

Jejunal tube placement in critically ill patients: A prospective, randomized trial comparing the endoscopic technique with the electromagnetically visualized method

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Objective: Head-to-head comparison of the success rate of jejunal placement of a new electromagnetically visualized jejunal tube with that of the endoscopic technique in critically ill patients.

Design: Prospective, randomized clinical trial.

Setting: Two intensive care units at a university hospital.

Patients: A total of 66 critically ill patients not tolerating intragastric nutrition.

Interventions: Patients were randomly assigned (2:1 ratio) to receive an electromagnetically visualized jejunal feeding tube or an endoscopically placed jejunal tube. The success rate of correct jejunal placement after 24 hrs was the main outcome parameter.

Measurements and Main Results: The correct jejunal tube position was reached in 21 of 22 patients using the endoscopic technique and in 40 of 44 patients using the electromagnetically visualized jejunal tube (95% vs. 91%;

relative risk 0.9524, confidence interval 0.804-1.127, $p = .571$). In the remaining four patients, successful endoscopic jejunal tube placement was performed subsequently. The implantation times, times in the right position, and occurrences of nose bleeding were not different between the two groups. The electromagnetically visualized technique resulted in the correct jejunal position more often at the first attempt. Factors associated with successful placement at the first attempt of the electromagnetically visualized jejunal tube seem to be a higher body mass index and absence of emesis. This trial is registered at ClinicalTrials.gov, number NCT00500851.

Conclusions: In a head-to-head comparison correct jejunal tube placement using the new electromagnetically visualized method was as fast, safe, and successful as the endoscopic method in a comparative intensive care unit patient population.

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