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## Education

### **M301. Aseptic Meningitis, 20 Years Later: Complication of Transsphenoidal Surgery**

*Sanam Anwer, Apoorv Prasad, Cheryl L. DuMond and Amy Sanders. Syracuse, NY*

A 47 year old female presented after sudden onset severe headache. Patient had past medical history of pituitary adenoma treated with transphenoidal/transnasal hypophysectomy in 1995. Physical examination was benign without meningeal signs. CTA head and neck ruled out acute intracranial pathology. Patient became febrile without elevated white count. LP revealed 365 white blood cells, with 59% monocytes. No neutrophilia was seen. Patient was started on empiric treatment with ceftriaxone, vancomycin, ampicillin, and acyclovir for meningitis. CSF bacterial/fungal cultures and viral PCRs were negative, and blood cultures revealed no growth. Possibility of CSF leak was explored via rigid nasal endoscopy by ENT which showed clear, pulsating fluid in sphenoid sinus. Beta-2 transferrin was detected in sample of nasal fluid. Patient subsequently had a lumbar drain temporarily placed by neurosurgery followed by endoscopic repair of CSF leak.

CSF leak is a complication of transsphenoidal surgery for pituitary and parasellar region, the risks being estimated as 13% in some studies. CSF leaks are commonly reported within a week of the surgery but rarely after 10 years. In our case report the patient presented with CSF leak meningitis approximately 20 years after pituitary surgery which has not been seen previously.

### **M302. Evaluation of Stereoscopic 3D Based Educational Contents for Long-Term Memorization**

*Aamir Saeed Malik, Hafeez Ullah Amin, Nasreen Badruddin, Nidal Kamel, Rana Fayyaz Ahmad and Wajid Mumtaz. Bandar Seri Iskandar, Perak, Malaysia*

The aim of this study is to compare stereoscopic 3D based and 2D based educational contents for long-term memorization using electroencephalogram (EEG) signals.

Sixty eight healthy young adults were equally divided into 2D group and stereoscopic 3D (S3D) group in such a way that their fluid intelligence and age were controlled between groups. S3D and 2D groups were exposed to S3D based and 2D based educational contents, respectively, for learning complex human anatomy concepts. The duration of contents was 30 minutes long and exactly after two months of retention they were asked to take a memory recall test of twenty multiple choice questions. The EEG signals were recorded during the recall session.

The behavioral responses of both groups were not significant ( $p > 0.05$ ). However, the EEG source analysis revealed significant differences between 2D and S3D groups for long-term memorization ( $p < 0.05$ ) in the BA 7, BA 10, BA 11, and BA 25. The recall of S3D contents involved widespread brain neuronal network as compared to 2D contents.

In conclusion, human brain processed the S3D contents differently for memorization than 2D contents. The differences may be due to depth perception in S3D contents.

**Study supported by:** HICoE grant for CISIR (grant no. 0153CA-002), Ministry of Education (MOE), Malaysia.

### **M303. Increasing Faculty Involvement in Educational Activities**

*Augusto Miravalle, John Corboy, Dianna Quan, William Jones, Lauren Frey and Alina Rich. Aurora, CO*

As hospitals and medical practices utilize a pay for service reimbursement schedule, it is often difficult to entice providers away from their clinical practices and devote time to teaching or providing educational activities. The University of Colorado School of Medicine Department of Neurology, aiming to encourage a greater involvement with educational activities, developed a system for tracking and measuring educational relative value units (eRVUs) and compensate faculty accordingly. A committee was established in order to identify which educational activities should be tracked and what metrics should be considered when tracking the activities. The committee identified two main metrics for determining the importance of an activity: time and relevance to the department. A matrix was developed to show activities along the spectrum of time spent preparing for and executing the activity versus the relevance the activity has to the department. Each faculty member's activity within the department was then plotted and measured on the matrix. The final sample consisted of 38 faculty members with 24 education-associated items on the matrix. With the workload for physicians ever increasing, providing monetary incentives for educational activities is essential for the training of future generations of neurologists.

Study supported by: CONSULTING: Teva; Genzyme; Accelerated Cure Project; Questcor; Putnam Associates (2014 \$300.00); Mallinckrodt; Biogen Idec; Medscape; Clinical Studies As Primary Investigator or Co-investigator; Roche; Biogen; NIH; Genentech; Teva; Osmotica; Accelerated Cure Projects.

