Variation in Pretibial Laceration Management

Take Home Point: Assessment and management of pretibial lacerations lack consistent standardized guidelines, which is needed to improve patient outcomes.

Citation: Shafi S, Shaw A, Koubeh W, et al. Management of pretibial lacerations: A systematic review. *Injury*. 2026;57(4):113101. doi: 10.1016/j.injury.2026.113101

Relevance: Pretibial lacerations are commonly encountered in both emergency departments (EDs) and urgent care (UC) settings, especially among older adults. Despite their frequency, management approaches vary widely across settings and regions.

Study Summary: This was a systematic review conducted and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist. MEDLINE, EMBASE, CINAHL, the Cochrane Central Register of Controlled Trials (CENTRAL), and ClinicalTrials.gov databases were used in the literature search to identify studies reporting on the assessment and/or management of pretibial lacerations.

A total of 29 studies involving 2,893 patients were included: 6 randomized controlled trials (RCTs); 12 cohort studies; and 11 case series. There was substantial variability in how lacerations were assessed, treated, and how outcomes were reported.

In studies that reported on operative management, the mean time to complete wound healing ranged from 13 to 70 days. Among the 3 RCTs that reported this outcome, mean time to complete wound healing ranged from 13 to 42 days. In contrast, studies that reported on nonoperative management were associated with longer wound healing times, ranging from 18 to 123 days. In the nonoperative RCTs, mean time to complete wound healing ranged from 32 to 123 days. Infection was the most common complication across both groups (0% to 63%). One month mortality rates were as high as 15%. Significant heterogeneity in study design and inconsistent definitions of outcomes and adverse events precluded meta-analysis. Comorbidities were inconsistently reported, though commonly noted conditions included ischemic heart disease, diabetes, chronic obstructive pulmonary disease/asthma, and long-term steroid use.

Editor's Comments: The review highlights marked variability in treatment approaches and a lack of high-quality evidence to guide practice. No studies from low- or middle-income countries were identified, which may reflect under-reporting, differences in coding practice, or publication bias rather than absence of cases.

There is a clear need for standardized wound classification systems and consistent outcome measures, including patient-reported outcomes for pretibial lacerations. Future RCTs comparing operative and nonoperative strategies—and techniques within each—are needed to better inform clinical decision-making. ■

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Can We Age Adjust D-Dimer to Rule Out Deep Vein Thrombosis?

Take Home Point: Using an age-adjusted D-dimer cutoff may safely exclude deep vein thrombosis (DVT) while reducing unnecessary imaging.

Citation: Le Gal G, Robert-Ebadi H, Thiruganasambandamoorthy V, et al. ADJUST-DVT Investigators. Age-Adjusted D-Dimer Cutoff Levels to Rule Out Deep Vein Thrombosis. *JAMA*. 2026 Feb 3;335(5):416-424. doi: 10.1001/jama.2025.21561.

Relevance: D-dimer testing is a widely used tool to exclude DVT in patients with low or intermediate clinical probability (based on Wells Score). However, its specificity decreases with age, limiting its usefulness in older adults.

Study Summary: This was a multicenter, multinational prospective diagnostic management outcome study, involving 27 hospitals in 4 countries (Belgium, Canada, France, and Switzerland). Patients presenting to EDs in the participating hospitals with a suspected DVT were recruited into the study. Clinical pretest probability of DVT was assessed using the Wells score. Patients with a low

or intermediate pretest probability had a D-dimer test performed. The D-dimer result was interpreted according to the age-adjusted cutoff; in patients younger than 50 years, DVT was excluded in those with a D-dimer value below 500 µg/L. In patients 50 years or older, the D-dimer test was considered negative if the result was below their age multiplied by 10, in µg/L (same as age-adjusted D-dimer for pulmonary embolism). Those with a positive D-dimer test underwent Doppler ultrasonography, while those with a negative test result had no further testing. All patients were followed for 3 months.

In total, 3,205 patients were enrolled and 2,169 (67.7%) had low or intermediate pretest probability. Of those, 692 patients (31.9% [95% confidence interval {CI} 30.0%-33.9%]) had a negative D-dimer result according to the age-adjusted cutoff. 531 (24.5% [95% CI 22.7%–26.4%]) had a D-dimer level less than 500 µg/L, and 161 additional patients (7.4% [95% CI 6.4%–8.6%]) had a D-dimer level between 500 µg/L and their age adjusted cutoff. This resulted in a 7.4% (95% CI 6.4%–8.6%) absolute increase, or a 23.3% (95% CI 20.3%–26.6%) relative increase, in the proportion of negative D-dimer results. There were no events among the 161 patients with a D-dimer level greater than 500 µg/L but below their age-adjusted D-dimer cutoff (0/161; 0.0% [95% CI 0.0%–2.3%]).

Editor's Comments: D-dimer assays were not standardized, with 11 different assays used, leading to some variability in interpretation. Additionally, the study was not randomized, limiting direct comparison between standard and age-adjusted D-dimer level cutoff strategies. There was a relatively low overall DVT prevalence, which may also influence generalizability.

