A study of the safety of current gastrointestinal endoscopy (EGD).

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Abstract

BACKGROUND AND STUDY AIMS: Previous attempts at assessing the safety of upper gastrointestinal endoscopy have been hampered by incomplete data collection. We aimed to assess the 30-day mortality associated with esophagogastroduodenoscopy (EGD) and assess the important risk factors.

PATIENTS AND METHODS: A retrospective cohort study was conducted of patients who underwent endoscopy at Ninewells Hospital in Dundee between 1 June 2000 and 31 May 2003. A total of 11 501 EGDS were performed in 8926 patients. These patients were record-linked to the death registry and the database of hospital admissions in order to calculate the all-cause 30-day mortality. An expert panel judged whether EGD had caused or contributed to the deaths. Logistic regression analysis was performed on outcomes of all-cause and EGD-contributed mortality.

RESULTS: The median age of the patients was 62 years (interquartile range 48 - 74 years), 54 % were women, and 94 % of procedures were diagnostic. A total of 395 patients died within 30 days (all-cause 30-day mortality rate 4.4 %). One patient death was caused directly by the EGD (procedure-caused mortality rate 1 in 9000). EGD was judged to have contributed to patient deaths at a rate of 1 in 182, based on majority agreement of experts: some factors associated with these deaths were percutaneous endoscopic gastrostomy insertion (odds ratio [OR] 18.39, 95 % confidence interval [CI] 5.71 - 59.22), melena or hematemesis indications (OR 9.01, 95 % CI 3.53 - 22.99), and esophageal varices (OR 6.28, 95 % CI 1.54 - 25.60).

CONCLUSIONS: A causal death rate of 1 in 9000 suggests that EGD is very safe. However, certain patient groups have an increased mortality, and the risks and benefits of EGD should be carefully evaluated in each patient.

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