

## Mortality rate after pneumatic dilatation for achalasia: authors' reply

We thank Drs Van Hoeij and Bredenoord for their interest in our article.<sup>1,2</sup> Their letter focuses on the observed mortality and perforation rates following pneumatic dilatation (PD) for achalasia.

It is important to recognise that, unlike the randomised controlled trial<sup>3</sup> and systematic review<sup>4</sup> quoted by Drs Van Hoeij and Bredenoord, our study was based on unselected subjects with achalasia receiving standard clinical care throughout England.<sup>2</sup> Our study therefore contained much older subjects with more comorbidity, as Drs Van Hoeij and Bredenoord suggested. Twenty-six percent of the cohort described in our article was over 77 years of age, in whom a 30-day mortality of 5.3% was observed. By comparison, in a randomised controlled trial of PD, 0% mortality was described in 96 selected subjects with a mean age of 46.4 (SD 15.6) years.<sup>3</sup> Therefore, few, if any, PD subjects over 77 years of age were included in the trial and were at the increased risk of death seen in our study.

The observed mortality in our study could be related to achalasia itself, any component of the PD procedure or its aftercare, or a deterioration of an unrelated comorbid condition. Our results support other research suggesting that perforation is unlikely to lead to death, with mortality in the perforation group in our study between 0% and 8%. Unfortunately, a more precise figure is censored from publication due to the Hospital Episode Statistics database reporting guidelines for small values. We have previously reported that subjects with achalasia have an adjusted incident rate ratio of 1.33 (when compared with the background population) for all-cause mortality at any time after diagnosis.<sup>5</sup> We therefore think that the increased mortality we have observed is likely to relate to disease-specific mortality and the age and comorbidities of the subjects

included, rather than perforation-related mortality.

We agree with Drs Van Hoeij and Bredenoord that further data on mortality and the cause of death in comorbid subjects or subjects over 70 years of age with achalasia undergoing therapeutic intervention are an important area for future research, given the clinical dilemmas involved in recommending intervention to these patients.

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**Contributors** PRH, NJT and PP drafted and approved this letter.

**Funding** The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

**Competing interests** None declared.

**Patient consent for publication** Not required.

**Provenance and peer review** Not commissioned; internally peer reviewed.

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**To cite** Harvey PR, Patel P, Trudgill NJ. *Gut* 2020;**69**:1716–1717.

Received 31 August 2019

Accepted 4 September 2019

Published Online First 18 September 2019



► <http://dx.doi.org/10.1136/gutjnl-2019-319513>

*Gut* 2020;**69**:1716–1717. doi:10.1136/gutjnl-2019-319762

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