Despite these limitations, the findings support the potential value of using age-adjusted D-dimer thresholds to improve diagnostic efficiency in the evaluation of DVT. This approach may help clinicians reduce unnecessary imaging while maintaining safety when applied correctly to symptomatic patients. ■

Casting Vs Surgery For Unstable Lateral Malleolus Fractures

Take Home Point: Cast immobilization was non-inferior to surgery for the treatment of unimalleolar Weber B ankle fractures with a congruent mortise on initial radiography but deemed unstable by external rotation stress testing.

Citation: Kortekangas T, Lehtola R, Leskelä H, et al. Cast immobilisation versus surgery for unstable lateral malleolus fractures (SUPER-FIN): randomised non-inferiority clinical trial. *BMJ*. 2026;392:e085295. doi: 10.1136/bmj-2025-085295

Relevance: Weber B fractures are a common fracture of the ankle and management decisions are based on whether the ankle mortise remains congruent and fracture stability.

Study Summary: This was a randomized, parallel group, non-inferiority trial comparing cast immobilization for 6 weeks to surgery for Weber B ankle unstable fractures with a congruent mortise in a single university hospital in Finland. The study followed the Consolidated Standards of Reporting Trials (CONSORT) guidelines for non-inferiority trials. Participants with unimalleolar Weber B fracture, with congruent mortise on initial radiographs (medial clear space <4 mm and ≤1 mm wider than the superior clear space), were enrolled in the trial. All participants were investigated for fracture stability using the external rotation stress test. If unstable, they were then randomized in a 1:1 ratio to undergo either cast immobilization for 6 weeks or surgery. Clinical follow-up continued for 2 years after randomization. The primary outcome was the Olerud-Molander Ankle Score (OMAS) at 2 years. OMAS is a validated, condition specific, patient-reported outcome measure for ankle fracture symptoms (range 0-100; higher scores indicating better outcomes and fewer symptoms; minimal important difference 12 points).

A total of 126 participants underwent randomization: 62 to the cast immobilization and 64 to surgery. In the primary intention-to-treat analysis, the mean OMAS at 2 years was 89 in the cast immobilization group and 87 in the surgery group (between group mean difference 1.3 points, 95% CI −4.8–7.3). One participant in each group had a radiographically confirmed nonunion. There were more complications in the surgical group, which included wound infection (1), delayed wound healing (1), and hardware removal procedures (9).

Editor's Comments: The narrow scope of the study limits its generalizability to other ankle fracture patterns, including other Weber fracture types. Additionally, the generalizability is limited as this was performed at a single center. However, the study highlights a prevailing shift to more conservative/nonoperative approaches in the treatment of fractures.

For UC clinicians, this may inform decisions regarding orthopedic referral urgency and help identify fractures that

may be managed conservatively. This could decrease unnecessary patient costs in time and money. UC clinicians are still advised to follow local protocols as practice patterns and orthopedic treatment preferences vary. ■

Using Artificial Intelligence Powered Scribes for Documentation

Take Home Point: AI-powered voice-to-text technology (AIVT) offers significant potential to improve clinical documentation and patient experience of clinical consultations through reduced clinician workload and improved clinician-patient interactions, though reliability and oversight remain important considerations.

Citation: Alboksmaty A, Aldakhil R, Hayhoe B, et al. The impact of using AI-powered voice-to-text technology for clinical documentation on quality of care in primary care and outpatient settings: a systematic review. *eBioMedicine*, 2025; 118

Relevance: Documentation demands contribute significantly to clinician workload. AI-based tools may help reduce this burden while maintaining or improving documentation quality.

Study Summary: This systematic review followed the PRISMA 2020 Checklist to assess the evidence on using AIVT to document individual patient-clinician medical consultations. This review focused specifically on effectiveness, efficiency, safety, patient-centeredness, timeliness, equity, and integration. The authors reviewed publications across 5 databases (MEDLINE, Embase, Global Health, CINAHL, and Scopus) to identify studies that assessed the use of AIVT in primary care or outpatient clinic settings in the documentation of 2-way medical consultations between a healthcare professional (HCP) and a patient.

The authors identified 9 studies for analysis that involved 524 HCPs and 616 patients, with a total of 1,069 medical consultations. All studies reported improved documentation processes with AIVT, allowing clinicians to focus more on patient interactions. Five studies demonstrated increased documentation efficiency. However, 1 study noted increased time spent reviewing and correcting documentation, potentially contributing to after-hours work. The quality of AIVT-generated documentation was often comparable to, and sometimes better than, traditional methods. However, there was no clear consensus regarding the safety of relying on AIVT tools for clinical documentation without subsequent HCP review. Generalizability was limited due to limited included patient populations, with most studies focusing on diabetes care and excluding pediatric and psychiatric settings.

Editor's Comments: Heterogeneity across studies—including differences in AIVT systems, patient populations, and clinicians—limited comparability. Standardized measures such as word error rate could not be consistently applied. Implementation challenges remain, including developing standardized policies and regulations to guide AIVT integration into clinical practice. There remain concerns around ethical principles, confidentiality, data security, patient consent, and accountability for errors. Clinicians and organizations should use AIVT with awareness of its benefits and drawbacks. ■

Emergency Department Interventions in Smoking Cessation

Take Home Point: Smoking cessation interventions incorporating nicotine replacement therapy (NRT) delivered in the ED resulted in increased quit rates with moderate certainty.

