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# DISCONTINUATION OF PROTON PUMP INHIBITORS DURING HOSPITALISATION: A RANDOMISED CONTROLLED TRIAL

## Background

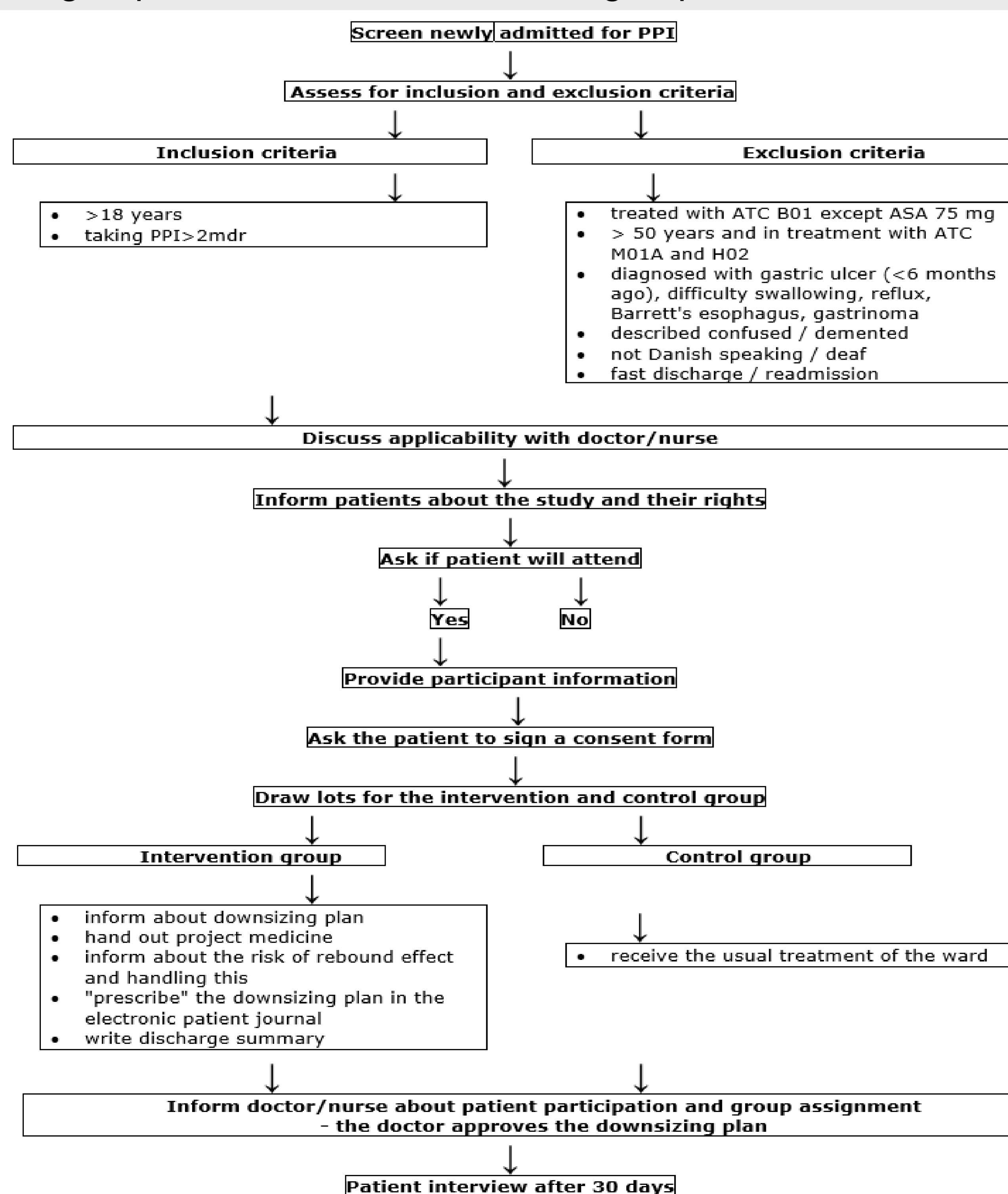
- Too many patients take proton pump inhibitors (PPIs) without indication (1,2).
- There are side effects to long term PPI treatment (3).
- No previous studies have examined whether it is possible to reduce or discontinue treatment during hospitalization and continue it successfully after discharge.

## Aim

- The aim of the study is to investigate if PPIs can be discontinued or reduced through counselling by pharmacy staff during hospitalisation.
- In addition, it is investigated whether dose reduction and/or discontinuation affects symptoms, number of readmissions and quality of life.

## Materials and methods

- Patients at the Emergency and Medical Departments at Randers Regional Hospital, were randomized into 2 groups, intervention and control group.



- The intervention was performed by pharmacy staff and included information and counselling about dose reduction and discontinuation of PPIs, including a strategy to cope with rebound symptoms

## Results

- 31 adults were included. 4 withdrew from the investigation at their own request or because they could not be reached on follow-up telephone calls.
- Baseline characteristics showed no statistically significant difference between intervention and the control group in terms of age, gender, number of drugs, symptoms, number of readmissions or quality of life.

**Table 1:** Number of adults included in the study and allocation to intervention or control group.

Group	Intervention	Control	Total
No dose reduction or discontinuation	4	13	17
Dose reduction or discontinuation	9	1	10
<b>Total</b>	<b>13</b>	<b>14</b>	<b>27</b>
% with dose reduction or discontinuation	<b>69,2 %</b> [38.6-90,9%]	<b>7.1%</b> [0.2-33.9]	

- The proportion of patients who successfully discontinued or reduced their use of PPI was 69.2% (CI95%: 38.6-90.9%) (9 in 13 patients) in the intervention group compared to 7.1% (CI95%:0.2-33.9) (1 in 14 patients) in the control group.
- The difference between groups was statistically significant (p=0.001).

## Conclusion

- The primary outcome was the proportion of patients who successfully reduced or discontinued their use of PPIs.
- Statistically significantly more patients discontinued or reduced their use of PPI after counselling by the pharmacy staff.
- Dose reduction and/or discontinuation did not affect symptoms, number of readmissions and quality of life.
- The pharmacy staff was capable of identifying patients for whom PPI dose reduction or discontinuation was relevant and performing a successful counselling on discontinuation or reduction of the use of PPIs.

### References:

- 1) Schepisi R, et al. Inappropriate use of proton pump inhibitors in elderly patients discharged from acute care hospitals, J Nutr Health Aging. 2016;20(6):665-670
- 2) Akram F, et al. Proton-pump inhibitors: Are we still prescribing them without valid indications? Australasian Medical Journal. 2014;7(11):465-470
- 3) Haastруп P, et al. Strategies for discontinuation of proton pump inhibitors: a systematic review. 2014; 31(6):625-630