POEMs

Patient-Oriented Evidence That Matters

Likelihood of Long COVID Varies by Variant, Sex, and Vaccination Status

Clinical Question

How likely are long COVID symptoms to occur among fully vaccinated health care workers after infections that did not require hospitalization?

Bottom Line

Among health care workers, the study found that long COVID is less likely in those who have been infected with more recent variants of COVID-19 and in those who have received three doses of the COVID-19 vaccine. (Level of Evidence = 1b)

Synopsis

The study took place in a network of nine Italian hospitals from March 2020 to April 2022. Personnel were tested weekly, every other week, or any time they developed symptoms using polymerase chain reaction for SARS-CoV-2. Long COVID was defined as the persistence of a symptom for more than four weeks after the acute infection. Over the study period, 739 of 2,560 personnel tested positive for COVID-19 (89 were asymptomatic) and 229 (31%) developed long COVID. The prevalence of long COVID differed by variant: 42% for the ancestral strain, 36% for the alpha variant, and 16% for the delta or omicron variants. The group at highest risk was unvaccinated women. In a multivariate analysis, the risk was lower for men (adjusted odds ratio = 0.65; 95% CI, 0.44 to 0.98), people who received two vaccine doses (adjusted odds ratio = 0.25; 95% CI, 0.07 to 0.87), and people who received three vaccine doses (adjusted odds ratio = 0.16; 95% CI, 0.03 to 0.84). The risk of long COVID increased with older age, in people with allergies, and in people with an increasing number of comorbidities. The illness trajectory for patients with long COVID (i.e., duration and severity of symptoms over time) was not reported.

Study design: Cohort (prospective)

Funding source: Foundation

Setting: Outpatient (any)

Reference: *Azzolini E, Levi R, Sarti R, et al. Association between BNT162b2 vaccination and long COVID after infections not requiring hospitalization in health care workers.* JAMA. *2022;328(7):676-678.*

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Low FODMAP Diet Most Likely to Improve Symptoms in Patients With Irritable Bowel Syndrome

Clinical Question

Is a low fermentable oligosaccharides, disaccharides, monosaccharides, and polyols (FODMAP) diet effective for the treatment of irritable bowel syndrome (IBS)?

Bottom Line

A network meta-analysis of the literature concluded that a low FODMAP diet is most likely to be effective for patients with IBS compared with other diets. A low FODMAP diet removes offending foods from the diet for four to six weeks followed by a gradual and systematic reintroduction of foods to identify those that the patient can tolerate. (Level of Evidence = 1a–)

Synopsis

The network meta-analysis included 13 studies and 944 patients with IBS. The studies were small (i.e., 30 to 110 patients), used the Rome III criteria to identify eligible patients, and compared a low FODMAP diet with usual diet, dietitian advice, or the diet recommended by the British Dietetic Association. Nine trials were at low risk of bias across all domains other than double masking.

Most studies enrolled patients who had IBS with constipation and IBS with diarrhea. The network meta-analysis combined direct and indirect comparisons and concluded that the low FODMAP diet was most likely to reduce pain, bloating, and distention; improve bowel symptoms; and improve global IBS symptoms. The low FODMAP diet was superior to the patient's usual diet and the British Dietetic Association's recommended diet.

Study design: Meta-analysis (randomized controlled trials)

Funding source: Self-funded or unfunded

Setting: Outpatient (any)

Reference: *Black CJ, Staudacher HM, Ford AC. Efficacy of a low FODMAP diet in irritable bowel syndrome: systematic review and network meta-analysis.* Gut. *2022;71(6):1117-1126.*

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Ketorolac Plus Dexamethasone Is More Effective for Pain Relief Than Ketorolac Alone in Adults With Renal Colic

Clinical Question

Does adding dexamethasone to ketorolac improve pain relief in adults with renal colic?