Citation: Pope I, Gentry S, Livingstone-Banks J, et al. Emergency department interventions for smoking cessation: a systematic review and meta-analysis. *Emerg Med J* 2026;0:1–10. doi:10.1136/emermed-2025-215326

Relevance: Supporting people who wish to quit smoking is among the most powerful interventions to improve health and combat health inequalities. The ED represents an opportunity to initiate cessation efforts.

Study Summary: This was a systematic review reported in accordance with PRISMA guidelines. Database searches of the Cochrane Central Register of Controlled Trials, MEDLINE, Embase, PsycINFO, CINAHL, US National Institutes of Health Ongoing Trials Register, and WHO International Clinical Trial Registry Platform were conducted for randomized controlled trials (RCTs) based in the ED, where the goal of the intervention was smoking cessation and follow-up was at least 3 months.

There were 19 studies included in the systematic review with 9,211 randomized participants (4,707 intervention and 4,504 control). Of these, 17 were incorporated into

the meta-analyses (6 RCTs for NRT interventions and 11 RCTs for behavioral interventions without pharmacotherapy). The authors found moderate-certainty evidence that interventions incorporating NRT were more likely to result in smoking cessation compared with control. The risk ratio (RR) was 1.55 (95% CI 1.27–1.89, p<0.0001). Trials involving behavioral support alone delivered in the ED demonstrated a RR of quitting compared with controls of 1.18 (95% CI 0.85–1.64, p=0.32).

Editor's Comments: None of the included studies evaluated other smoking cessation pharmacologic therapies such as varenicline or bupropion, representing a promising area for future research. Considerable behavioral intervention and pharmacotherapy heterogeneity existed across both intervention and control groups, which may dilute the impact of any particular individual component. Smoking cessation programming implementation challenges exist, especially in high-volume ED or UC settings. These include limited clinician time and staffing. Alternative models, such as involving nonclinical staff during patient waiting times, may help integrate smoking cessation support into urgent care practice. This effort could promote health in local communities. ■

Intravenous Saline Plus Drug Therapy For Migraine Treatment

Take Home Point: Adding 1,000 mL intravenous saline to nonsteroidal anti-inflammatory drug (NSAID)-based therapy did not significantly improve pain relief at 2 hours in patients with acute migraine.

Citation: Turan Y, Akoglu H, Unal E, et al. Efficacy of Adding Intravenous Saline Solution to Nonsteroidal Anti-Inflammatory Drug-Based Treatment of Acute Migraine in the Emergency Department. *Ann Emerg Med.* 2026;87(2):157-166. doi: 10.1016/j.annemergmed.2025.09.013

Relevance: Migraine affects approximately 10% of the global population and is a common presentation to EDs and UCs. Intravenous fluids are often used alongside pharmacologic therapy (including NSAIDs), though supporting evidence is limited.

Study Summary: This was a single-center, double-blind, parallel-group, randomized controlled trial conducted at a single tertiary care emergency department in Turkey. Participants were adults diagnosed with migraine who presented with an acute attack and were able to provide written informed consent. Researchers randomized patients with a 1:1 ratio to receive 1,000 mL of normal saline solution by intravenous infusion at 1,000 mL/hour for 1 hour (intervention group) or 10 mL of normal saline solution by intravenous infusion at 10 mL/hour for 1 hour (control group). Both groups also received 75 mg intramuscular diclofenac. The primary outcome was the change in headache visual analog scale (VAS) scores 2 hours postintervention. Secondary outcomes included use of rescue medication, ED length of stay, and adverse events.

"Alternative models, such as involving nonclinical staff during patient waiting times, may help integrate smoking cessation support into urgent care practice. This effort could promote health in local communities."

A total of 125 patients were included in analysis (64 intervention group, 61 control group). The median change in VAS score for headache was 62.0 mm (interquartile range [IQR] 37.5–82.0) in the intervention group, and 48.0 mm (IQR 26.0–74.0) in the control group. The estimated median VAS score difference between groups was 10.0 mm (95% CI –2.0 to 20.0), however, this difference was not statistically significant. Headache, nausea, and functional disability decreased over time in both groups, with no differences found between groups during the study. Rescue medication was used more frequently in the control group 23.8% vs 42.5% with a difference of 18.6% (95% CI 2.1–35.0). Median ED length of stay was shorter in the intervention group (150 vs 168 minutes; difference 19 minutes, 95% CI 0–39). No serious adverse events occurred.

Editor's Comments: The single-center design limits generalizability. The nurses involved in the care of the patients were not blinded, which may have influenced patient responses and physician decisions regarding rescue medication. Additionally, alternative migraine treatments were not evaluated, which limits the scope of the study's results. Further research is needed to clarify the role of intravenous fluids in migraine management and to assess broader treatment strategies. ■