCH GRANT

Award: SANS 20,000 Riyal Research Grant
Winner: Professor Amro Al-Habib
Project Title: Effects of Compressive Lesions on Intraoperative Human
Spinal Cord Elasticity.

Award: SANS 50,000 Riyal Research Grant for Multi-Centre Trials
Winner : Professor Amro Al-Habib
Project Title: First Cervical Vertebra Lateral Mass In Down Syndrome
Compared To Non-Down Syndrome Population.

#2 7THANNUAL MEDICAL STUDENTS NEUROSCIENCE COMPETITION

1St Place: Abdulrahman AlMutiri
2nd Place: Mishael AlObaid
3rd Place: Alshaymaa Arishy

SANS21: AWARD WINNERS Continued

#3

NeuroGraphia Art Competition

NEUROGRAPHIA

By Dr. Abdulrahman Jafar Sabbagh King Abdulaziz University Hospital | **KAUH** Jeddah, Saudi Arabia

Over the years, I realised that the ability to create excellent medical illustrations is shared as a talent by many students, residents, and trainees, but their work often remains hidden and never sees the light of day because most of it is never shared or published.

Throughout my residency, I decided to reduce the use of published illustrations and diagrams from articles, books, or online sites as much as possible when preparing presentations. Instead, I employed my ability to draw and create illustrations that depicted physiological and anatomical information using pen and paper or the primitive tools of Power Point that were available at the time (1999 to 2005). This resulted in a plethora of illustrations, some of which were eventually published in journals and books. God blessed me with my first book "Neurosurgery Case Review" which I co-authored and edited with my friend Remi Nader FRCSC in 2009 (Figure 1), with most of the illustrations done on my computer. Cognitively, drawing improves memory and comprehension (1,2). Certainly drawing anatomical and physiological illustrations helped me memorise, understand, and comprehend neurophysiology as well as surgical corridors and microsurgical information far beyond reading and looking at illustrations.

Being part of the Saudi Association of Neurological Surgery (SANS), I had entertained the idea of establishing an art competition with the aim of uncovering these hidden talents in Saudi Arabia



and around the world.

After talking last year with Professor Amro Al-Habib, the President of the Society, as well as Dr. Khalid Siddiqui, the President of the SANS 2021 Conference, and Dr. Mohammed Bafaquh, the head of the Scientific Committee, they were enthusiastic about the idea and kindly very supportive. We decided to launch the NeuroGraphia competition, and we all feel blessed that it was a success and hopefully this would continue every year.

For us at NeuroGraphia, everyone who submitted their work for the NeuroGraphia art competition is a winner, we were blessed to have many submissions for our first launch of such an event. This should also be an opportunity for these young "NeuroGraphers" to be exposed to the publishing world, in the hope that there would be more collaboration between researchers and illustrators.

And as the Chinese proverb says "A picture is worth a thousand words"



Figure 1. Drs. Abdulrahman Sabbagh and Remi Nader

1. Wammes JD, Jonker TR, Fernandes MA. Drawing improves memory: The importance of multimodal encoding context. Cognition. 2019 Oct; 191:103955. doi: 10.1016/j.cognition.2019.04.024. Epub 2019 Jun 26. PMID: 31254746.

 Joewono M, Karmaya INM, Wirata G, Yuliana, Widianti IGA, Wardana ING. Drawing method can improve musculoskeletal anatomy comprehension in medical faculty student. Anat Cell Biol. 2018 Mar;51(1):14-18. doi: 10.5115/acb.2018.51.1.14. Epub 2018 Mar 28. PMID: 29644105; PMCID: PMC5890012.

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Winners of The 2021 NeuroGraphia Art Competition

Photo by Laura Chouette on Unsplash

#A NeuroGraphia Scientific Illustration Competition

1St Place: Dr. Ziyad Hussain



3rd Place: Dr. Kimberly Ohm



2nd Place: Dr. Esraa Khairou and Dr. Mohammad Babgi



#B NeuroGraphia Art Competition

1st Place: Dr. Rozan Bokhari and Dr. Afnan Alkhotani



3rd Place: Dr. Moneera Aldraihem



2nd Place: Dr. Fatimah Alghbban



iSANS 2021: AWARD WINNERS

Sans Gold Medalist: Professor Saleh Baeesa MD,Chb, frcsc, FAANS

"It is a wonderful honour to be recognised by SANS and our professional colleagues": Professor Saleh Baeesa Receives 2021 SANS Gold Medal

Upon the occasion of the 15th Annual Meeting of the Saudi Association of Neurological Surgery (SANS) from March 18 to 20, 2021, the SANS Gold Medal was awarded to professor Saleh Baeesa from Saudi Arabia. Professor Saleh Baeesa has been selected as the 2021 recipient of the SANS Gold Medal for his longstanding contributions to the field of neurosurgery. SANS awards this medal each year during the annual meeting to a neurosurgeon in recognition of his or her outstanding contributions to the specialty.



