

hensive search terms and collected data from: USA, Canada, Finland, and Japan, as well as worldwide search volume. Potential seasonal variations in the data were assessed by comparative non-parametric tests and curve-fit regression model. *Results:* Our analyses revealed that USA had the highest median search scores (115 vs. 86, 46, 46 for Finland, Canada and Japan, respectively). The term “brain aneurysm” was the commonly used search term among countries, followed by “cerebral aneurysm”. There was no evidence of seasonality in any of the countries studied on both univariate tests and regression time-adjusted analysis. *Conclusions:* There are no seasonal variations in internet search query volume for SAH. Further studies are needed to explore whether online search volumes correlate with the actual incidence of SAH.

## P.050

### Minimally invasive disconnection of spinal dural arteriovenous fistulas in a hybrid neurovascular operating room

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*Background:* Hybrid neurovascular operating rooms offer significant advantages for vascular neurosurgery. In 2008, we installed North America’s first robotic intraoperative rotational 2D/3D angiography unit in a neurosurgery operating room. To date, 200 procedures have been performed. *Methods:* In selected cases of spinal dural arteriovenous fistula (dAVF) requiring surgical disconnection, intraoperative spinal angiographic roadmapping, angiographic image overlay onto the skin and surgically exposed spine, and laser cross-hair image guidance were utilized to accurately determine the location and trajectory of the draining vein. *Results:* In four cases of spinal dAVF, a minimally invasive approach was employed, via either single-level (N=2) or two-level (N=1) hemilaminectomy. Techniques used included: angiographic roadmap / image overlay and intraoperative fluoroscopic with laser light guidance. These provided sub-centimeter accuracy in localizing the path of the draining vein. Surgical incision lengths ranged between 4 to 5 cm, with the shortest incision measuring only 4.2 cm. Complete cure was obtained in all cases, with no untoward complications. *Conclusions:* Hybrid neurovascular operating room technology can facilitate the use of minimally invasive approaches to spinal dural AVF disconnection.

## P.051

### Validation of the unruptured intracranial aneurysm treatment score against “real-world” MDT decisions

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*Background:* Intracranial aneurysms are relatively common and often incidentally detected. Elective treatment may eliminate the risk of future hemorrhage, but carries risks of permanent deficit or death. Case-control studies have suggested factors predisposing to aneurysm rupture as well as risks of elective aneurysm repair. A clinical tool was recently developed to weigh benefits of repair against treatment risks. We evaluate its performance against real-world clinical decisions made by a cerebrovascular multidisciplinary team

(MDT). *Methods:* Chart review of all patients with unruptured intracranial berry aneurysms (UIA) discussed at cerebrovascular MDT rounds 2008-2015. Management decisions and clinical outcomes were recorded. The Unruptured Intracranial Aneurysm Treatment Score (UIATS) was calculated for each patient (each aneurysm in the case of multiple UIA). *Results:* We identified 240 patients with a total of 279 aneurysms. UIATS recommended aneurysm repair in 79 cases, conservative management in 88 cases, and was equivocal in 112 cases. Where the UIATS gave a clear decision, that decision was concordant with the MDT decision in 119/167 cases (71%). Discordant decisions often related to the presence of comorbidities. Clinical outcomes did not differ in cases where the recommendations were clearly concordant vs. discordant. *Conclusions:* The UIATS may provide guidance to non-expert clinicians. It did not outperform the MDT.

## MULTIDISCIPLINARY - OTHER

## P.053

### Development of an EEG curriculum for icu nurses to facilitate real time screening of continuous EEG data for seizures in critically ill adults

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*Background:* Nonconvulsive seizures (NCSz) occur commonly in critically ill patients and are harmful. Diagnosis requires detection with continuous electroencephalography (cEEG) that necessitates frequent interpretation by experts. This is often not possible, and requires large amounts of resources. Screening level interpretation of cEEG by ICU nurses to facilitate timely expert diagnosis may be one solution. *Methods:* Kern’s approach to curriculum development was utilized to inform creation of a cEEG curriculum for ICU nurses. *Results:* A needs assessment revealed 80%, 94%, and 100% of nurses lacked comfort in basic seizure/EEG principles, EEG and CDSA interpretation respectively. The most requested method of learning (76%) involved simulation. A spiral curriculum of 15 interactive online tutorials with corresponding practice/simulation modules providing instant feedback was developed. To evaluate curriculum impact, time spent on modules, improvement in nursing knowledge, and diagnostic accuracy will be evaluated using pre and post curriculum tests. Participant satisfaction will be evaluated using electronic surveys. *Conclusions:* Development of a curriculum to teach ICU nurses basic screening diagnostic skills for NCSz is possible. Moving forward, we hope to refine and validate this learning tool and formally implement its use to help screen for NCSz prior to expert interpretation.