What Should We Do with the Nail? Nailbed Repair in Children

Take Home Point: After nail bed repair, discarding the fingernail was associated with similar rates of infection and similar cosmetic outcomes compared to replacement of the fingernail.

Citation: Jain A, Grieg A, Jones A, et al. Effectiveness of nail bed repair in children with or without replacing the fingernail: NINJA multicentre randomized clinical trial. *BJS*, 2023, 110, 432–438 https://doi.org/10.1093/bjs/znad031

Relevance: Procedures for nail bed injuries in children are common, and one of the key surgical decisions is whether to replace the nail plate following repair.

Study Summary: This was a two-arm 1:1 parallel-group, open, multicenter, superiority randomized controlled trial performed across 20 hospitals in the United Kingdom (UK) to assess whether discarding the fingernail during nailbed repair was superior to retaining it. Included were children under 16 years old with acute nailbed injury <48 hours old who were believed to require surgical repair. Interventions involved were to replace fingernail or substitute (ie, foil), compared to discarding the fingernail and applying a low-adherent dressing. Follow-up assessments involved a clinical appointment between 7—10 days after operation and a participant-reported questionnaire at 7–10 days after the procedure and again at 4 months with a reporting window of up to 12 months.

The authors randomized 451 patients (224 nail discard, 227 nail replace). There was no significant difference in cosmetic appearance between the groups. There was no evidence that replacing the nail after the procedure offered reduced pain at dressing change. The early infection rate (day 7) was 2.2% in the nail-replaced group versus 0.9% in the nail-discarded group (trend, but not statistically significant). The health economics analysis revealed, unsurprisingly, that replacing the nail was associated with significantly longer procedure time and cost.

Editor's Comments: Patients in the study were seen and treated in a secondary care setting, therefore caution is suggested regarding its generalizability to urgent care (UC). However, it is likely these were, on average, more complicated nailbed injuries than typically seen in UC as well given the study stetting. The findings do suggest a reasonable argument for a "less-is-more" approach to children presenting with nailbed injuries in UC—especially given the additional clinician time and patient discomfort associated with more elaborate repair techniques. This option certainly merits further investigation in both UC practice settings and adult populations. ■

Uncertainty Within New Specialists and Practitioners

Take Home Point: There is a need for newly graduated clinicians to have psychologically safe, reflective spaces to think through uncertainties with others.

Citation: Collini A, Alstead E, Knight A, et al. "You may think that the consultants are great, and they know everything, but they don't": Exploring how new emergency medicine consultants experience uncertainty. *Emerg Med J*. 2023;40:624–629. doi:10.1136/emermed-2022-213013

Relevance: Uncertainty is inherent in the practice of medicine, particularly at times of transition, but managing uncertainty is often not addressed explicitly in practitioner training.

Study Summary: This was an interpretive phenomenological analysis (IPA) to examine how new emergency medicine (EM) consultants (attendings) in the United Kingdom experience uncertainty. IPA is a method for analyzing data that centers the individual and their lived experience involving a "double hermeneutic" process, where the phenomenon being studied is interpreted and expressed by the participant then further interpreted by the researcher. IPA uses small sample sizes with relatively homogenous characteristics to maintain focus on the individual while identifying patterns across data.

The authors performed analysis on 5 consultants (2 female, 3 male), working in different locations in the UK, with experience as a consultant/attending ranging from

Prepared by Ivan Koay MBChB, MRCS, FRNZCUC, MD; Urgent Care Physician and Medical Lead Kings College Hospital Urgent Treatment Centre, London; Convenor Ireland and UK Faculty of the Royal New Zealand College of Urgent Care; Independent Assessor European Reference Network, Andalusian Agency for Healthcare Quality

5-11 months. All had completed their EM residency training in the UK. Three superordinate themes were identified: 1) transition and performance as a source of uncertainty; 2) uncertainty and decision-making in the context of the emergency department (ED); and 3) sharing uncertainty and asking for help. These were compounded by a perceived lack of useful feedback. Sharing uncertainty and asking for help were seen as beneficial but potentially risky due to the perception of the participants that certainty is expected of them in their roles.

