Clinical & Scientific letters

Letters not directly related to articles published in *Clinical Medicine* and presenting unpublished original data should be submitted for publication in this section. Clinical and scientific letters should not exceed 500 words and may include one table and up to five references.

Diagnostic error in the hospital presentation of acute asthma

Editor – Hospital Episode Statistics data show hospital presentations with acute asthma are increasing.[1] The accurate diagnosis of asthma is hindered by the disease's heterogenous pathophysiology and the lack of a universal diagnostic test and there is little published data on the rate of false positive diagnosis of acute asthma presenting to hospital.

To assess the false positive diagnostic rate of acute asthma in our hospital we prospectively reviewed 450 serial adult presentations with asthma over six months. We recorded the presenting diagnosis (pts own if attending A&E or that of refereeing GP if referred to MAU), that made by the receiving doctor and that made after a structured respiratory specialist review. We accepted a diagnosis unless there was documented objective evidence to refute it, when patients were reclassified as 'normal', anxiety/hyperventilation, pneumonia, respiratory tract infection (RTI), COPD, cardiovascular or miscellaneous. To be given a diagnosis of 'normal' or hyperventilation at the review required a documented presentation peak flow of ≥75% best or predicted best.

Two hundred and eighty-four of the 450 patients were admitted, with admission rates from A&E and MAU being 46% and 91% respectively. In 103 cases the presenting diagnosis of asthma was not sustained by the receiving doctor. Of these 103 cases 39 were felt to be 'normal' or to have anxiety/hyperventilation, 16 COPD, 15 RTI, 8 cardiovascular, 7 pneumonia and 18 miscellaneous (Fig 1). In 347 patients the receiving doctor agreed the presenting diagnosis of asthma. After respiratory review 77 (22%) of these presentations were attributed to diagnoses other than acute asthma with 33 being classified as 'normal' or have anxiety/hyperventilation, 25 COPD, 5 RTI, 6 cardiovascular, 4 pneumonia and 4 miscellaneous causes. Patients with a post review diagnosis of 'normal' or anxiety/hyperventilation had a mean PEF on presentation of 91% best, were significantly younger than those with acute asthma (34 vs 42, p=0.008) and had a female:male ratio of 2.4:1. Patients with a post review diagnosis of COPD were significantly older than the acute asthmatics (42 vs 68, p<0.0001). The initial receiving doctors diagnosis of acute asthma was confirmed after respiratory review in 270 patients. Overall, 40% of the 450 serial cases presenting as acute asthma had their diagnosis changed after specialist review (false positive diagnostic rate) while the receiving doctors, false positive diagnostic rate was 22%.

If our results are representative of national trends, central data on hospital admissions with acute asthma are likely to be overestimating the true rate by 22%, a rate similar to the previously described over-diagnosis of asthma deaths.[2–5]

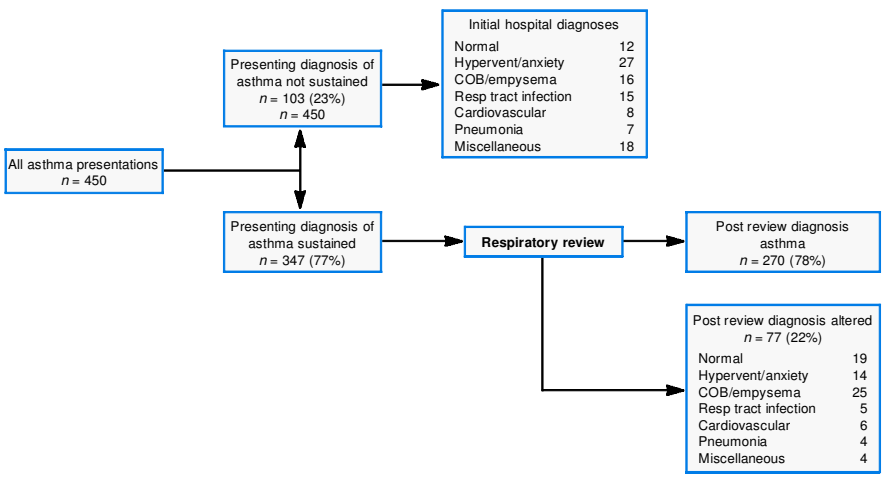

Fig 1. End diagnoses of patients after initial hospital diagnosis and after structured respiratory review.

