# A prospective randomised controlled trial of the LMA Supreme™ versus Spritztube® tracheal cannula in anesthetized adult patients

Dott.ssa SILVIA DE ROSA (1), Dott. ANTONIO MESSINA (2), Dott. ANNA PICCOLO (1)(3), Dott. ALESSANDRO RIGOBELLO (1), Dott.ssa VALENTINA ALBERTI (1), Dott.ssa ELISA BONI (1), Dott. PAOLO GASPARINETTI (1), Dott. PAOLO GENNARO (1), Dott. ADRIANO PELLIZZARI (1), Dott. ENRICO POLATI (3), Dott. MIRCO PRIMADEI (1), Dott. RAFFAELE BONATO (1), Dott. STEFANO CHECCACCI CARBONI (1)

(1) Department of Anesthesiology and Intensive Care, San Bortolo Hospital, viale Rodolfi, 37, Vicenza, Vi/veneto, Italia.

(2) Department of Anesthesia and Intensive Care Medicine, Maggiore della Carità University Hospital, corso Giuseppe Mazzini, 18, Novara, No/piemonte, Italia.

(3) Division of Anesthesiology, Department of Surgery, University of Verona Hospital Trust, University of Verona, via San Francesco,22, Verona, Vr, Veneto, Italia.

Argomento: Altro

BACKGROUND: The Spritztube (ST) [tracheal cannula, Med Europe s.r.l] is a new extraglottic airway device which brings together the ability to perform both EAD ventilation and oro-tracheal fibreoptic intubation using the same device. This trial was conducted to evaluate the efficacy, safety, and incidence of adverse events of ST and also to compare the results with those of laryngeal mask airway (LMA).METHODS: This was a prospective, randomized, controlled clinical study including 336 spontaneously breathing anaesthetised patients randomized into two groups undergoing elective surgery. Time required for intubation, successful intubation attempt, airway sealing pressure and incidence of complications were assessed. RESULTS: One hundred sixty-seven and 167 patients were randomly allocated to LMA and ST groups, respectively. Most patients were females and had Mallampati Class II airway in both groups. The number of attempts for ST was significant less compared to LMA ($P<0.001$). Airway insertion was more successful ($P = 0.03$; 93% vs. 84%) with ST. Insertion times were similar with ST (10 [10-15]s) and LMA (10 [10-20]s). The oropharyngeal leak pressure in ST (60 [60-65] cmH2O) was significantly higher than that in LMA group (60 [40-60]cmH2O, $p<0.0001$). At insertion, blood staining ($p=0.01$) and failure device was seen in LMA group ($p=0.002$), while in ST group two (1%) patients had laryngospasm and three (3%) patients had obstruction after insertion. Incidence of sore throat and presence of gastric insufflation was not different between the two groups. CONCLUSIONS: ST was found to be safe with low complications. It provided better airway sealing with high rate of the first insertion success.

| | Group 1 (LMA) | Group 2 (ST) | *p value* |
|---|---|---|---|
| **Complication at insertion** | | | |
| **Air Leak at induction** | 9 (5%) | 0 (0%) | **0.01** |
| **Laryngospasm** | 0 (0%) | 2 (1%) | 0.10 |
| **Obstruction after insertion** | 5 (3%) | 3 (2%) | 0.55 |
| **Blood staining** | 6 (4%) | 0 (0%) | **0.01** |
| **Presence of gastric insufflation** | 1 (1%) | 1 (1%) | 0.99 |
| **Failure Device** | 9 (5%) | 0 (0%) | **0.002** |
| **Complication at removal** | | | |
| **Dysphagia** | 1 (1%) | 0 (0%) | 0.25 |
| **Hoarseness** | 0 (0%) | 0 (0%) | 0.33 |
| **Sore Throat** | 1 (1%) | 1 (1%) | 0.95 |

**Table. Complications** All quantitative data as total number (%).