Professor Saleh Baeesa is a consultant neurosurgeon at King Abdulaziz University Hospital (KAUH) and King Faisal Specialist Hospital & Research Centre -Jeddah (KFSH&RC). He is also a professor at King Abdulaziz University. His clinical research interests include surgical treatment of brain tumours ,epilepsy surgery, spine surgery, paediatric and vascular neurosurgery. Professor Baeesa is a Canadian board certified neurosurgeon since 1997.

Professor Saleh's services to the Saudi Association of Neurological Surgery and general participation in organised neurosurgery worldwide are well known within the association, thanks to his contributions throughout his illustrious career. His statesmanship and commitment to neurosurgery have been particularly inspiring to those who have had the opportunity to work with him.

Professor Saleh Baeesa was born and raised in Jeddah, Saudi Arabia. In 1988, he earned his medical degree from King Abdulaziz University (KAU). He completed an internship at joined KAU hospital as a demonstrator (teaching assistant) the following year.

He started, July 1992, the residency in neurosurgery at the University of Ottawa, Canada. He completed a fellowship in paediatric neurosurgery (1997-98) at the Children's hospital of eastern Ontario.

After training in Canada, Professor Saleh returned home to Jeddah, Saudi Arabia to practise neurosurgery. Since 1998, he stood at the roots of the establishment of Neurosurgery Division at King Abdulaziz University Hospital. From 1999-2006, he was honoured to accept the appointment of Assistant Professor of Neurosurgery at King Abdulaziz University. Since 1999, Professor Saleh has been the head of the division of neurosurgery at King Abdulaziz University Hospital. Professor Saleh has also served as Programme Director of Neurosurgery at the Saudi **Council for Health Specialties** (SCFHS). He is a member of the scientific committee of the Saudi Board of Neurosurgery Training Programme at SCFHS. Professor Saleh holds memberships in a number of professional societies

including the Saudi Association of Neurological Surgery (SANS), the Saudi Spine Society (SSS), the North American Society of Spine Surgery (NASS), American Association of Neurosurgical Surgeons (AANS), and Congress of Neurological Surgeons (CNS).

Professor Baeesa has chaired numerous conferences including Neurosurgery Update in Paediatric Neurosurgery, Pan Arab Neurosurgical Society, Dubia Spine Conference and The Saudi Epilepsy Society. He has also presented at local and international meetings, given more than 160 presentations around the world and written three textbook chapters. Professor Baeesa wrote more than 200 articles published in leading medical journals; he is also an assistant editor for two neurosurgical journals

Throughout his remarkable career, he has been particularly devoted to teaching and improving the practice of Patient-Centred Care and research. Professor Saleh Baeesa was simply the talented neurosurgeon who has moved the field forward in countless ways.

The winner of SANS Gold Medal- 2021





iSANS 2021 AT- A-GLANCE







NEUROSURGERY IN SAUDI ARABIA

Life As A Neurosurgeon

By Dr. Mahmoud Karmi

Consultant Neurosurgeon Jordan Hospital | Amman, Jordan

When Aramco first contacted me, I was a professor of neurosurgery in the Neurosurgical Department at the University of Jordan School of Medicine. I started as a locum at Aramco's Dhahran Health Centre (DHC) before becoming a permanent employee until the summer of 1996. My wife Lorraine, daughter Hanna, son Zuhair, and six-week-old daughter Azza accompanied me to Aramco. Adam, my youngest son, was born in Dhahran.

My First Day

On my very first day as a locum at DHC, a hospital car was sent to pick me up for an emergency case. I was a complete stranger to the ICU staff at the time. After introducing myself, I went to see the patient. He was in his forties and on a ventilator with fixed dilated pupils. He had also undergone knee surgery and was taking anticoagulants. When I examined his brain CT scan, I discovered that he had bilateral intraventricular hemorrhage (IVH).

On my first day, I was faced with what seemed to be a no-win scenario. If I do not intervene surgically, I will be held accountable, and if I intervene and he does not make it, I will be in a difficult situation. So I took him to the operating room and performed burr holes and set up External Ventricular Drains (EVD). I explained my plan with the ICU specialist in great detail.



Fortunately, the surgery was successful, and the patient returned to the ICU for further follow-up with the specialist.