Bottom Line

In a first-of-its-kind study in a single emergency department, adding dexamethasone to ketorolac was more effective than ketorolac monotherapy in decreasing pain in people with renal colic. The effect was seen in the first 30 minutes, but it is likely effective for 60 minutes. (Level of Evidence = 1b)

Synopsis

The study took place in a single emergency department in Iran. The researchers enrolled adults with acute renal colic whose pain intensity was greater than 5 on a visual analog scale of 1 to 10. The participants' stones were confirmed by laboratory and radiographic findings. The researchers randomized the participants to receive a single dose of intravenous ketorolac, 30 mg, plus placebo (n = 60), or ketorolac, 30 mg, plus dexamethasone, 8 mg (n = 60). On average, the age of participants was mid-30s, and they were in severe pain (median score of 9.5). After 30 minutes, both groups of participants achieved meaningful reductions in pain scores, and those receiving dexamethasone had greater reductions than those receiving placebo (–5 vs. –3). However, after an hour, the differences were no longer statistically significant (–7 vs. –5; $P = .068$). The latter difference is clinically meaningful and suggests the study was too small. During the hour after initial treatment, 21 patients (35%) who received dexamethasone and 35 patients (58%) who received placebo also received a narcotic (number needed to treat = 5; 95% CI, 3 to 19). Many people with renal colic experience nausea. The participants who received dexamethasone were less likely to receive an antiemetic during the hour after initial treatment (12% vs. 28%; number needed to treat = 6; 95% CI, 4 to 44). Although this appears to be the first study published on using dexamethasone in people with renal colic, the authors point out its effectiveness as an adjunct for painful musculoskeletal conditions. This single-site study is too small to detect uncommon harms associated with corticosteroid use.

Study design: Randomized controlled trial (double-blinded)

Funding source: Self-funded or unfunded

Allocation: Concealed

Setting: Emergency department

Reference: *Razi A, Farrokhi E, Lotfabadi P, et al. Dexamethasone and ketorolac compare with ketorolac alone in acute renal colic: a randomized clinical trial.* Am J Emerg Med. *2022;58:245-250.*

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Enoxaparin Is Better Than Aspirin for the Prevention of Venous Thromboembolism After Total Hip or Knee Arthroplasty

Clinical Question

Is aspirin as effective as enoxaparin for preventing symptomatic venous thromboembolism (VTE) after total hip or knee arthroplasty?

Bottom Line

The study showed superiority of enoxaparin over aspirin for VTE prophylaxis after total hip or knee arthroplasty. This contrasts with a previous study that showed noninferiority of aspirin compared with rivaroxaban (Xarelto). In that study, all patients received five days of rivaroxaban

before randomization. The primary outcome focused on proximal deep venous thrombosis (DVT) or pulmonary embolism, which may be more clinically important than the distal DVTs that drove the difference in the current study. (Level of Evidence = 1b)

Synopsis

In the cluster-randomized crossover study from Australia, the investigators randomized 31 hospitals to administer aspirin, 100 mg daily, or subcutaneous enoxaparin, 40 mg daily, as VTE prophylaxis following total hip or knee arthroplasty for osteoarthritis. The duration of treatment was 35 days after hip arthroplasty and 14 days after knee arthroplasty. Approximately 15% of patients in both groups who were already taking aspirin preoperatively continued treatment, although the dose was adjusted to the dose used in the aspirin group. Of the 31 hospitals, 16 enrolled patients for the other treatment group once they achieved the patient enrollment target. In the final analysis, investigators included 5,416 patients from 21 hospitals in the aspirin group and 3,787 patients from 20 hospitals in the enoxaparin group. The two groups had similar baseline characteristics. The primary outcome of symptomatic VTE within 90 days occurred in 3.45% of the aspirin group and 1.82% of the enoxaparin group (estimated difference = 1.97%; 95% CI, 0.54% to 3.41%). This did not meet the prespecified noninferiority criteria for aspirin but did meet statistical superiority for enoxaparin compared with aspirin (P = .07). This difference was driven by a significantly higher number of below-knee DVTs in the aspirin group (2.4% vs. 1.2%; P = .004). Although no significant differences were detected in pulmonary embolisms or above-knee DVTs, the study was not adequately powered to detect differences for these individual outcomes. The two groups did not differ in secondary outcomes, including death and major bleeding.

Study design: Randomized controlled trial (nonblinded)

Funding source: Government

Allocation: Concealed

Setting: Inpatient (any location) with outpatient follow-up

Reference: *Sidhu VS, Kelly T, Pratt N, et al.; CRISTAL Study Group. Effect of aspirin vs enoxaparin on symptomatic venous thromboembolism in patients undergoing hip or knee arthroplasty.* JAMA. *2022;328(8):719-727.*

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