

(17.36  $\mu\text{m}^2$  vs. 12.42  $\mu\text{m}^2$ ;  $p = 0.0038$ ). There was no statistically significant difference in mean areas of hemorrhage between traditional brain retractors and tubular retractors (3.43  $\mu\text{m}^2$  vs 3.60  $\mu\text{m}^2$ ;  $p = 0.8297$ ). **Conclusions:** Tubular retractors are associated with significantly less edema in surrounding brain than traditional retractors. On histopathological merits, this study supports the application of tubular retractors over traditional retractors.

## P.212

### Demographic Trends in Canadian Neurosurgery Training & Academic Neurosurgery

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**Background:** Exploring current trends in career outcomes can guide further expansion and diversity in neurosurgery demographics, as well as inform medical trainees of qualifications required for a career in neurosurgery. This study therefore aims to explore temporal trends and gender distribution in training, teaching, and leadership positions among currently practicing neurosurgeons. **Methods:** A list of practicing Canadian neurosurgeons and their certification year, degrees, fellowships, and teaching positions was created using publicly available information and phone/email confirmation by surgeons. **Results:** We identified 297 neurosurgeons currently practicing in Canada (F=32, M=265). There was a significant trend towards a greater number of neurosurgical staff having at least one advanced degree or fellowship over time ( $p=0.0012$ ,  $p=0.0048$  respectively), with no significant difference between proportions of males and females. Within academia, women represent 33% of adjunct professors, 8% of associate professors, and 15.2% of full professors. Two neurosurgical departments in Canada are led by women. **Conclusions:** Literature shows there is an underrepresentation of women in neurosurgery, particularly in higher-ranking teaching and leadership positions, yet our results suggest there is no significant differences in qualifications between males and females. Further exploration is needed to identify reasons underlying these trends and propose solutions to promote growth in the field.

## P.213

### Long-Term Improvement Of Gait And Cognition After Primary Endoscopic Third Ventriculostomy (ETV) In Adult Obstructive Hydrocephalus

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**Background:** Adults with obstructive hydrocephalus often present with cognitive and/or gait dysfunction in addition to

symptoms of raised ICP. We previously reported improvement of cognitive and gait function 3 months following primary adult ETV. This abstract presents long-term results in this group. **Methods:** Obstructive hydrocephalus was identified based on tri-ventriculomegaly on CT and/or MRI. Gait velocity (10 m timed gait) and cognitive function (Montreal Cognitive Assessment [MoCA]) were measured at two timepoints: pre-ETV and  $\geq 9$  months post-ETV. **Results:** Sixteen adults underwent primary ETV and completed a long-term assessment. Mean age was 60 years and 10 (63%) were male. Etiology: 10 (62.5%) congenital and 6 (37.5%) acquired. Mean long-term follow-up time for cognitive and gait assessments was 14.4 and 13.7 months, respectively. The long-term MoCA within patient median change was +2 points ( $n = 15$ ;  $p = 0.007$ ). Group medians were 23/30 (pre-ETV) and 26/30 (post-ETV). The long-term gait velocity within patient median change was +0.4 m/s ( $n = 12$ ;  $p < 0.001$ ). Group medians were 0.7 m/s (pre-ETV) and 1.3 m/s (post-ETV). **Conclusions:** ETV in adults with obstructive hydrocephalus results in long-term improvement of cognition and gait velocity when assessed  $\geq 9$  months post-ETV. Larger cohorts will determine the generalizability of these results. Hydrocephalus Association supported project.

## P.214

### Improved Cognition After Endoscopic Third Ventriculostomy In Adult Obstructive Hydrocephalus Using Repeatable Battery For The Assessment Of Neuropsychological Status

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**Background:** In addition to symptoms of raised ICP, adults with obstructive hydrocephalus often present with cognitive dysfunction. We previously reported the improvement of global cognition at 3 and 12 months following primary adult ETV using the Montreal Cognitive Assessment (MoCA). This abstract presents multidomain cognitive testing using the RBANS. **Methods:** Obstructive hydrocephalus was identified based on tri-ventriculomegaly on MRI findings with a site of obstruction. Cognitive function was measured using the RBANS and MoCA at two timepoints: pre-ETV and post-ETV. Within patient analysis was conducted using the Wilcoxon Signed Rank Test. **Results:** Nine adults underwent ETV, 7 primary and 2 secondary (ETV after shunt malfunction), and completed follow-up assessment. Mean age was 33 years old and 7 (78%) were female. Etiology: 3 (33%) congenital and 6 (67%) acquired. Mean follow-up time was 4.5 months. The RBANS total scaled score, attention, and delayed memory index scores were significantly improved post-ETV ( $p < 0.05$ ). Immediate memory, language, and visuospatial index scores were not significantly different. Secondary analysis shows that picture naming and figure recall subtests were significantly improved. MoCA total scores were not significantly different. **Conclusions:** ETV in adults with obstructive hydrocephalus results in improvements in global cognition, attention, and delayed memory on RBANS testing.