When You Are The Only Neurosurgeon

The management asked me to give DHC staff lectures on the principles and scopes of neurosurgery and the importance of neurosurgical services, which I did. From then on, the staff recognised me as the first neurosurgeon at DHC. There were many wonderful neurologists working there, but there was no neurosurgeon on staff. Previously, Aramco had set up a referral committee to send all neurosurgical cases abroad. Cases were sent to the United States, the United Kingdom, Canada, Germany, and parts of Asia. However, this policy does not apply to emergency cases that clearly require immediate intervention, such as the first case I encountered the day I arrived at DHC. For two years, I was the only neurosurgeon. I ran clinics, gave consultations to all departments, and performed surgeries.

A middle-aged man was admitted to the hospital with a massive bifrontal meningioma involving the sagittal sinus. I performed the craniotomy to excise the tumour. This procedure took six hours because I was working alone.

Life As a Neurosurgeons Continued

Dr. M. Ahmad, the medical director, had invited me to dinner at that time. However, I had kept him and the other doctors waiting because the operation had taken longer than planned.

I remember being called by the late Dr. Alhabbal, who was sympathetic to the lengthy neurosurgical procedures. He explained that Aramco was not used to such procedures and asked me to refer these cases to the referral committee until the president of the company, Mr. Al Neamy, would approve the idea of neurosurgery at Aramco.

When an MRI in another radiologically similar case revealed a meningioma, I scheduled the patient for a craniotomy. Histology, on the other hand, revealed that it was a tuberculoma. A week later, I received a letter asking me to explain why the preoperative diagnosis differed from the postoperative diagnosis.

Two Heads Are Better Than One

During my first two years, I established the neurosurgical service at the Aramco DHC. After reviewing numerous applications for a second neurosurgeon to work alongside me, Dr. Philippe Couillard from Canada was selected. One day he was operating on a Middle Cerebral Aneurysm (MCA) when I was called into the operating room (OR) to assist him. Together we performed an anastomosis to the segment in the MCA and the aneurysm was successfully clipped. We began working together and formed a team, dividing our time between clinic days, operating days, rounds and consultations. Dr. Couillard was one of the best people I have ever worked with. He was twenty years younger than me,

and despite the fact that our training was on opposite sides of the Atlantic, our decisionmaking, surgical techniques, and problemsolving skills were no different. In fact, they were identical, and that made us a perfect team.

Dr. Couillard and I performed the first neuroendoscopy "Codman Endoscope" procedure in the Middle East at that time.This enabled us to obtain the Codman Certificate. We purchased the Leksell Stereotactic Frame and received training in Stockholm, Sweden, Aramco's management deserves credit for this. I had previous experience at various frames with Professor John Gillingham in Edinburgh, Scotland, where I trained at the Stereotaxi.

The Best Bits & Challenges

One of the many challenging cases we dealt with was a newborn with an encephalocele at the anterior fontanelle, and the cyst contained brain tissue sharing a sagittal sinus as confirmed by MRI/MRA.





This case, performed in 1992, was actually the second case recorded in the world medical literature since 1974. The newborn had turned 5 years old when I left Aramco in the summer of 1996, and he had very mild left-sided weakness.

Another difficult case involved one of our nurses who underwent Anterior Cervical Discectomy (ACDF) for C5/6 and C6/7 discs. Due to an injury to the recurrent laryngeal nerve, she developed postoperative hoarseness of voice. Unfortunately, she did not improve and was treated by ENT specialists at DHC, the United Kingdom, and Ireland. She improved slightly over time, but one side of her vocal cords remained paralysed. Such a devastating complication had a huge impact on morale.

Life Outside Work

As for social life, I had a great time, especially after my colleague arrived. My favourite sport is English football/soccer. After passing exams and field tests, I became a referee. When my son Zuhair played, I had a lot of fun being a referee. Later, he helped me by being an assistant referee. I also took history classes, which were very interesting.



Going Back Home

When I returned to Jordan, I worked part time at Jordan University School of Medicine. Dr. Nidal Rousan, a very talented and meticulous neurosurgeon, joined me in 2003, and together we formed a successful team that was a model for others. We still run a busy service at Jordan Hospital as well as a postgraduate residency program.

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I would like to thank my colleagues and the DHC medical management team for their assistance while I was there, particularly Dr. Kamil Salamah, the general surgeon, and the late Dr. Mohammad Salamah (no relation).





If you would like to share your experience working in Saudi Arabia, email us here to submit your writing.



LETTER To the editor

By Dr. Saad Alhussain

Johns Hopkins Aramco Healthcare | **JHAH** Dhahran, Saudi Arabia

Beautiful article!

In early 1992, I spent a few months working with Professor Karmi. I was a physician in Saudi Aramco's professional development program at the time. That was only a few months before I was sponsored to begin my neurosurgery residency training in Ottawa, Canada.

It was also around this time that Dr. Philippe Couillard joined the service as a consultant.

