

Xylocaine Spray Reduces Patient Discomfort During Nasogastric Tube Insertion

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Citation

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Abstract

Background: Nasogastric tube insertion is not tolerated well by patients especially after failed previous attempts. Atomised 1% Xylocaine spray may be used topically in the oropharynx and nasopharynx during endoscopy procedures.

Aims: The authors assessed the efficacy of topical local anaesthetic in a cohort of patients undergoing nasogastric tube insertion.

Methods: Patients in whom first attempt at tube insertion was unsuccessful were recruited to the study and consent obtained. Patient discomfort was assessed for the initial insertion attempt (VAS 1) and after use of the topical local anaesthetic (VAS 2) using a visual analogue scale.

Results: All second attempts with Xylocaine spray topical local anaesthesia were successful. Mean score for VAS 1 was 74.5 and for VAS 2 was 52.5. The mean reduction in VAS was 22. Paired t test revealed a significant reduction in discomfort scores at the second attempt.

Conclusion: The authors suggest that this technique should be used on all suitable patients to increase tolerance of the procedure.

INTRODUCTION

Nasogastric tubes are frequently used within the surgical specialties in order to decompress the upper gastrointestinal tract, measure fluid losses or administer enteral nutritional supplements. The procedure is not tolerated well by all patients and previous reports have suggested comforting strategies to aide placement^{1,2}. Topical 1% Xylocaine spray is used in the oropharynx and nasopharynx by ENT surgeons for minor procedures and to aide examination (Figure one). The authors have previously used this topical anaesthetic to aide nasogastric placement with great success.

METHODS

The authors conducted a prospective study to examine the effect of atomised lignocaine spray on patient discomfort during nasogastric tube insertion. Inclusion criteria were any adult patient who had a failed first attempt at insertion by a senior surgical ward nurse, a GCS of 15, no contraindication to insertion and no impairment of swallowing reflex. Patients were consented for the study by the senior author. A

visual analogue scale (VAS) was used to record the level of discomfort for the failed nasogastric tube insertion immediately after the attempt. The VAS was a 100mm linear scale with 0 marked as no discomfort, 50 as moderate discomfort and 100 as severe discomfort.

Patients then received a single spray of lignocaine 1% to the patent nostril and a further spray to the posterior oropharynx. An identical nasogastric tube was inserted by the authors using a standard technique^{3,4}. Correct placement was tested using aspiration, pH testing with litmus paper and air injection with auscultation over the gastric fundus. A second VAS was then completed together with a proforma with patient details, reason for insertion and whether the procedure had been successful. Results were statistically analysed using the paired t test.

RESULTS

Eleven patients met the inclusion criteria and all agreed to be included in the study (Table one). There were 5 males and 6 females. Mean age was 64 (range 32 to 85 years).

Nasogastric tubes were successfully passed in all eleven patients during the second part of the study although five patients required second attempts due to coiling of the tube within the oropharynx.

All patients recorded a decrease in their level of discomfort after lignocaine spray use. The mean VAS1 was 75 (range 50 to 92) and the mean VAS2 was 53 (range 35 to 82). The mean change in VAS (VAS1-VAS2) was 22 (range 6 to 36). Paired t test revealed a significant difference between the two groups: $t = 7.246$ ($p < 0.0001$).

Figure 1

Table 1

No.	Age	Sex	Att	Succ	VAS1	VAS2	Diagnosis	Indication
1	66	male	1	y	83	57	Burns	Nutrition
2	57	male	2	y	92	71	Pancreatitis	Vomiting
3	76	female	1	y	50	42	Obstruction	Decompression
4	32	male	1	y	64	35	Burns	Nutrition
5	43	female	2	y	88	82	Burns	Nutrition
6	72	female	1	y	70	38	Cholecystitis	Vomiting
7	64	male	1	y	61	45	Obstruction	Decompression
8	77	female	2	y	82	46	Obstruction	Decompression
9	85	female	1	y	78	56	Postoperative	Nutrition
10	47	female	2	y	68	54	Obstruction	Decompression
11	81	male	2	y	84	52	Obstruction	Decompression

DISCUSSION

Patients were anxious at the second attempt at nasogastric tube insertion and the use of topical 1% Xylocaine spray as a comforting strategy helped to allay some of this anxiety. Patient perceptions of discomfort on a VAS are extremely variable and reliance on absolute scores should be avoided. Analysis was performed of the difference between the two VAS scores for each patient. The results demonstrated a significant reduction in VAS of discomfort after administration of atomised topical Xylocaine spray. We would recommend using this technique in all suitable

patients who require nasogastric tube insertion.

Figure 2

Figure 1



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