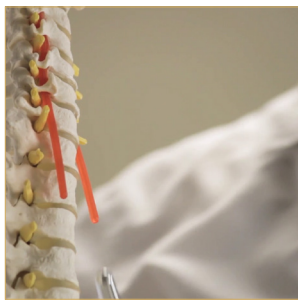
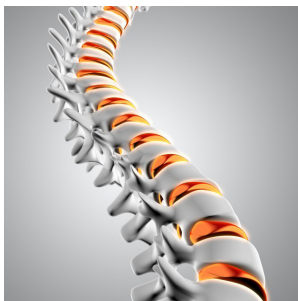

Scientific Tracks & Sessions

September 03, 2019

Spine 2019



4th International Conference on
Spine and Spinal Disorders
September 03-04, 2019 | London, UK

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Occipital Dermal Sinus tract causing Craniospinal Infection: Case report and review of literature

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Background: Congenital dermal sinus tract (DST) is a rare entity of cranial or spinal dysraphism that may occur anywhere from nasion and along the midline neuraxis from occipital to sacral regions. Craniospinal infection caused by occipital DST is even rarer. Because of their scarcity, these lesions are not well documented in the literature, often mixed with dermal sinuses in other location or other dysmorphic features. This paper reports a unique case of an infant presented with craniospinal abscesses resulting from occipital dermal sinus tract.

Methods and materials: In this paper, we report a case of a 16-month-old girl presented with high grade fever, vomiting and lethargy. She had a discharging occipital skin lesion. Her diagnosis was Occipital DST with Cerebellospinal Abscess, which was treated successfully by excision of the DST and cerebellar abscess. Histopathological examination revealed a dermoid cyst. She received 8 weeks of parenteral antibiotic treatment with a good outcome.

Results: Occipital DST is a rare condition. Its clinical presentation varies and clinical suspicion is required. Early neurosurgical intervention is important to prevent the risk of potential


complications such as abscess and bacterial meningitis.

Conclusion: This case highlights the importance of early recognition and evaluation of midline craniospinal cutaneous stigmata in infant. Further neurosurgical assessment with radiological investigations are recommended for early detection and management. Once diagnosed is made, surgical intervention and appropriate antibiotic therapy are the mainstay of treatment.

Speaker Biography

Tariq Al-Saadi is a Neurosurgical resident at McGill University-Montreal Neurological Institute in Canada. Graduated first rank with distinction from Sultan Qaboos University in Oman in 2016. After completing his internship, he joined the Department of Neurosurgery at Khoula Hospital, which is the National Trauma Center in Oman. Throughout his undergraduate and post graduate years, he has been an active member of various surgical societies with high passion for research and medical education. Has been invited as a speaker to several national and international meetings and has published in various peer reviewed journals. He is an editorial board member of the Gulf Research Collaboration Group (GRCG), which is established to conduct multi-centric high-quality research in the Gulf area.

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Utilising a human factors approach in your Spine practice

Rafid Al-Mahfoudh

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Ergonomics in healthcare has emerged as a pivotal science with novel approaches. Unprecedented levels of both waste reduction and product quality have been achieved in industry and manufacturing on the basis of process mapping, engineering principles and lean methodology.

Systems and processes that may reduce errors and improve performance in Spine surgery include standardisation and checklists (developed to enhance teamwork and improve handover) e.g. the implementation of the WHO Checklist has been shown to reduce inpatient mortality. Others include optimising the surgical environment, investigating errors, attention to ergonomics and equipment design, enhancing communication and team performance. An understanding of the principles of human factors and the implementation of this discipline can have a profoundly positive influence in spine practice from the ward to the theatre environment.

Healthcare practitioners should embrace these concepts with the ultimate goal of delivering a high quality service. We emphasise that errors and inefficiencies in patient care arise not from the solitary actions of individuals but from conflicting, incomplete, or suboptimal systems. Human factors can be used to elucidate system errors when suboptimal healthcare outcomes arise.

Speaker Biography

Rafid Al-Mahfoudh is an appointed Consultant Neurosurgeon and Complex Spine Surgeon in Brighton and London. He is senior lecturer at the University of Brighton. He is one very few surgeons with dual orthopaedic and Neurosurgical spine accreditation in addition to further specialist fellowship training in anterior skull base and minimally invasive neurosurgery in Adelaide and New York. He is honorary senior lecturer at the University of Sussex.

