Emergency physicians’ practices and attitudes regarding procedural anaesthesia for nasogastric tube insertion

G A Juhl, G P Conners

**Objective:** To determine practice and attitudes of emergency physicians regarding procedural anaesthesia for nasogastric tube insertion (NGT).

**Methods:** Survey of resident/attending emergency physicians working in a tertiary care medical centre.

**Results:** Of 68 physicians, 46 responded: 98% believed that awake and alert patients find NGT insertion uncomfortable/painful; 93% used measures to reduce this, most commonly lubricant gel, topical anaesthetic spray, lidocaine gel, and distraction/use of a child life worker; 28% believed these provided adequate pain control and 37% believed they were inadequate. Topical anaesthetic spray, lidocaine gel, and nebulised/atomised anaesthetics were believed the most practical to administer and 44% actually used these. Nebulised/atomised anaesthetics, systemic anxiolytics, and topical anaesthetic spray were believed the most effective at pain control but only 24% actually used these. While 39% of respondents were satisfied with their current practice, 46% were dissatisfied: 91% would change their practice if new literature were to show a convenient way to effectively reduce this pain.

**Conclusions:** Emergency physicians do not actually use the measures they believe are most practical/most effective at reducing the pain associated with NGT insertion. Thus, there may be a barrier to the use of these measures. Improvement in procedural anaesthesia for NGT insertion in emergency departments is needed and desired by emergency physicians.

**METHODS**

We distributed an anonymous survey to all resident and attending (faculty) emergency physicians who primarily work in the emergency department of a large, urban, US academic tertiary care medical centre with a fully accredited three year emergency medicine residency programme. The survey (see box) was designed by us and piloted with another physician group prior to administration. Survey questions concerned belief that nasogastric tube insertion causes pain, measures reducing discomfort, and satisfaction with these procedures. The discomfort reducing measures listed included some commonly used measures that are not anaesthetics, such as use of lubrication, anxiolytics, vasoconstrictors, and distraction or use of a child life worker (a non-physician health professional who works with children and families to reduce the stress associated with medical experiences and procedures). Responses were transferred without identifiers into a computerised database for analysis. The study protocol was reviewed and approved as exempted by the University of Rochester Research Subjects Review Board.

**RESULTS**

The survey was distributed to 38 emergency medicine resident physicians and 30 attending physicians; 46/68 (68%) were completed and returned, including 28 by resident physicians (74%) and 18 by attending physicians (60%). Of the respondents, 98% believed (agreed or strongly agreed) that awake and alert patients find nasogastric tube insertion uncomfortable or painful; 93% agreed or strongly agreed that they used measures to reduce this pain/discomfort; and 28% believed (agreed or strongly agreed) that these measures are adequate for control of the pain/discomfort of nasogastric tube insertion, 37% believed (disagreed or strongly disagreed) that these measures are inadequate, and 35% were neutral. Only 39% of respondents were satisfied with their current practice (agreed or strongly agreed), 46% were dissatisfied (disagreed or strongly disagreed), and 91% said they would change their practice if new literature were to show a convenient way to effectively reduce pain/discomfort.

Of pain control measures actually used by respondents, lubricant gel (78%), topical anaesthetic spray (65%), lidocaine gel (54%), and distraction or use of a child life worker (17%) were most commonly mentioned (multiple responses were allowed). Of these, topical anaesthetic spray (35%), lubricant gel (33%) and lidocaine gel (20%) were believed to provide patients the most comfort. Respondents believed that topical anaesthetic spray (26%), lidocaine gel (26%), and nebulised or atomised anaesthetics (24%) were the most practical to administer, assuming they were readily available. The anaesthetics that the respondents believed were the most effective for nasogastric tube insertion, assuming they were readily available, were: nebulised or atomised anaesthetics (26%), systemic anxiolytics (20%), and topical anaesthetic spray (17%). Only 44% of respondents actually used the measure they believed was the most practical for pain reduction. Only 24% actually used the measure they believed was the most effective at pain reduction.
DISCUSSION

Under-treatment of patient pain and discomfort has been recognised as a significant problem in emergency medicine.8–10 Nearly all the emergency physicians responding to our survey were aware that patients who are awake and alert find nasogastric tube insertion painful or uncomfortable. Although 93% of our respondents took measures to reduce this pain, only 28% believed that these measures provide adequate pain control.

Measures actually taken to reduce the pain of nasogastric tube insertion varied widely, with lubricant gel, topical anaesthetic spray, and lidocaine gel each used by over half of the respondents; these were also the three measures, of those actually used, that were believed most effective at providing comfort. Of measures that are available, however, those that respondents believed were the most effective are nebulised or atomised anaesthetics, systemic anxiolytics, and topical anaesthetic spray. Available measures they believed are the most practical were topical anaesthetic spray, lidocaine gel, and nebulised or atomised anaesthetics. Only topical anaesthetic spray appeared on all the lists, suggesting a barrier to use of the other effective or practical measures. This is further suggested by the finding that less than half of our respondents actually used the measure they believed is the most practical for pain reduction, and less than a quarter of all respondents actually used nebulised or atomised anaesthetics.
actually used the measure they believed is the most effective at pain reduction. It is therefore not surprising that nearly half of our respondents were dissatisfied with their current measures to reduce the discomfort of nasogastric tube insertion, and that 91% were willing to change their practice should the literature show a better method.

The effectiveness of anaesthetics to reduce the pain of nasogastric tube insertion has been well proven. Various topical anaesthetics with vasoconstrictors, especially nebulised, atomised, or gel lidocaine, have proved effective at reducing the pain of nasogastric tube insertion. Although commonly used by our respondents, lubricant gel alone has been shown to poorly reduce this pain. Although we did not specifically enquire in our survey as to the nature of the barriers to physicians’ use of more effective anaesthetics, those suggested by other authors, including physicians’ under-appreciation of pain, concerns about side effects, limited availability of desired medications, inadequate training in pain relief, and administrative barriers to anaesthetic use are likely contributors.

In summary, we present evidence that the measures actually used to provide pain control for nasogastric tube insertion in the emergency department differ from those believed to be the most practical and the most effective. Many of the emergency physicians we surveyed were dissatisfied with this aspect of their practice, and the large majority was willing to change. Improvement in procedural anaesthesia for nasogastric tube insertion in the emergency department is needed and desired by emergency physicians.

CONTRIBUTORS
Dr Juhl initiated the study design, collected the data, analysed a part of the data, and did part of the writing. Dr Conners finalised the study design, analysed part of the data, and finalised the writing; he acts as guarantor for this paper.