Dr. Couillard told me on his arrival day that he is so eager to see the sand dunes. I told him that it was a simple request; simply look out the window. The team was phenomenal. Drs. Karmi and Couillard were both outstanding surgeons and humble people. I learned a lot from them, both professionally and personally.

They both left in 1996, two years before my return from training. Their finger prints are still visible and are well remembered by DHC staff and patients.



Left to Right: Dr. Karmi, Dr. Couillard

Dr. Philippe Couillard is a Canadian former neurosurgeon, university professor and politician who served as 31st Premier of Quebec from 2014 to 2018.

Between 2003 and 2008, he was Quebec's Minister of Health and Social Services.

From 1992 to 1996, he practised Neurosurgery in Dhahran, Saudi Arabia.

Establishing a Neuro-Oncology Multi-disciplinary Team Meeting (MDT) : Challenges and Rewards



By Dr Mahmoud Taha King Fahad Specialist Hospital in Dammam | **KFSH-D**

The multidisciplinary team (MDT) model of cancer care was established to ensure that cancer patient care is consistent with the best available evidence. Tumour boards have been around in the United States for 50 years. Until recently, however, their primary goal was to educate rather than improve patient care. Over the past two decades, the primary goal has shifted.

In the United Kingdom, the overhaul of cancer services and subsequent rapid adoption of MDTs in recent decades was driven primarily by political and public pressure resulting from a series of reports published in the late 1990s that highlighted wide variations in patient care. Many other European countries and Australia have rapidly adopted the MDT model for cancer care. The neuro-oncology multidisciplinary team (MDT) consists of a group of health professionals with expertise in the investigation and treatment of patients with CNS tumours.

There are currently at least four Neuro-Oncology MDT meetings taking place in Saudi Arabia.

What are the benefits of a Neuro-Oncology MDT?

1-Having shared decisions/plans in one setting.2-Adherence to standard treatments and evidence-based protocols.

3-Avoiding treatment delays, especially in malignant cases.

4-The ability to teach residents.

5-Having a valuable database for research.

What are the minimum requirements for Neuro-Oncology MDT?

1-Neuro-oncology MDTs are typically established in hospitals that house the region's oncology service and have the following services: Neurosurgery, Radiation Oncology, Medical Oncology (team members should have an interest or subspecialty in Neuro-Oncology), Neuro-Radiology and Neuro-Pathology.

2-Technically equipped venue (images and pathology slide projectors).

3-Assigned secretary for collection of cases.4-Clinical coordinators (typically a nurse with experience in oncology) for documentation, data collection, OPD scheduling and patient communication.

What should be discussed in the Neuro-Oncology MDT?

1-Ideally, all new CNS tumours. This would be difficult in a busy unit. Therefore, most MDTs usually discuss postoperative cases that require input from medical oncology and/or radiation oncology. Some cases are discussed without surgery, e.g. DIBG.

2-Follow-up cases, such as progression or recurrence of HGG (decision for further surgery vs second-line chemotherapy).

3-Occasionally, agreement on palliative care decisions for advanced or terminal cases.

At King Fahad Specialist Hospital in Dammam (KFSH-D), the Neuro-Oncology MDT was established in 2009 after a collaboration across the disciplines involved, this process took about 6 months. We now discuss about 5-7 cases per week. Almost half of the cases are new and about half are operated outside our hospital.

For cases operated outside our hospital, the pathology slides/blocks and pre- and post-operative images need to be sent to and reviewed by our pathologists and radiologists before the MDT session. One of our biggest challenges is ensuring that the pathology blocks and images are sent on time, as well as having the appropriate pre and post-operative images. Another major challenge is logistical availability, particularly in light of recent advances in molecular studies (which have led to the new WHO classifications of CNS tumours). This has increased the pressure on our laboratory to provide these new markers and obtain an accurate and up-to-date pathological diagnosis.

On the other hand, the benefits of our MDT have been great in terms of improved patient care, teaching opportunities for residents, and a valuable database collected over the years. Our team has produced over 25 papers and abstracts from our Neuro-Oncology MDT over the years.

In summary, the establishment of a Neuro-Oncology MDT in a hospital with an oncology service is highly recommended to improve patient care. Although setting up the meeting will face some obstacles (including minor issues such as arranging a fixed time and place for the meeting), the rewards in the end are great and outweigh the challenges.

Reference

Vivek Patkar, Dionisio Acosta, TimDavidson, et al. CancerMultidisciplinary TeamMeetings: Evidence, Challenges, and the Role of Clinical Decision Support Technology. International Journal of Breast Cancer, Volume 2011, Article ID 831605.