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Anatomic assessment of variations in Kambin's Triangle: A Surgical and Cadaver study

Ali Fahir Ozer

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The relationship of exiting root and Kambin's triangle is discussed in this article. Transforaminal endoscopic surgery as the gold standard of less invasive lumbar disc surgeries is performed through Kambin's triangle. Existing root damage is one of the most important complication for this type of surgery. Anatomic variations in Kambin's triangle may be the main reason for nerve root damage during endoscopic lumbar disc surgery.

Kambin's triangle was investigated with surgical views and cadaver studies. Thirty-four patients with far lateral disc herniation were treated with an extraforaminal approach under the microscope. On the other hand, 48 Kambin's triangles were dissected on 8 cadavers. Three main types of triangle were identified, and patients were grouped according to these 3 types of the triangle.

Only 6 of the 34 patients had type 3 triangles, which is the wide classical triangle described by Kambin; however, 17 patients had type 2, with a narrow space in the triangle, and 11

patients had type 1, with no space inside the triangle. Cadaver results were similar; only 10 of the 48 specimens had the type 3 classical triangle, whereas 23 specimens had type 2, and 15 specimens had type 1 triangles. Our results disclosed narrowed or no space in 82.4% of the patients and 79.2% of the cadavers.

We observed that a wide and safe room of the triangle may not be exist in some patients. Therefore, more care must be taken during endoscopic lumbar disc surgery to avoid nerve damage.

Speaker Biography

Ali Fahir Ozer is currently working as a Neurosurgeon and academic staff at the Koc University, Department of Neurosurgery, and at the VKV American Hospital (Istanbul, Turkey). His Clinical interest focuses on spine surgery. Dr. Ozer's research focuses on biomechanics Of spine, and dynamic stabilization of spine. He has authored or co-authored well over 70 papers. He is the member of advisory board and reviewer of many scientific journals. Currently, he is a member of TNS, ISAS, NASS, AOSpine, and Eurospine.

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 Notes:

Neurological recovery following Traumatic Spinal Cord injury: A systematic review and meta-analysis

Richam Faissal El Hossain Ellakkis

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This study aims to summarize the current evidence on neurological recovery following TSCI by use of a meta-analytical approach, and to identify injury, treatment, and study variables with prognostic significance.

A literature search in MEDLINE and EMBASE was performed, and studies reporting follow-up changes in American Spinal Injury Association (ASIA) Impairment Scale (AIS) or Frankel or ASIA motor score (AMS) scales were included in the meta-analysis. The potential effect of severity, level and mechanism of injury, type of treatment, time and country of study, and follow-up duration were evaluated using meta-regression analysis.


A total of 114 studies were included, reporting AIS/Frankel changes in 19,913 patients and AMS changes in 6920 patients. The AIS/Frankel conversion rate was 19.3% (95% CI 16.2–22.6) for patients with grade A, 73.8% (95% CI 69.0–78.4) for those with grade B, 87.3% (95% CI 77.9–94.8) for those with grade C, and 46.5% (95% CI 38.2–54.9) for those with grade D. Neurological recovery was significantly different between all grades of SCI severity in the following order: C > B > D > A. Level of injury was a significant predictor of recovery; recovery rates followed this pattern: lumbar > cervical and thoracolumbar >

thoracic. Thoracic SCI and penetrating SCI were significantly more likely to result in complete injury. Penetrating TSCI had a significantly lower recovery rate compared to blunt injury (OR 0.76, 95% CI 0.62–0.92; $p = 0.006$). Recovery rate was positively correlated with longer follow-up duration ($p = 0.001$). Studies with follow-up durations of approximately 6 months or less reported significantly lower recovery rates for incomplete SCI compared to studies with long-term (3–5 years) follow-ups. The authors demonstrated how neurological recovery after TSCI is significantly dependent on injury factors, but is not associated with type of treatment or country of origin. Based on these results, a minimum follow-up of 12 months is recommended for TSCI studies that include patients with neurologically incomplete injury.

Speaker Biography

Richam Ellakkis has completed his graduation in Medical School at the Federal University of Mato Grosso do Sul and the residence of Neurosurgery at Hospital de Base, São José do Rio Preto. Fellowship in Skull Base Tumors and Neurovascular at University of São Paulo. At present he is living in Foz do Iguaçu in the position of Neurology and Neurosurgery Coordination at Hospital Municipal.

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Microelectrode recording and deep Brain stimulation

Amal Mokeem

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Introduction: Microelectrode recording (MER) Defined as Neurophysiological Technique that detect and amplifies the activity of Individual Single Neural Units.

