

Guideline development: Percutaneous Endoscopic gastrostomy in advance dementia patients

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BACKGROUND

Dysphagia, apraxia and lack of appetite are common symptoms in the patients with advanced dementia and are responsible for a poor nutritional intake. The decision to start the administration of food and fluids via a percutaneous endoscopic gastrostomy (PEG) tube is controversial.

The aim of our systematic review was to investigate if the use of PEG, in comparison to oral nutrition or to nasogastric tube, was associated to a reduced mortality in advanced dementia.

RESEARCH QUESTIONS

In patients with dementia, does percutaneous endoscopic gastrostomy, when compared to oral feeding, reduces mortality?

IDENTIFICATION OF STUDIES

We performed a search accordance to the recommendations of the Cochrane collaboration using Medline and EMBASE, from earliest achievable date until April 2020. Reference lists were also reviewed and relevant articles retrieved for consultation. We also searched for Conference papers No language restrictions were applied. The queries used are described below:

Medline query: ((randomized controlled trial [pt] OR controlled clinical trial [pt] OR Clinical Study [pt] OR clinical trial [pt] OR Pragmatic Clinical Trial[pt] OR Observational Study [pt] case control [tiab] OR cohort [tiab] OR randomized [tiab] OR groups [tiab] OR trial [tiab]) NOR (animals [mh] not (human [mh] and animals [mh])) AND gastrostomy AND dementia

EMBASE query: (randomized controlled trial.mp OR Clinical Study.mp OR clinical trial.mp OR case-control studied OR Observational Study.mp OR case control.ti, ab OR cohort.ti,ab OR randomized.ti,ab OR groups.ti,ab OR trial.ti,ab) AND gastrostomy AND dementia

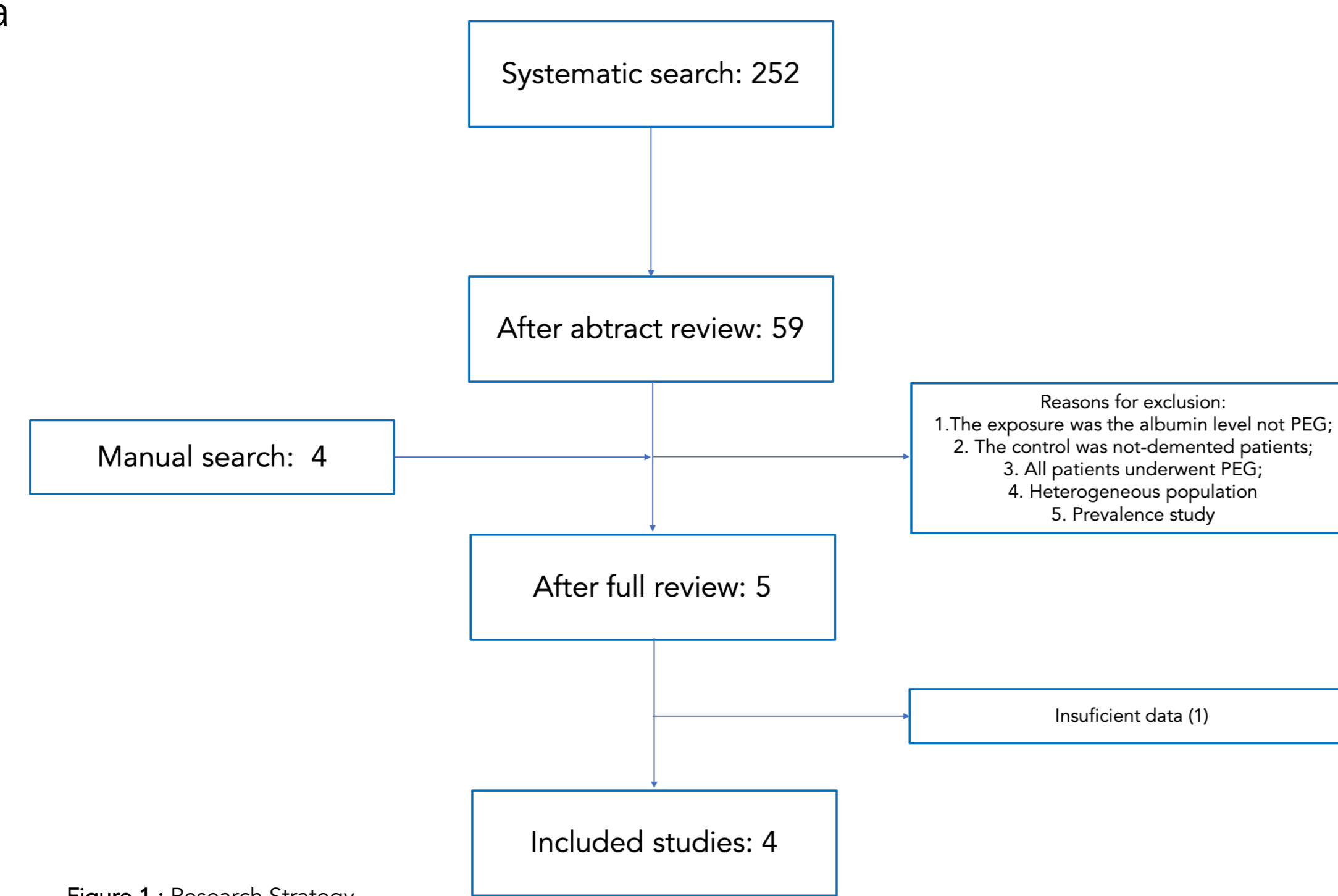


Figure 1.: Research Strategy

DATA EXTRACTION AND QUALITY APPRAISAL

We used Endnote to manage duplicate files and extracted data to a pre-defined spreadsheet. We did a quality appraisal of the studies using The risk of bias in observational studies of exposures (ROBINS-E) tool, since we found only observational studies through our research.