NEUROSURGICAL GUIDELINES

2020 UPDATED GUIDELINES ON THE MANAGEMENT OF HYDROCEPHALUS IN THE PAEDIATRIC POPULATION

Developed from Guidelines on the Treatment of Paediatric Hydrocephalus: Update of the 2014 Guidelines Neurosurgery, Volume 87, Issue 6, December 2020, Pages 1071-1075 (here)

By Dr. Yaser Babgi

King Fahad Medical City| KFMC Riyadh, Saudi Arabia

Hydrocephalus is a common problem we see in neurosurgical practice. The consequences of the disease and its treatment failure for the patient can be serious and affect the patient's quality of life. To date, there is no consensus on the best method of treatment; this sheds light on the need for a frequent literature review to summarise the best available evidence. This is an updated guideline of the previous one of 2014. Few changes have been made to the existing one after reviewing the available evidence till November 2019 by the task force under the Paediatric Section of the American Association of Neurological Surgeons (AANS) and the Congress of Neurological Surgeons (CNS).

We will list the new change if present in each part of the previous guidelines:

Part 2: This part discusses the management of posthemorrhagic hydrocephalus in premature infants. The new studies support the existing recommendation and also allowed the generation of a new one.

Level III Recommendation: Neuro-endoscopic lavage is a feasible and safe option for removing the intraventricular clots and may lower the rate of shunt placement.

Part 3: In this section, the technical adjuvants in shunt insertion were reviewed. There was no change in the recommendation regarding the use of endoscopy and computer-assisted electromagnetic (EM) navigation because there was no sufficient good evidence.

The class II study shows no statistically significant improvement in shunt survival; therefore, the previous level III recommendation remains, and the use of ultrasound is an option.

NEUROSURGICAL GUIDELINES

Part 4: We look at the two techniques for hydrocephalus treatment, which are either CSF shunts or ETV.

Level II Recommendation: the new studies confirm the previous recommendation that both modalities are an option.

Part 5: This part evaluates the effect of valve type on CSF shunt efficacy and survival. The new review found insufficient or poor quality studies to recommend a new change.
Part 6: Review of the efficacy of prophylactic preoperative IV antibiotics for infection prevention in shunt surgery. The new literature review found no new evidence.
Part 7: This section reviews the superiority of antibiotic impregnated shunts (AISs) over standard shunts (SS) in reducing shunt infection in paediatric hydrocephalus. This new evidence raises the recommendation from level III to level I.

Level I Recommendation: Antibiotic-impregnated shunt tubing (AIS) reduces the risk of shunt infection compared with conventional silicone hardware and should be used for children requiring shunt placement.

Part 8: This section is relevant to the management of CSF shunt infections. The available evidence did not support any new changes to the guidelines.

Part 9: This part attempts to answer what influence the entry point and position of the ventricular catheter have on shunt function and survival. Recent studies did not provide convincing evidence to change the existing evidence that both frontal and occipital entry points are an optional level III.

Part 10: The objective of this part is to evaluate the change in ventricular size as a predictor of treatment success. The small size of the cohort and the poor quality of the new studies did not support a change in the original recommendations.

2014 Guidelines: click here

PUBLIC EDUCATION

Stroke May Is National Stroke Awareness Month



PUBLIC EDUCATION

By Dr. Ismail Babelli Consultant Neurologist Riyadh





In 2007, the Saudi Stroke Society was established. The SSS aims to reduce the burden of stroke by changing how stroke is perceived and treated. This can only be accomplished through professional and public education as well as institutional changes. SSS is the voice of stroke in Saudi Arabia. For further information, click **here**



CLINICAL CHALLENGE



By Dr. Mohammed Bafaquh King Fahad Medical City | KFMC Riyadh

40-year-old female, involved in car accident; GCS 10/15. Right frontal contusion, no other injury.

Question: Draw an algorithmic approach specific to this injury?



RESIDENT'S CORNER

The Nose: A Corridor to the Brain

By Dr. Hanadi AlKathiri Supervised by Dr. Mohammed Bafaquh

Reaching the brain through the nose began in ancient Egypt as part of the mummification process, in which removal of the brain (excerebration) was achieved through a transethmoidal approach [10]. For centuries, several surgical approaches have been modified to reach the brain through the nose with the goal of pituitary tumour resection. The first successful attempt was performed by Schloffer via the superior nasal transsphenoidal in the early 19th century. At that time, several other approaches were proposed, such as trans-ethmoidal with oblique trajectory, a transpalatal approach, which was not accepted because of its complications. The most common and frightening post-operative complication was meningitis, which caused a high mortality rate[2, 3]. Throughout history, there have been two prominent approaches: Cushing's sublabial transsphenoidal approach and Hirsch's endonasal transsphenoidal approach.