Editor's Comments: There was no data collected regarding age, ethnicity, or other relevant experience of the participants, which limits its transferability. The small number in the study also limits its generalizability. The study does highlight the need for more work to be done on the matter in the UC sector with an expanded scope to include other practitioners as well. Psychological safety has been demonstrated in a variety of settings to be an important factor for healthcare team performance to minimize the risks of medical error. ■

Does Cold Air Really Help in Treatment of Croup?

Take Home Point: A 30-minute exposure to outdoor cold air (‹10°C or ‹50°F), as an adjunct to oral dexamethasone, is beneficial for reducing the intensity of clinical symptoms in children with moderate croup symptoms.

Citation: Siebert JN, Salomon C, Taddeo I, et al. Outdoor Cold Air Versus Room Temperature Exposure for Croup Symptoms: A Randomized Controlled Trial. *Pediatrics*. 2023;152(3): e2023061365

Relevance: Nonpharmacological measures such as mist therapy and exposure to cold air have been anecdotally cited as remedies for croup, however, limited data exists to support their efficacy.

Study Summary: This was a prospective, open-label, single-center, randomized controlled trial conducted in a tertiary pediatric emergency department (ED) in Switzerland. Participants were randomized on a 1:1 ratio to wait 30 minutes outside the ED (within sight of the triage desk) exposed to outdoor cold air (intervention group) ‹10°C or ‹50°F or to wait inside the ED where ambient air is pulsed between 24 to 25°C or 75.2°F to 77°F (control group). All participants received of a single 0.6 mg/kg dose of oral dexamethasone at time of arrival and prior to intervention. The primary outcome was the proportion of participants showing clinical improvement defined as a decrease in Westley Croup Score (WCS) ›2 points from baseline at 30 minutes.

The authors randomized 118 children and found the number of patients showing a reduction of at least 2 points in WCS at 30 minutes after triage was significantly higher in patients allocated to the cold air exposure group, which was statistically significant. Patients with moderate croup had the greatest benefit from the intervention. Symptoms were completely resolved in 44.2% of children in the intervention group and 32.1% of children in the control group on the day 7 follow-up call. No adverse events were recorded in the trial with no readmissions for croup/respiratory conditions recorded in the subsequent 7-day period.

Editor's Comments: The single center, small numbers and unblinded nature of the study limits its generalizability and potentially introduces various forms of bias. The results do lend credence to the historic home remedy of cold air exposure as a useful means to assuage children with mild to moderate croup symptoms and is a low risk adjunct that parents can continue safely at home. ■

Treating Nausea With Inhaled Isopropyl Alcohol

Take Home Point: In this systematic review, inhaled isopropyl alcohol had a modest effect in reducing nausea among ED patients.

Citation: Lee SY, Tamale JR. Isopropyl alcohol inhalation for the treatment of nausea in adult emergency department patients: a systematic review and meta-analysis. *Emerg Med J.* 2023; 40:660–665. doi:10.1136/emermed-2022-212871

Relevance: Nausea is a common, debilitating, and frequently refractory symptom for patients presenting to acute care settings. Inhaled isopropyl alcohol (IPA) has shown some promise in relief of nausea and has favorable features in its safety and rapidity of onset.

Study Summary: This was a systematic review of present evidence on the use of inhaled IPA for treatment of nausea among patients presenting to an ED. The authors included studies that compared inhaled IPA to routine care or placebo in the treatment of adult ED patients with nausea. The authors identified 3 studies that were suitable for the meta-analysis, with a total of 275 participants. They found that patients treated with inhaled isopropyl alcohol reported

a 2.18 point reduction on a 0-10 visual analog scale (VAS) for nausea severity, as compared with an inhaled saline as placebo. This was felt to be clinically significant. Only one study assessed the proportion of patients who vomited during their ED stay and did not find any difference between the intervention and control groups.

