

A.4

Neurological events following COVID-19 vaccination: does ethnicity matter?

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Background: Neurological complications following vaccinations have been described before, but the rates of neurological complications, and their variation by ethnicity, following COVID-19 vaccine are not well-known. **Methods:** We conducted a population-based cohort study of Ontarians aged 18 years and over who received their first COVID-19 vaccine, and followed them for six weeks to estimate the incidence of neurological events, ascertained using validated case definitions based on ICD-10 codes. Ethnicity was defined using last name surname algorithm. We used multivariable logistic regression models, adjusting for age, sex, and vaccine-type to evaluate ethnic differences. **Results:** In the included 10,063,466 Ontario residents, incidence of GBS (n=72), CVST (n=52) and transverse myelitis (n=25) after first COVID-19 vaccine was rare. The crude rate of ischemic stroke (240/1,000,000 people) was the highest followed by Bell's palsy (54/1,000,000). Compared to the general population, the adjusted odds of ischemic stroke and Bell's palsy were lower in Chinese (aOR_{Bell's} 0.62; 0.39-0.98 and a OR_{ischemic stroke} 0.74; 0.59-0.91) and South Asians (aOR_{Bell's} 0.83; 0.52-1.31 and aOR_{ischemic stroke} 0.84; 0.65-1.08). **Conclusions:** The incidence of neurological events following COVID-19 vaccine is low, and it varies by ethnicity. Our findings should encourage vaccination against COVID-19 in all ethnic groups.

A.5

Investigating myelitis and rheumatologic disease overlap in the era of neuromyelitis optica spectrum disorder and MOG Antibody-associated disease

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Background: Historical studies of myelitis associated with rheumatologic disease may have featured patients with unrecognized aquaporin-4 (AQP4)-IgG seropositive neuromyelitis optica spectrum disorder (NMOSD) or MOG-IgG associated disease (MOGAD). **Methods:** Cases with rheumatologic disease and myelitis unrelated to multiple sclerosis (MS) seen at Johns Hopkins between 2018-2023 were identified by medical record query and chart review. Descriptive statistics were used to compare AQP4-IgG seropositive to seronegative subjects. **Results:** Of 234 patients screened, 190 were excluded (144 did not have inflammatory myelopathy, 46 had MS), resulting in a cohort of 44 patient (43 female, mean age 45 years [SD±14]). Twenty patients (45%) had AQP4-IgG seropositive NMOSD, 1 (2%) MOGAD, 20 (45%) other myelitis, and 3 (7%) AQP4-IgG

seronegative NMOSD. AQP4-IgG seropositive subjects were more likely to have longitudinally extensive central cord lesions than seronegative patients. Most (n=43; 98%) were tested for serum AQP4-IgG, and 20 (46%) were positive by cell-based assay (CBA) or enzyme-linked immunosorbent assay. Of 24 AQP4-IgG seronegative patients, 8 were tested only by ELISA/unknown assay. Serum MOG-IgG was positive in 2/18 subjects. **Conclusions:** AQP4-IgG seropositive NMOSD was common in this cohort of patients with rheumatologic disease and myelitis, with the caveat that several seronegative cases were never tested with gold-standard CBA.

A.6

INDIGO: a global, randomized, double-blinded, Phase 3 study of vorasidenib versus placebo in patients with grade 2 glioma with an IDH1/2 mutation (mIDH1/2)

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Background: We evaluated vorasidenib (VOR), a dual inhibitor of mIDH1/2, in patients with mIDH1/2 glioma (Phase 3; NCT04164901). **Methods:** Patients with residual/recurrent grade 2 mIDH1/2 oligodendroglioma or astrocytoma were enrolled (age ≥12; Karnofsky Performance Score ≥80; measurable non-enhancing disease; surgery as only prior treatment; not in immediate need of chemoradiotherapy). Patients were stratified by 1p19q status and baseline tumor size and randomized 1:1 to VOR 40 mg or placebo (PBO) daily in 28-day cycles. Endpoints included imaging-based progression-free survival (PFS), time to next intervention (TTNI), tumor growth rate (TGR), health-related quality of life (HRQoL), neurocognition and seizure activity. **Results:** 331 patients were randomized (VOR, 168; PBO, 163). The median age was 40.0 years. 172 and 159 patients had histologically confirmed oligodendroglioma and astrocytoma, respectively. Treatment with VOR significantly improved PFS and TTNI. Median PFS: VOR, 27.7 mos; PBO, 11.1 mos (P=0.000000067). Median TTNI: VOR, not reached; PBO, 17.8 mos (P=0.000000019). Treatment with VOR resulted in shrinkage of tumor volume. Post-treatment TGR: VOR, -2.5% (95% CI: -4.7, -0.2); PBO, 13.9% (95% CI: 11.1, 16.8). HRQoL and neurocognition were preserved and seizure control was maintained. VOR had a manageable safety profile. **Conclusions:** VOR was effective in mIDH1/2 diffuse glioma not in immediate need of chemoradiotherapy.