The first transsphenoidal approach was performed by Cushing in adaptation of the Schloffer technique on an acromegaly patient. Hirsch described the first endonasal transseptal transsphenoidal approach under local anesthesia and remained an advocate for his endonasal approach until the end of his career. Later, Cushing converted to the inferior nasal approach of Kanavel and incorporated the sublabial incision of Halstead and used the submucosal septal resection of Kocher. Years later, Cushing's expertise in transcranial approaches increased, leading to a decrease in mortality. Cushing had a clear preference for the transcranial approach because it offered a better corridor for visualisation of the suprasellar tumour and almost complete decompression of the optic pathway [4]. For the next 35 years, the Cushing preference dominated the neurosurgical field, leading to the abolition of the transsphenoidal approach. However, a few remaining neurosurgeons continued to perform it, including Dott, a fellow of Cushing who taught it to Guiot [5]. Advances in technology and a better understanding of local complex anatomy played a significant role in the continued development of the transsphenoidal approach. The use of the cystoscope by the otolaryngologist to view the maxillary sinus aroused attention to use it as a nasal endoscope.



The Nose: A Corridor to the Brain Continued

In 1922, Dandy introduced the endoscope to neurosurgery, but it was soon abandoned due to poor visualisation. In 1950, Guiot presented intraoperative image intensification and fluoroscopy for the use of a transsphenoidal approach allowing better illumination, and in 1965, Hardy was the first to use the microscope, which allowed magnification and stereoscopic visualisation, resulting in a better outcome and wider use of the approach.

Hardy established the fundamental principles and tools of pituitary surgery, as well as his discovery of the ability to distinguish between a tumour and a normal pituitary gland with high magnification of the microscope. To date, there have been continuous advancements in advanced technology such as intraoperative MRI, frameless stereotactic image-based guidance, 3D endoscopes, and advanced transsphenoidal approaches to reach locations beyond the sella [3]. In 2014, a notable increase in the adaptation of endoscopic technique in transsphenoidal pituitary surgery and a parallel decrease in microscopic technique was noted [6].



Sagittal view demonstrating transsphenoidal

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RESIDENT'S CORNER

LESSONS LEARNT FROM RESIDENCY

A recent resident graduate reflects on his experience 1/2

By Dr. Abdulaziz Almusa

Suffice it to say that such a topic requires an extensive treatise to cover even its simplest elements. However, when I received the

request to write this paragraph, it inspired me to reflect on those six years and what lasting remarks I thought would remain carved in my memory forever. Needless to say, clinical, technical, and academic achievements are at the heart of all neurosurgical training, and I believe I can make my mentors proud in this regard. In fact, Faris Yaghmoor (a recent graduate) and I recently performed a successful endoscopic resection of a pituitary adenoma with suprasellar extension.

On the other hand, there are times during residency when situations take on a more significant emotional aspect, especially at times when a surgery takes an unexpected turn, usually involving the extremes of outcome, whether it is an unexpected complete resolution of the deficit or a devastating complication, the level of emotional energy, in my opinion, cannot be compared to any other specialty and this definitely took a toll on me, especially in the initial phases of training. As time passed and encounters continued to pile up, it dawned on me that we humans have limited control over almost any outcome. Despite doing our best, things can always take a completely different path, sometimes for the better, but also sometimes for the worse.

A bad outcome tends to be hard on both sides, but when it is unexpected, it is even harder. So, in the end, what is the lesson that has remained and will remain carved into my being?

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I say: always prepare with the utmost skill, execute with great precision and be ready for anything!



RESIDENT'S CORNER

LESSONS LEARNT FROM RESIDENCY

A recent resident graduate reflects on his experience 2/2

By Dr. Abdulaziz Almubarak



Residency is a very intense learning period in the life of a neurosurgeon. The academic environment and

learning opportunities make this a critical period that should be used efficiently by the resident. As a senior registrar who manages patients almost independently in a peripheral region of our country, I realised the importance of every round, lecture, clinic, meeting, or surgery where the teaching revolves around the resident, especially in a program where our mentors have made tremendous efforts to help us be competent physicians and provide the standard of care to our patients.

CERTIFICATES OF PARTICIPATION For Residents

Our editorial board members have issued Certificates of Contributions for residents, who contributed to our newsletter in February 2021 issue.



CLINICAL CHALLENGE

The Answer



Category: Spine - CranioCervical junction injury **Level of difficulty:** PGY-3

Reference: A. Leone, A. Cerase, C. Colosimo, L. Lauro, A. Puca, and P. Marano, "Occipital condylar fractures: a review," Radiology, vol. 216, no. 3, pp. 635-644, 2000.