Editor's Comments: The limited number of studies identified along with the low number of pooled participants limit conclusions regarding inhaled IPA as a nausea intervention. Additionally, nausea is a non-specific symptom and can be caused by conditions ranging from vertigo to bowel obstruction to early pregnancy. It is unclear from existing data for which etiologies of nausea inhaled IPA may be more or less effective. There is certainly opportunity for interested UC clinicians to study the efficacy of inhaled IPA further among various groups of patients, including children. ■

Injectable Metoclopramide For Migraines – Is it our Best Parenteral Option?

Take Home Point: 10mg of intravenous metoclopramide is effective in treating acute migraine attacks and superior to many alternatives.

Citation: Abdelmonem H, Abdelhay H, Abdelwadoud G, et al. The efficacy and safety of metoclopramide in relieving acute migraine attacks compared with other anti migraine drugs: a systematic review and network meta-analysis of randomized controlled trials. *BMC Neurology*. (2023) 23:221. https://doi.org/10.1186/s12883-023-03259-7

Relevance: Acute migraine relief is sought by many UC patients. There are numerous treatments for migraines to choose from. Metoclopramide is a relatively common injectable antiemetic with a reasonable safety profile, and therefore, well suited as a potential abortive for UC use.

Study Summary: This was a systematic review and meta-analysis of studies comparing intravenous (IV) metoclopramide with other treatments for acute migraine. The authors included all randomized clinical trials that investigated the effect of metoclopramide alone (of any dose or route) without any combination with an active drug in relieving acute migraine. They compared it with placebo or any other active anti-migraine drugs such as prochlorperazine, chlorpromazine, ketorolac, valproate, sumatriptan, bupivacaine, granisetron, dexketoprofen trometamol, dexamethasone, magnesium sulfate, pethidine, sumatriptan, and ibuprofen.

The authors included 16 randomized clinical trials with 1,934 pooled patients—826 of whom received metoclopramide for analysis. They found that 10mg of IV metoclopramide had efficacy in decreasing headache scores at every time point from 15 minutes–1 hours and was superior to placebo, sumatriptan 6mg subcutaneou injection, and prochlorperazine 10m IV, most notably. The recurrence rates were similar between all anti-migraine therapies Metoclopramide significantly decreased the incidence of nausea and had relatively few and minor adverse reactions. The IV route was most efficacious although intramuscular administration also was superior to placebo but not IM prochlorperazine.

Editor's Comments: The results do suggest that metoclopramide is safe and efficacious to use in both reducing the headache symptoms of migraine as well as nausea and vomiting. Migraine treatment is rarely achieved with a single agent in clinical practice. Rather patients typically take over-the-counter medications and/or prescription medications for migraine prior to presenting to an UC for an acute headache. This study does not clarify to what extent metoclopramide adds additional relief in combination with other therapies. Additionally, IV administration in UC is infrequently feasible and the effects of IM dosing have not been as robustly studied. Finally, as migraine is a recurrent problem for most patients, it is also appropriate to confer with patient about what therapies have worked and have been well tolerated during prior episodes. ■

Venous Thromboembolic Risk with NSAID and Hormonal Contraception Use

Take Home Point: In this study, the number of extra venous thromboembolic events (VTE) among patients using non-steroidal anti-inflammatory drugs (NSAIDs) was significantly higher when taken concomitantly with high/medium risk hormonal contraception.

Citation: Meaidi A, Mascolo A, Sessa M, et al. Venous thromboembolism with use of hormonal contraception and non-steroidal anti-inflammatory drugs: nationwide cohort study. *BMJ* 2023; 382: e074450. doi:10.1136/bmj-2022-074450

Relevance: Use of estrogen containing contraceptives is an established risk factor for VTE, and observational studies have reported an increased risk of VTE with use of NSAIDs as well.

