Modified Gastric Biopsy Forceps as a Flexible Stylet-Assisted Nasogastic Tube Insertion in Anesthetized and Intubated Patients: A Prospective Randomized Controlled Study

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Abstract: Modified Gastric Biopsy Forceps as a Flexible Stylet-Assisted Nasogastic Tube Insertion in Anesthetized and Intubated Patients: A Prospective Randomized Controlled Study Chutima Simasatikul M.D.*, Narut Ruanaanukun M.D.*, Amorn Vijitpavan M.D.*
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Background: Insertion of a nasogastric tube in anesthetized and tracheally intubated patient may be difficult. The nasogastric tubes are prone to coiling and kinking during insertion. We hypothesize that the gastric biopsy forceps which are used as a flexible stylet-assisted nasogastric tube insertion can significantly improve the first-attempt success rate over the conventional technique during its insertion in anesthetized and tracheally intubated patients.

Methods: Eighty adult patients presenting for surgery under general anesthesia with endotracheal tube with neuromuscular relaxation were randomized to an experimental technique...
of gastric biopsy forceps (stylet group) or a conventional technique (control group) for insertion of the nasogastric tube. The success rates were assessed along with the duration of insertion, the incidence of coiling and kinking of nasogastric tube, the incidence of complications, and procedure-related bleeding. **Results:** The first-attempt success rate was 92.5% in stylet group compared with 65% in control group (**P** = 0.013). Overall success rate was significantly higher in stylet group (100% vs 85%; **P** = 0.026). The mean time required to insert the nasogastric tube was significantly shorter in stylet group (24.85 + 9.62 vs 62.4 + 59.38 seconds; **P** = 0.002). The incidences of coiling and kinking were significantly lower in stylet group (7.5% vs 32.5%; **P** = 0.005). The incidence of minor bleeding was lower in stylet group, but not statistically significant (2.5% vs 17.5%; **P** = 0.057). No other complications were observed in either of the groups. **Conclusions:** The gastric biopsy forceps assisted nasogastric tube insertion resulted in higher success rate, less time for insertion, and lower incidence of coiling and kinking of nasogastric tube than the conventional technique in anesthetized and tracheally intubated patients without serious complications.

**References**