NEUROSURGERY COMMUNITY

SPINE SURGERY FELLOWSHIP PROGRAMME GRADUATES

CLASS OF 2021

Congratulations to our five graduates! Thank you for your commitment to the health and wellbeing of others during such volatile times! We look forward to your future successes and contributions to the spine community. 2021 Spine Surgery Fellowship Program graduates have passed written and clinical exams after 2 years of extensive training at their centres:

Prince Sultan Military Medical City (PSMC) King Faisal Specialised Hospital (KFSH&RC) National Guard Hospital (KAMC) King Khalid University Hospital (KKUH) King Fahad Medical City (KFMC) :

We are proud to announce the graduates:

Dalia Hasan Ali

Mohamed AlDawood

Ibrahim Omer

Moteb Abo Alras

Muath Ihsan Abualfaraj

"

During these two years, they have learnt about and treated all types of spinal pathology, including but not limited to traumatic, degenerative, neoplastic, congenital spinal disease, and variant deformities. During their training, they used the most advanced technology in investigation and surgical management.

The five candidates who qualified for the exam took the written exam on March 6 and the clinical exam three weeks later on March 28. They performed very well on both exams.

We as educators are very proud of our graduates and are confident that they will be the pillars and future of spine surgery in our country.

– Dr. Abdulwahed Barnawi –

Program Director of Spine Surgery Fellowship

2022 SANS Annual Meeting

By Professor Ahmed M. Alkhani King Abdulaziz Medical City| KAMC Riyadh, Saudi Arabia

It is my pleasure and honour to invite you all to the upcoming 16th Annual Meeting of the Saudi Association of Neurological Surgery (SANS). The meeting is tentatively scheduled for March 2022 in Riyadh with

the theme "BACK TO LIFE". The theme is selfexplanatory given the situation that the entire world suffered and is still suffering because of the Covid-19 Pandemic.

King Abdulaziz Medical City, National Guard Health Affair will be proud to host the 2022 SANS annual meeting.

We were forced, like many other associations that meet around the world, to hold our 2021 meeting virtually. In that regard, it was a successful event with hundreds of

knowledge and expertise in neurosurgery, and remember those we sadly missed because of the pandemic.

I am confident that with your support we will

make our annual conference in 2022, safely and in person, another successful event. The nationally and internationally distinguished speakers and the outstanding submitted abstracts, the meeting will reflect the true picture of advanced neurosurgical practice and research in our country.

Let us all hope and pray that we will all be able to meet in Riyadh in March 2022 and in person for our SANS annual meeting. We are working hard with the members of the Scientific and Organising Committees to put on an outstanding meeting that I

our colleagues across the country and around the world attending and enjoying our webinar sessions. But we believe that in 2022 we will be "BACK TO LIFE" and be able to safely meet in person, share our

am sure you will enjoy.

Until then, please stay safe.

Professor Ahmed Alkhani President of the 16th Annual Meeting, SANS

NEWLY JOINED NEUROSURGEONS

We would like to extend our enthusiastic congratulations on their hard work. We look forward to the contributions they will make to our specialty, and the improvements they will bring to patients' lives.

Dr. Ahmed A. Najjar is an assistant professor at Taibah University in A I m a d i n a h , Almunawwarah. He is the first Saudi to

graduate from the neurosurgery residency programme at Université de Montréal. Dr. Najjar holds a master's degree in neuroinflammation.

- 2019-2020 Epilepsy Neurosurgery Fellowship, Toronto University, Canada
- 2018-2019 Functional and Stereotactic Fellowship, Toronto University, Canada
- 2018 Board certified neurosurgeon
- A special interest in the advancement of neurosurgery in regions with limited resources

PROMOTIONS & HONORS

Hearty Congratulations To Our Recently Promoted Member

This year, we are pleased and proud to announce that Dr. Amro Al-Habib has been honoured for his promotion to Professor of Neurosurgery at the

College of Medicine in King Saud University (KSU). Professor Amro's promotion is in recognition of his

accomplishments in advancing the field. Please join us in offering our hearty congratulations to Professor Amro!

BOOK NEWS

Professor Sherif Elwatidy translated ABC of Medical Learning and Teaching into Arabic. He dedicated this work to Arab Library and all those interested in medical education. In 2010, Professor Elwatidy received King AbdAllah Bin AbdelAziz International Translation Award.

Please join us in thanking Professor Sherif for his efforts to assist students and neurosurgeons in the Middle East.

IN THE SPOTLIGHT

Dr. Abdulaziz Abdulrahman Alarifi Retires After a Career of Service for Nearly 25 Years With KAMC

By Professor Ahmed M. Alkhani

King Abdulaziz Medical City | KAMC Riyadh, Saudi Arabia

It is very pleasurable to learn about the history of neurosurgery in our country. We began to see the first generation of national neurosurgery colleagues among us who had completed their neurosurgery training, practiced for years full of accomplishments and contributions to the specialty, and are now entering the retirement phase, having reached the age of sixty (or more).