REFERENCES

1. Nair S, Hertan H, Pitchumoni CS. Hypoalbuminemia is a poor predictor of survival after percutaneous endoscopic gastrostomy in elderly patients with dementia. Am J Gastroenterol. 2000 Jan;95(1):133-6. PubMed PMID: 10638571. 2. Teno JM, Gozalo PL, Mitchell SL, Kuo S, Rhodes RL, Bynum JP, et al. Does feeding tube insertion and its timing improve survival? J Am Geriatr Soc. 2012;60(10):1918-21. 3. Ticinesi A, Nouvenne A, Lauretani F, Prati B, Cerundolo N, Maggio M, Meschi T. Survival in older adults with dementia and eating problems: To PEG or not to PEG? Clin Nutr. 2016 Dec;35(6):1512-1516. doi: 10.1016/j.clnu.2016.04.001. Epub 2016 Apr 7. PubMed PMID: 27091773. 4. Rakici H, Ayyaz MA. Percutaneous endoscopic gastrostomy feeding is beneficial in patients with advanced dementia. Asia Pac J Clin Nutr. 2019;28(4):695-700. doi: 10.6133/apjcn.201912.28(4).0004. PubMed PMID: 31826365

IMPLEMENTATION

Step 1.: baseline assessment tool to evaluate which practice is in line with the recommendations about PEG insertion in patients with advanced dementia and dysphagia

Step 2.: committee with physician, hospital manager, a residential home manager, a palliative care coordinator, a nurse, patient and caregivers representant.

Step 3.: sessions with patients and families in order to access priorities in care.

Step 4.: identification of areas for improvement, on priorities, reviews of literature.

Step 5.: interactive educational sessions, which can be held either at scientific meetings on dementia, primary care facilities, nursing homes and at patient's association facilities.

Step 6.: educational outreach visits - conduction of one-to-one visits between members of the implementation committee and the stakeholders, including patients and caregivers.

Step 7.: posting reminders of the criteria for patient selection and the recommendations in the outpatient clinic and in the medical wards.

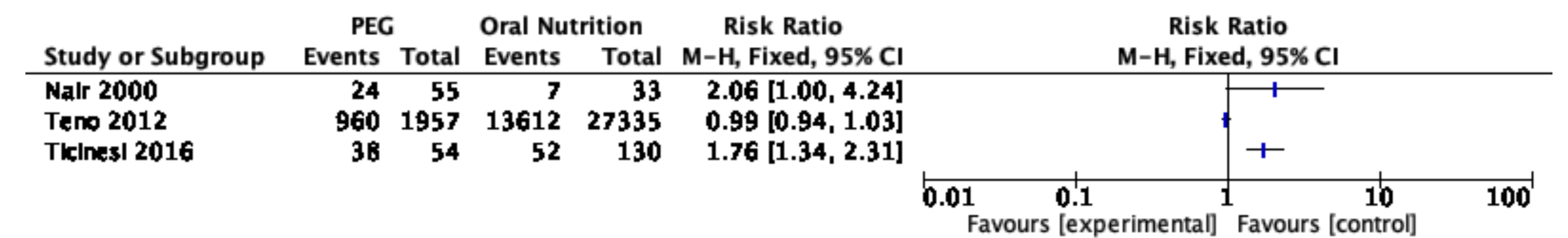
Step 8.: consultation with the hospital communications experts to develop the implementation plan, including: presentations about the program on all units; presentations to multidisciplinary leaders, emails to the medical teams, contact with patient's and caregivers associatons.

Step 9.: patient-mediated interventions, such as pamphlets about the dysphagia management program to patients and family members. Educational sessions at nursing homes/daycare facilities and patients' associations facilities.

EVIDENCE PROFILE (GRADEPro)

Summary of findings						
No of studies	No of patients		Effect		Certainty	Importance
	PEG insertion	Oral nutrition or NGT	Relative (95% CI)	Absolute (95% CI)		
4	1015/2066 (49.1%)	13671/27498 (49.7%)	RR 1.01 (0.92 to 1.05)	0 more per 1000 (from 40 fewer to 25 more)	Very low	CRITICAL

Certainty assessment					
No of studies	Study design	Risk of bias	Inconsistency	Indirectness	Imprecision
3	observational studies	serious	very serious	not serious	very serious



Studies heterogenity: Chi2: 20.69, df= 2 (p=0.0001) I² = 90%

RATE OVERALL QUALITY

We assess the overall quality of the studies using ROBINS-E

Studies	Bias due to confounding	Bias in selection of participants into the study	Bias in classification of interventions	Bias due to deviations from intended interventions	Bias due to missing data	Bias in measurement of outcomes	Bias in selection of the reported result
Nair et al 2000	Moderate	Serious	Serious	Low	Moderate	Low	Low
Teno et al. 2012	Moderate	Serious	Serious	Low	Low	Low	Low
Ticinesi et al. 2016	Serious	Moderate	Moderate	Low	Low	Low	Low
Rakici et al. 2019	Moderate	Serious	Serious	Low	Moderate	Low	Low

RECOMMENDATIONS

Recommendation We cannot provide a recommendation on PEG in dementia patients.

Quality of evidence: Very low. **Strength of recommendation:** Inconclusive.