### **M304. A New Method of Eliciting Pyramidal Tract Impairment in Adults**

*Ferdinand Osuagwu, Usha Pasupuleti, Devakinanda Pasupuleti and Ronald Bradley. Saginaw, MI and East Lansing, MI*

**Background and Purpose:** The most widely utilized plantar reflex is the Babinski reflex and it has its own share of limitations with different reliability and consistency among different examiners. This made us to suggest a new way of eliciting pyramidal tract dysfunction in adults

**Methods:** 168 adult subjects were examined for the new sign in addition. It consists of just an observation of the



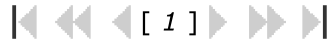
**Journal Summary List**

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Journals from: search Full Journal Title for 'ANNALS OF NEUROLOGY'

Sorted by:

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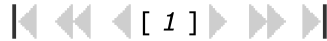


*Ranking is based on your journal and sort selections.*

Mark	Rank	Abbreviated Journal Title <i>(linked to journal information)</i>	ISSN	JCR Data						Eigenfactor <sup>®</sup> Metrics	
				Total Cites	Impact Factor	5-Year Impact Factor	Immediacy Index	Articles	Cited Half-life	Eigenfactor <sup>®</sup> Score	Article Influence <sup>®</sup> Score
<input type="checkbox"/>	1	<a href="#">ANN NEUROL</a>	0364-5134	32934	9.977	10.792	1.970	167	9.9	0.06054	4.176



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Rank in Category: ANNALS OF NEUROLOGY

Journal Ranking *i*

For 2014, the journal ANNALS OF NEUROLOGY has an Impact Factor of 9.977.

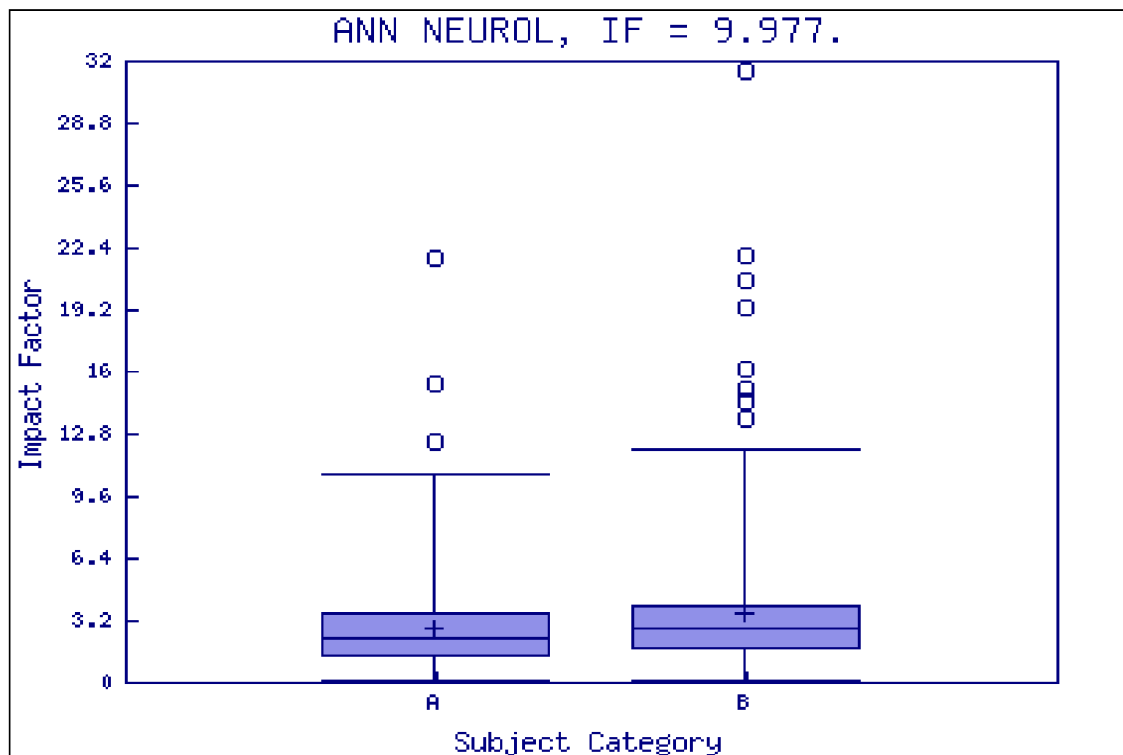
This table shows the ranking of this journal in its subject categories based on Impact Factor.

Category Name	Total Journals in Category	Journal Rank in Category	Quartile in Category
CLINICAL NEUROLOGY	192	5	Q1
NEUROSCIENCES	252	12	Q1

Category Box Plot *i*

For 2014, the journal ANNALS OF NEUROLOGY has an Impact Factor of 9.977.

This is a box plot of the subject category or categories to which the journal has been assigned. It provides information about the distribution of journals based on Impact Factor values. It shows median, 25th and 75th percentiles, and the extreme values of the distribution.





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