Dr. Abdulaziz Abdulrahman Alarifi has left King Abdulaziz Medical City (KAMC), National Guard Health Affairs, Riyadh, to start a new chapter in his life outside neurosurgery. Dr. Abdulaziz retired in early 2021 after a nearly 25-year career of providing the highest international standards of care and a wonderful humanitarian touch to his patients.

After completing his neurosurgery training in Winnipeg, Manitoba, Canada, he began his career in the Department of Neurosurgery at King Abdulaziz Medical City (KAMC) in 1999. He made significant contributions to our department's clinical services, with a particular interest in spine surgery.

As Program Director, he led the educational activities of our residency program for many years before handing it over to Dr. Aloraidi in 2012. His teaching and support for his residents was greatly appreciated at all levels. Abu-Omar, as he prefers to be addressed, is a wonderful person, a gentleman, and a valuable member of our department.

Despite the fact that we will all miss him in the department, he has promised to come by and

attend some of our teaching and departmental activities.

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All members of the Neurosurgery team wish Abu-Omar all the best and a happy new and exciting chapter in his life.

Celebrating the retirement of Dr. Alarifi

Left to Right: Dr. Alzoabi, Dr. Aloraidi, Dr. Alarifi, Dr. Alwohaibi, Dr. Alkhani Background: the construction of the Neurosciences Centre (2017)

Left to Right: Dr. Alfurayan, Dr. Alwohaibi, Dr. Russell, Dr. Alarifi

MY STROKE OF INSIGHT: A BRAIN SCIENTIST'S PERSONAL JOURNEY - A REVIEW

My Stroke Of Insight Jill Bolte Taylor 2006

By Atika Al Sudairy

Ever wondered what a brain stroke would look like from a patient's perspective?

As a stroke survivor, Jill Bolte Taylor describes her experience of a stroke so vividly. It is unusual for someone having a stroke to describe the process of cognitive degeneration so consciously. She could sense the inner activities of her brain during the stroke.

Thus, what makes Jill's work especially different? The book is written by a neuroanatomist who suffered a stroke and therefore experienced her brain damage from a particular expert-like perspective. Dr. Taylor is a brain scientist at the Harvard Brain Tissue Resource Centre, and the brain was her area of expertise.

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Wow, how many scientists have the opportunity to study their own brain function and mental deterioration from the inside out?,"Oh my gosh, I'm having a stroke! Wow, this is so cool!

My Stroke of Insight is a 189-paged memoir written by Jill Bolte Taylor, a brain scientist and patient recovered from a stroke. All that changed on a beautiful December morning in 1996, when half of her brain became covered in blood. Her brain stroke got in the way of her ability to speak, read, write or recall any of her life. She had a long journey of recovery over a period of eight years. Through her description we get to know, at the clinical level, how the internal functioning of left

hemisphere was affected. [e.g.,"*The sounds coming out of my throat did not match the words in my brain*" (p. 55); "I could neither create/express language nor understand it." (p. 60)] One of the many things I find amazing about her description is that she defines responsibility as

The ability to choose how we respond to stimulation coming in through our sensory system at any moment in time.

Under the eyes of health care professionals, the author's experience of strokes would be considered a useful resource to increase awareness of the patient's perspective. Under the eyes of laymen, this book provides much understanding about stroke and recovery. The author has expertly turned her experience into a source of resilience for others. Jill's insistence that she is not a `stroke victim' but a `stroke survivor' runs throughout the book, determined to cope positively with her new circumstances. This experience is not only truly touching, but the descriptions, cries, and suffering are hauntingly beautiful.

Jill takes readers through a variety of touching life moments as she recovers from this stroke. She reflects in this book on the idea that being vulnerable is not synonymous with weakness; rather, vulnerability can be the birthplace of joy and peace. Jill's advice to others? "pay attention to what is going on in your brain and own your power. Beam bright!" she says.

UPCOMING EVENTS

Add these important dates to your calendar and plan to be a part of it.

2021 AANS Annual Scientific Meeting: Stronger Together-Orlando: Aug.21-25, 2021 Learn more
2021 EANS Congress- Hamburg, Germany: Oct. 03-07, 2021 Learn more
2021 CNS Annual Meeting: Vision for the Future-Austin, Texas: Oct.16-20, 2021 Learn more
XVII WFNS World Congress of Neurosurgery - Bogota, Colombia: March.13-18, 2022 Learn more

NEWSLETTER Volume 2 Issue 2 SANS

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Let's help you to make a difference in the neurological surgery field, whatever your interest, you can help further our mission by supporting our newsletter in submitting

articles and reviewing research. We always strive to make our newsletter more than just a newsletter by being informative and using them to serve the field of Neurological Surgery. We are always open to any ideas that will help us improve our newsletter.

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