Mechanism of Deep Brain Stimulation (DBS):

*HFS suppresses the activity of STN, STN neurons discharge spontaneously at a frequency of ~ 20 Hz.

*PD they became hyperactive with an average firing ~ 40Hz.

*DBS HFS at >100Hz, STN will increase firing during the initial stimulation period after which they will fail to respond secondary to inactivation of Na⁺ channels, result in synaptic inhibition.

*This stimulation induced activation of inhibitory presynaptic terminals result reduction of pathologic activity and its transmission, and subsequent improvement in information processing high likely responsible for amelioration of motor symptoms during DBS

- The Food and Drug Administration (FDA) approved DBS as a treatment for:
- Essential tremor in 1999
- Parkinson's disease in 2002
- Dystonia in 2003

Methods: Patients selection criteria is important.

A number of stimulation techniques may be performed during movement disorder surgery. Used either:

*To asses' side effect (proximity to structures wish to avoid)

*To assess the potential clinical effect of chronic stimulation.

Conclusion: Deep Brain Stimulation (DBS) is safe procedure.

It is safety Greatly depend on:


- The quality of the instruments.
- The method of stereotactic planning.
- The experience of the surgical and neurophysiology team.

Complication of Deep Brain Stimulation (DBS) could be Numbness, tingling, Symptomatic subdural hemorrhages, Infection, Hardware issues.

Speaker Biography

Amal Mokeem is a Consultant Clinical Neurophysiologist in the department of Neurosciences at King Faisal Specialist Hospital/ Riyadh. Assistant professor at AL-Faisal University. Program Director of Clinical Neurophysiology fellowship program and technologist training program. She is honored to be the First Saudi Neurophysiologist physician experienced in the field of deep brain stimulation (DBS) and intraoperative microelectrode recording (MER) in the Kingdom of Saudi Arabia.

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PRP in Orthopedic Surgery

Ahmed Al-Suwaidi

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Platelet-Rich Plasma (PRP) therapy is an emerging regeneration therapy to: Relieve pain, Promote accelerated healing MSK conditions. High platelet concentrations, mixed with anticoagulant degranulation of platelet, release of GF & bioactive proteins from α -granules. Effective, reliable, easily applied & low-cost application in terms of pain, functional status, as well as cartilage regeneration.

Speaker Biography

Ahmed Al-Suwaidi is the Head of the department in Sharjah Kuwait Hospital and Deputy Member of Orthopedic Technical Committee, UAE. His field of interest includes Orthopedics Surgery.

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Functional outcome in unstable Hangman's fracture managed with anterior decompression and stabilization with cervical locking plate and tricortical bone graft

Vaibhav Jain

AIIMS Bhopal, India

Between 2010 and 2016, 44 patients (range 19-75 years) with unstable hangman's fracture underwent anterior decompression and stabilization with cervical locking plate and tricortical bone graft in our institution. According to the Levine – Edwards classification all patients were unstable type with Type Ia–6(13.6), type II 35(79.5%), Type II (0), Type III (6.8). The mean period of follow up was 17 months (range 6 to 48 months). None of the patient has worsening of neurological deficit postoperatively. Neurological recovery was observed in all 9 patients. All patients were relieved from axial pain. All patients showed solid fusion with no complication related to bone graft and plate .The method in our study is feasible and safe method in treating Hangman's fracture, with the benefit of high primary stability, anatomical reduction and direct decompression of the spinal cord. To study the functional outcome in unstable Hangman's fracture managed with anterior decompression and stabilization with cervical locking plate and tricortical bone graft .44 patients (range 19-75 years) with unstable hangman's fracture were included in study. According to the Levine- Edwards classification all patients were unstable type with Type Ia

-6(13.6), type II 35(79.5), Type III (6.8). The mean period of follow up was 17 months. None of the patient has worsening of neurological deficit postoperatively. Neurological recovery was observed in all 9 patients. All patients were relieved from axial pain. All patients showed solid fusion with no complication related to bone graft and plate. The method in our study is feasible and safe method in treating Hangman's fracture, with the benefit of high primary stability, anatomical reduction and direct decompression of the spinal cord.