Study Summary: This was a nationwide cohort study of women 15-49 years old in Denmark over a 21-year period from 1996-2017. Participants were identified using the Civil Registration System, the National Registry of Causes of Death, the National Patient Registry, and the National Registry of Medicinal Product Statistics. Participants were Danish citizens by birth or immigration. The registries identified participants who were exposed to non-aspirin NSAIDs and hormonal contraception. The registries also identified participants with primary VTE events.

The authors included 2,029,065 participants and found 8,710 incident cases of VTE (2,715 cases (31.2%) were coded as pulmonary embolism (PE), and the rest were registered as isolated deep venous thrombosis (DVT) of the lower extremity. Authors found 228 (2.6%) women died within 30 days of the diagnosis of VTE. Hormonal contraception and NSAIDs were used concomitantly by 529,704 participants. Compared with non-use of hormonal contraception, the association between NSAID use and venous thromboembolism was stronger in women using high risk hormonal contraception (combined estrogen and progestin patch, vaginal ring, and tablets containing 50 µg ethinyl estradiol, or the progestins desogestrel, gestodene, drospirenone, or the anti-androgen cyproterone). Importantly, use of NSAIDs alone without hormonal contraception was also associated with an increased incidence of VTE.

Editor's Comments: There are numerous confounders within the study including socioeconomic factors, access to healthcare and the racial mix of the population that limits generalizability. As NSAIDs may have been used without a prescription, it is difficult to ascertain the true exposure to NSAIDs in this population. However, this study does highlight an additional risk to NSAID use that is worth considering, especially in patients with history of VTE, estrogen based contraception use, and/or other risk factors for VTE. ■

COVID-19 Abstract

Can We Safely Co-Administer COVID-19 and Influenza Vaccines?

Take Home Point: In this study, both reactogenicity and immunogenicity were mostly unchanged with coadministration of the COVID-19 and seasonal influenza vaccines.

Citation: Gonen T, Barda N, Asraf K, et al. Immunogenicity and Reactogenicity of Coadministration of COVID-19 and Influenza Vaccines. *JAMA Network Open*. 2023;6(9): e2332813. doi:10.1001/jamanetworkopen.2023.32813

Relevance: The ongoing incidence of COVID-19 infections has resulted in continued morbidity and mortality associated with the virus. Co-administration of vaccines has been shown improve adherence, but it is unclear whether vaccination for seasonal influenza and SARS-CoV-2 is as safe and effective as spacing the vaccines out temporally.

Study Summary: This was a prospective cohort study which enrolled healthcare workers at a large tertiary medical center in Israel. The OmicronBA.4/BA.5–adapted bivalent vaccine (COVID-19 vaccine) and the Influvac Tetra SIV (Abbott) (2022/2023, SIV) were used. Vaccines were offered as 2 shots administered together on a single day (injected into opposite arms); or 1 of the vaccines or both on separate days. Reactogenicity was assessed by an electronic questionnaire sent up to 62 days after vaccination, addressing local and systemic symptoms. Immunogenicity was assessed by post vaccination anti-spike IgG titers.

The authors included 2,106 study participants of which 649 responded to the questionnaire (30.8% response rate). They found of the 3 study groups, those who received SIV alone experienced the least reactogenicity, while COVID-19 vaccination alone elicited similar reactogenicity to that of the co-administration of COVID-19 vaccine with SIV. Immunogenicity in the co-administration group was estimated to be 0.84 (95% CI, 0.69-1.04) times lower than in the COVID-19 alone group, however none of the participants were infected with COVID-19 during the 60-day follow up period.

Editor's Comments: The study population was comprised of relatively healthy subjects, which limits generalizability to the patients at greatest risk from infection with these viral pathogens. Furthermore, there are a number of commercially available COVID-19 and influenza vaccines and conclusions about the combination of other forms of these vaccinations cannot be made. The limited follow-up period and use of a surrogate marker (ie, IgG spikes after inoculation) make determinations about the efficacy of simultaneous vaccination difficult to assess. However, the findings do suggest that administering both COVID-19 and influenza vaccination at the same time point toward safety of the practice of co-administration of the vaccines, which should improve adherence. ■