

POSTER 505

Influence of the Choice of Naris on the Success and Complications of Blind Nasotracheal Intubation in the Field

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Background: Because of the direction of the tube bevel, the right naris is used initially when performing blind nasotracheal intubation. This is thought to result in a higher success rate and less epistaxis than when the left naris is utilized.

Hypothesis: The efficacy of right-sided nasotracheal intubation (rNTI) is superior to left-sided nasotracheal intubation (INTI).

Design: A two phase, prospective study in which Phase I evaluated the success rate and incidence of epistaxis based on which naris was attempted in a consecutive population. Phase II randomized patients to rNTI or INTI following the decision to perform nasotracheal intubation and noted the success rate and incidence of epistaxis for the first naris attempted.

Setting: An urban 9-1-1 system with 70 paramedics and a run volume of 44,000/year.

Participants: Phase I: A consecutive population of 122 patients. Phase II: Convenience population of 100 patients.

Results: Overall success rates of blind nasotracheal intubation were 84.1% (Phase I) and 78% (Phase II). In Phase I, the success rate of INTI (94%, n = 33) was significantly better than rNTI (73%, n = 89, $p < 0.05$ Pearson Chi-square). In Phase II, there was no statistical difference between rNTI (64%, n = 56) and INTI (52%, n = 44). There was no difference noted in the incidence of epistaxis in either group: rNTI (37%, n = 24) versus INTI (35%, n = 20).

Conclusion: No significant difference was found between the left and right naris when comparing success rates or incidence of epistaxis in a randomized fashion. When paramedics were allowed to choose, there was a higher success rate with nasotracheal intubation on the left suggesting that anatomic features such as a larger naris may influence the success rate of blind nasotracheal intubation.

POSTER 507

The Effect of On-Line Medical Control on the Assessment of Presumed CHF

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Hypothesis: On-Line Medical Control (OLMC) improves assessment of presumed heart failure (CHF).

Design: One-year prospective, controlled trial of patients with presumed CHF. During odd numbered months (CON group), contact with staff emergency physicians at a single base-station hospital was required before treatment. During even-numbered months (NONCON group), the paramedics assessed and treated according to standing orders without OLMC contact.

Setting: Urban EMS system with ALS paramedics and 9-1-1 dispatch.

Participants: Inclusion criteria: adult patients with dyspnea and presumed CHF. Exclusion criteria: chest pain, injury, suspected drug overdose, systolic blood pressure <110 mmHg, ventricular tachyarrhythmias, bradycardia, or pregnancy.

Interventions: Standardized therapy: intravenous furosemide and sublingual nitroglycerin.

Results: For the respective groups (CON, n = 51 vs NONCON, n = 33), there was no difference in mean age (74.8 vs 74.0 yr), mean furosemide dose (40 mg vs 50 mg), number patients intubated (10 vs 4), or subsequently diagnosed with acute myocardial infarction (2 vs 4). In the CON group, nine patients were assessed inaccurately by paramedics (8 subsequently diagnosed with pneumonia) compared to four patients in the NONCON (3 diagnosed with pneumonia). There also was no difference in survival (4 deaths CON vs 1 death NONCON). No deaths were attributable to paramedic assessment errors or treatment. OLMC changed the intended treatment for four patients in the CON group.

Conclusions: Contact with OLMC does not improve the accuracy of paramedics' assessment of patients with presumed CHF. Treatment for CHF by standing orders results in similar survival rates. Pneumonia is the most common disease in patients mistakenly assumed to have CHF.