Speaker Biography

Vaibhav Jain has completed his M.S. orthopaedics from Indira Gandhi Medical College Shimla in the year 2016. He completed his Fellowship in spine surgery from Hosmat Hospital Bangalore. He has presented scientific papers in national, zonal and state conferences. He has been invited as a faculty in North zone orthopedic association conference 2018 (NZOACON 2018). He received a BEST PAPER AWARD in NZOACON 2018. He has published 2 papers on cervical spine injury in PUBMED indexed journal. Currently he is working as Senior Resident in Department of orthopaedics AIIMS Bhopal and actively involved in planning and management of spinal disorder in the department.

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Philosophy and strategy in the Surgical Treatment of ASI

Pier Paolo Mura, Silvia Casula, Maurizio Piredda, Luisanna Gambula and Francesca M Meloni

University of Vertebral Surgery and Scoliosis Center, Italy

Study: Adolescent idiopathic scoliosis surgery has been going on for many decades. Our operating series began in 1992 and has continued over the years with a certain numerical constancy, up to now, having operated some hundreds of patients.

Objectives: The aim of surgery of severe adolescent idiopathic scoliosis is to rebalance the spine, stabilizing the correction obtained to avoid further aggravation of the deformity.

Methods: Since 2012 we use a prosthetic system associated with a philosophy of correction. We have always modeled the bar on the sagittal plane and corrected the scoliosis by translation, then performing a real direct derotation.

We have associated compression and distraction maneuvers in the selected cases. We have carried out systems rich in instrumentation, in general, screws and we have connected them with Cobalt Chrome bars.

Results: The results are good in terms of correction and

therefore rebalancing of the rachis and therefore of the shoulders and pelvis, maintenance of the correction obtained and also a discrete reduction of the hump. We have not been free from short- and medium-term complications.

Conclusions: The aim is to rebalance the spine and stabilize it in the arthrodesis area to avoid its development. They say that after one year from this surgery the patient can perform a gymnastic activity, even in a competitive nature.

Speaker Biography

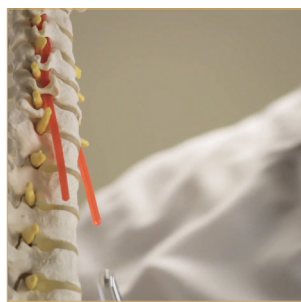
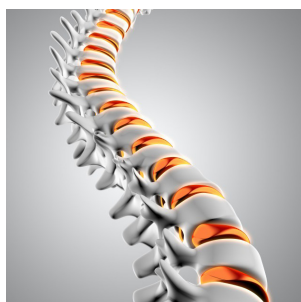
Pier Paolo Mura has completed his Specialization in Orthopedics and Traumatology from the University of Cagliari, Italy at the age of 35 years. He is Team manager of Spinal Surgery Unit and Scoliosis Center Policlinico Sant'Elena, Kinetika Sardegna Gruppo Korian, Quartu Sant'Elena, Italy. Surgical treatment of spinal diseases, with particular reference to degenerative diseases and deformities 6000 operations carried out as principal surgeon. He has over hundreds of publications, and his publication an editorial board member of reputed Journals.

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Young Researcher Forum

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Complications, reoperations, readmissions and length of hospital stay in 34,639 surgical cases of Lumbar Disc Herniation

Olaf Fjeld^{1,2}, Lars Grøvre³, Jon Helgeland⁴, Milada Cvancarova Småstuen^{1,5}, Tore Kristian Solberg^{6,7}, John-Anker Zwart¹ and Margreth Grotle^{1,5}

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Measuring rates of complications, reoperations, readmissions, and length of hospital stay contributes important information regarding the quality and costs of surgical and hospital care. This information is valuable, not only in relation cost-effectiveness and the framing of clinical guidelines on a population level, but also in the conversations between patients and clinicians. The objective of this longitudinal observation study was to determine the rate of unfavourable events such as complications, reoperations, and readmissions for patients operated for lumbar disc herniation over a 15-year period from 1999 to 2013. Further, to investigate the impact of age, sex, comorbidity, education, civil status, income, and regional health authority affiliation on the rate of such events. The study showed that surgery

for lumbar disc herniation has very low mortality ($p < 0.001\%$) and fewer than 7% of patients experience an unfavourable event such as a reoperation, surgical complication, or hospital readmission. Whether this rate is acceptable must however be considered in relation to the health gains achieved by lumbar disc surgery.

Speaker Biography

Olaf Fjeld studied medicine at Trinity College Dublin, Ireland. He currently works as a Neurologist at the Oslo University Hospital and is expected to complete his PhD on "poor outcomes in Sciatica" within the present year.

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