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VALUABLE ALTERNATIVE TO THE NEX-METHOD? CONEX AS A NEW METHOD TO PREDICT THE INTERNAL TUBE POSITION OF A NASOGASTRIC TUBE: A PILOT STUDY

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Rationale: The NEX-method (nose-earlob-xiphoid process) is widely used to predict internal nasogastric tube length. A possible alternative is the Hanson formula: (NEX x 0,38696) + 30,37 cm. Earlier unpublished research[1] revealed that with both methods, tip position was located too close or even not beyond the lower esophageal sphincter (= LES) in > 20% of all patients. Assessment of the internal tube length by 3 radiologists in 183 patients suggested a correction of the Hanson formula: (NEX x 0,38696) + 30,37 cm + 6 cm. Aim of the study is to determine whether this correction can be a valuable alternative to the other methods.

Methods: A 3-month pilot study was conducted in a Belgian general hospital. External measurement to define the internal tube length was performed by 2 nutrition support nurses. The CoNEX[2]-method used to determine the internal tube length was *(NEX x 0,38696) + 36,37 cm.* After (re)positioning, 58 tubes were eligible to be assessed through X-ray by 2 independent radiologists. The ideal tube position was defined as a tube placed with the tip 3 cm or more beyond the LES[3].

Results: There is a significant difference between the use of the CoNEX-method and the two other methods ('NEX' and '(NEX x 0,38696) + 30,37 cm') to become an ideal tip position. The use of the CoNEX-method in all patients (n=58) led to 100% of well-positioned nasogastric tubes. The CoNEX-method also resulted in a significantly higher probability to aspirate gastric contents after the insertion of the nasogastric tube: 69% of all patients compared to 56% or less in both two other methods.

Conclusion: The CoNEX-method can be a valuable alternative to predict the internal tube position of a nasogastric tube. The CoNEX-method makes it also possible to obtain gastric aspirate in a higher amount of cases than the other two described methods.

References: [1] Torsy, T., Saman, R., Boeykens, K. (2017). [Internal length determination]. Unpublished raw data.

[2] **Co**rrection of the **NEX**

[3] Ellett et al. (2005). Predicting the insertion distance for placing gastric tubes. *Clinical Nursing Research, 14* (1), 11-27.

Disclosure of Interest: None Declared

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