Clinical Trials Update

Monoclonal Antibody Overcomes Migraine Treatment Failure

Eptinezumab succeeded in preventing migraine headaches in patients for whom traditional oral prevention treatments had failed. The finding is from an international phase 3b trial that examined whether the intravenously administered monoclonal antibody is as safe and effective in patients with difficult-to-treat migraines as it was in a larger group of people with migraines who participated in previous phase 3 trials.

The more recent trial, published in The Lancet Neurology, included a 24-week placebo-controlled period and a 48-week dose-blinded extension, which is ongoing. The 891 participants, who experienced treatment failure with 2 to 4 preventive medications within the past 10 years, were randomly assigned to receive eptinezumab 100 mg, eptinezumab 300 mg, or placebo administered at baseline and at week 12.

Both doses of eptinezumab significantly reduced the number of average monthly migraine days compared with placebo. The change in mean monthly migraine days during weeks 1 to 12 from baseline was 4.8 fewer with eptinezumab 100 mg, 5.3 fewer with eptinezumab 300 mg, and 2.1 fewer with placebo. The reduction in migraine days continued during the second dosing period, lasting from week 13 to week 24. Patients in the eptinezumab groups were significantly more likely than those who received placebo to experience at least a 50% reduction in monthly migraine days.

Among all the trial participants, 5% to 7% had treatment-emergent adverse events; serious adverse events were uncommon.

Effect of Modified Chinese Diet Is Comparable to Antihypertensives

Among people in China with mild hypertension, eating a heart-healthy diet that fit traditional regional Chinese cuisines significantly lowered their blood pressure within 4 weeks, according to a study published in Circulation.

One-fifth of the world’s population routinely eats a traditional Chinese diet, including Chinese people living in the US. The Chinese diet has become increasingly unhealthful, with fewer grains, legumes, fruits, and vegetables and more meat, eggs, and edible oil. But Western heart-healthy diets aren’t compatible with Chinese regional cuisines. So the investigators created the Chinese heart-healthy (CHH) diet modified to fit 4 regional Chinese cuisines. The diet slashed daily sodium from 6000 mg to 3000 mg, reduced fat, doubled dietary fiber, and increased protein, carbohydrates, and potassium.

The study, conducted in China, included 265 Chinese adults with systolic blood pressure between 130 and 159 mm Hg. After a 7-day run-in period when they ate their usual diets, participants were randomly assigned to a 28-day diet of prepared CHH foods that were adapted to their regional cuisines or to their usual cuisine.

Participants who ate the heart-healthy diet lowered their systolic blood pressure by an average 10 mm Hg and diastolic blood pressure fell by an average 3.8 mm Hg compared with the control group. The reduction in blood pressure, which was consistent among the 4 cuisine groups, was comparable with the effect of antihypertensive medications.

The CHH diet, if sustained, could reduce major cardiovascular disease by 20%, heart failure by 28%, and all-cause death by 13%, according to the authors.

Too Little Salt Is Harmful for Some Patients With Heart Failure

Severely restricting salt intake led to a worse prognosis for 1713 patients with heart failure with preserved ejection fraction (HFrEF) in a secondary analysis of the Treatment of Preserved Cardiac Function Heart Failure With an Aldosterone Antagonist, or TOPCAT, trial, which evaluated whether spironolactone could reduce poor outcomes resulting from HFpEF.

In the secondary analysis, participants were scored on how much salt they added to home-cooked meals per serving; none (0 points); one-eighth teaspoon (1); one-quarter teaspoon (2); and one-half teaspoon or more (3). The primary outcome was a composite of death from cardiovascular disease, heart failure hospitalization, and aborted cardiac arrest.

Patients with a cooking salt score greater than 0 had significantly lower risks of the primary end point, but not all-cause or cardiovascular death, compared with patients who added no salt to their food. Poor outcomes related to overly strict salt use were more common in patients younger than 70 years and those of diverse racial and ethnic minorities.

About half the participants had a cooking salt score of zero; 56% were men and 81% were White. Those who added no salt to their food weighed significantly more and had a lower diastolic blood pressure (70 mm Hg) than those with a cooking salt score greater than 0. They were also more likely to have previous hospitalizations for heart failure, to have type 2 diabetes, and to use β-blockers and diuretics.

Based on their findings, reported in Heart, the authors concluded that clinicians should reconsider advising patients with HFpEF to be unnecessarily strict with their salt intake.

Antibody Testing’s Limits for Detecting Prior SARS-CoV-2 Infection

Serology tests that detect antibodies to the SARS-CoV-2 nucleocapsid protein have
played a key role in tracking infections in clinical trials and at population levels because they reveal prior rather than acute infection. But currently used messenger RNA (mRNA) vaccines elicit antibodies to the novel coronavirus’ spike protein rather than the nucleocapsid protein, raising questions about how tests that measure nonspike antibodies will perform in areas with high vaccination coverage.

To find out, investigators carried out a substudy of 30,420 US adults enrolled in the mRNA-1273 (Moderna) phase 3 trial conducted in 2020. Participants had been randomly assigned to receive 2 doses of mRNA-1273 vaccine or placebo given on days 1 and 29. Serology testing was conducted on days 1, 29, and 57 and at the decision visit when participants were offered mRNA-1273 vaccination if they were previously assigned to a placebo group.

The investigators reported in the Annals of Internal Medicine that among 700 trial participants who had COVID-19 confirmed by polymerase chain reaction during the trial’s blinded, placebo-controlled phase, about 40% of the vaccinated group compared with approximately 93% of those who received placebo had detectable antibodies against the nucleocapsid protein (anti-N Abs) at an average 53 days after diagnosis. Viral load was a factor: each 1-log increase in SARS-CoV-2 viral copies at diagnosis nearly doubled the odds of anti-N Ab seroconversion.

"These data suggest that assay limitations may exist in detecting anti-N Abs in persons recently vaccinated with mRNA-1273," the authors wrote, noting that clinicians should consider an individual's vaccination history when they determine seropositivity based on anti-N Ab testing.

— Anita Slomski

Note: Source references are available through embedded hyperlinks in the article text online.