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3 Wright SC, Evans AE, Sinnamon DG, MacMahon J. Asthma mortality and death certification in Northern Ireland. *Thorax* 1994;**49**:141–3.
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Availability of fully staffed GI endoscopy lists at the weekend for inpatients: does it make a difference?

Editor – Like most UK hospitals, our hospital used to have a fully staffed emergency GI endoscopy service only during normal weekday working hours. Outside these hours, an experienced endoscopist was available but was not supported either by a full support team or by the full range of therapeutic equipment. This type of ad hoc service has recently been identified as being of below an acceptable quality in the recently published British Society of Gastroenterology

guidelines for setting up an endoscopy service.[1]

In recent years, regular weekend gastrointestinal (GI) endoscopy lists have been implemented in some hospitals in the UK to reduce outpatient waiting times. These lists also provide an additional regular opportunity to endoscope inpatients – which could in turn lead both to earlier discharge of patients admitted with trivial upper gastrointestinal (UGI) haemorrhage and to earlier endoscopic diagnosis in patients with significant UGI haemorrhage allowing either endoscopic therapy or earlier surgical referral.

Having recognised this, we therefore took advantage of additional weekend 'waiting list initiative' GI endoscopy lists to perform emergency endoscopy on patients admitted with suspected or confirmed acute upper GI bleeding in our purpose-designed GI unit with fully qualified assistance.

Retrospectively, we audited the notes and computer records of all inpatients undergoing diagnostic and therapeutic upper GI endoscopy on weekend lists for a five-month period from August to December 1999. Primary end points analysed were discharge within 24 hours of endoscopy for patients admitted with trivial GI bleeding and endoscopic or surgical intervention and mortality for patients with significant GI bleeding (defined as systolic blood pressure <100 mmHg and/or Hb <10 g/l due to recent blood loss).

Fifty eight inpatients (38 male, 20 female) were endoscoped of whom 39 had trivial bleeding and 19 had significant upper GI bleeding. Thirteen (33.3%) of the 39 patients with trivial haemorrhage were discharged within 24 hours of their endoscopy saving 23 bed days. Of these discharges, 6 patients had a normal OGD, 2 with Mallory-Weiss tear and 1 each with oesophagitis, *H pylori* positive gastritis, gastric ulcer, gastric erosions and duodenitis. In the 19 patients with significant haemorrhage, 10 (53%) underwent endoscopic therapy, 5 of whom were subsequently transferred to surgical care over the weekend. In total, fourteen patients (29.8%) were referred to the surgical team of whom 7 were transferred to a surgical ward. Three (5.2%) underwent surgery with one post-operative death at 3 weeks. The total number of deaths was 5 (8.6%). Three of these were early (within 30 days of OGD) and all were patients in the significant haemorrhage group. Two late deaths (over 30 days from OGD) were unrelated to either the GI haemorrhage or its investigation.

The results of the audit indicate that weekend endoscopy lists do indeed allow the earlier discharge of a large proportion of patients with trivial upper GI haemorrhage with a significant saving of inpatient bed days.[2,3] The surgery rate and mortality for patients with more serious haemorrhage were equivalent to those of previous published series.[4,5] With no control data, we could not estimate whether we had reduced the surgery rate or death rate within this hospital. However, earlier diagnosis with opportunities for therapy in optimal conditions must lead to a higher quality of service, allowing earlier appropriate decisions and rational interventions in this seriously ill group of patients leading to higher quality of care.

References:

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