‘Treat the Cause’: the NCEPOD report on acute pancreatitis

Hospital doctors can make a difference to the outcome of patients with acute pancreatitis by investigating and treating the underlying cause, using early warning scores to detect deterioration, avoidance of inappropriate antibiotics and encouraging better network arrangements. These are the key recommendations of a recent report from National Confidential Enquiry into Patient Outcome and Death (NCEPOD) (2016).

Acute pancreatitis is an acute inflammatory process affecting the pancreas. The main causes are gallstones and excessive alcohol intake. Most hospitals in the UK serving a population of 300 000–400 000 people admit around 100 patients with this condition each year. The condition can be mild and self-limiting but can also be a severe illness causing multiple organ failure and death (Banks et al, 2013; Johnson et al, 2014; Lankisch et al, 2015).

Many practice guidelines for management of acute pancreatitis have been published but with significant variation in their implementation (Baltatzis et al, 2016). The International Association of Pancreatology guidelines provide the most recent recommendations and serve as a reference standard for current management (Working Group IAP/APA Acute Pancreatitis Guidelines, 2013).

NCEPOD is an independent organization whose remit is to review medical and surgical practice and to make recommendations to improve the quality of the delivery of care. The aim of the report discussed here was to identify the remediable factors in the quality of care provided to patients treated for acute pancreatitis.

How did NCEPOD undertake this study of acute pancreatitis?

During the 6-month study period between 1 January and 30 June 2014, 14 479 patients were identified by NCEPOD as having been admitted to hospital with a primary diagnosis of acute pancreatitis. To obtain a cohort with more severe disease, patients with one or more of the following criteria were selected: an inpatient stay of three or more nights, admission to critical care, and death in hospital. A sample of this subpopulation was then randomly selected (up to five cases per hospital) for inclusion. A total of 712/987 (72%) completed clinician questionnaires and 697 sets of case notes were returned to NCEPOD. The case reviewers were able to assess 418 cases.

Two questionnaires were used to collect data for this study; a clinician questionnaire for each case and an organizational questionnaire for each participating hospital. A multidisciplinary group of case reviewers was recruited to peer review the case notes and associated clinician questionnaires.

What were the overall main findings?

The majority of patients (77%; 547/712) were discharged to their previous place of residence; 89/712 (13%) patients died and 35/712 (5%) patients were transferred to another hospital. The case reviewers deemed that overall 45% of patients received ‘good practice’, i.e. a standard that they would accept from themselves, their trainees and their institution. The purpose of NCEPOD reports is to identify opportunities for improvement; these can be aspects of clinical or organizational care or both. In total, room for improvement, whether clinical, organizational or both, was identified in 52% of the cases reviewed. Less than satisfactory care occurred in 3% of cases (*Figure 1*).

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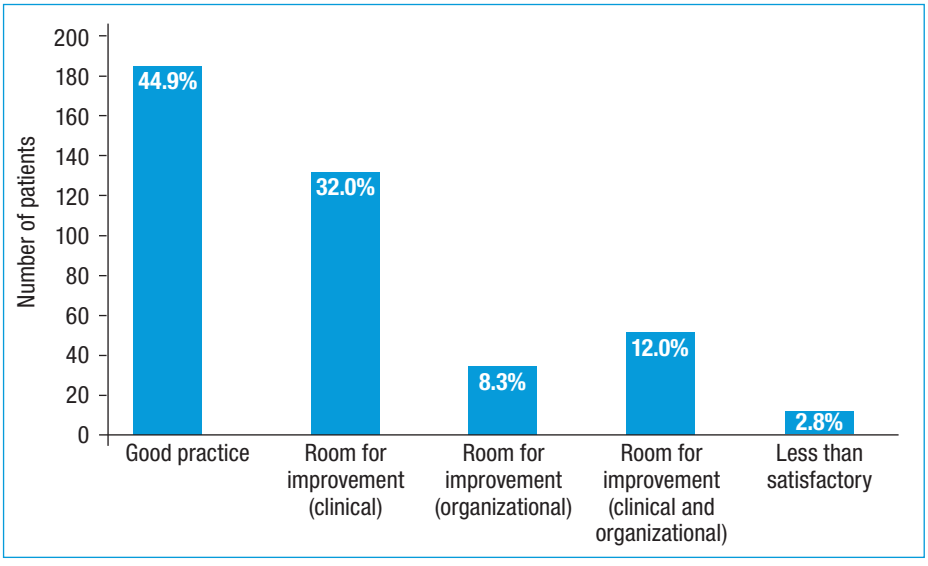
Figure 1. Overall assessment of care. From National Confidential Enquiry into Patient Outcome and Death (2016).



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Where are the opportunities for improvement?

The National Early Warning Score has been developed to provide a standardized track-and-trigger system for acute illness in people presenting to, or within hospitals (Royal College of Physicians, 2012). Although the initial assessment was deemed prompt in the majority of patients, it did not include any form of early warning score in 154/502 (30.7%) of emergency department admissions for acute pancreatitis. On admission to a ward, an early warning score was performed in 571/662 (86.3%) cases. The type of early warning score used in the emergency department and the ward was not the same in 8% (22/285) cases. When an early warning score was used, it frequently led to an escalation of response (47.3%) and while responses were almost always appropriate, they were not always timely.

Intravenous antibiotic prophylaxis is not recommended for the prevention of infectious complications in acute pancreatitis (Wittau et al, 2011; Working Group IAP/APA Acute Pancreatitis Guidelines, 2013). The risks, of encouraging antibacterial resistance and opportunistic fungal infections, leading to even higher mortality rates, outweigh any benefits (O'Reilly and Kingsnorth, 2004). Antibiotics were prescribed in 439/712 (61%) patients. In one fifth of cases, antimicrobial management was not considered appropriate by both the clinicians and the case reviewers; the commonest reason for inappropriate antibiotic prescription being that antibiotics were not indicated (60/72 patients).

One fifth of the patients had a previous admission with acute pancreatitis. In almost all readmissions the cause was the same as the original acute pancreatitis episode. Treatment of the cause at the time of the first admission could have averted many readmissions. Expert consensus is that the best time to operate to deal definitively with gallstones is during the index admission for patients with mild acute pancreatitis, after the initial symptoms have resolved (van Baal et al, 2012; Royal College of Surgeons of England and Association of Upper Gastrointestinal Surgeons, 2013; Working Group IAP/APA Acute Pancreatitis Guidelines, 2013; National Institute for Health and Care Excellence, 2014). For patients with severe biliary pancreatitis, it is usually appropriate to delay cholecystectomy. Gallstones were the cause of a recurrent acute pancreatitis admission in 40/132 (30.3%) patients who were recurrent admissions during this study but only 18.9% (61/322) of patients with acute pancreatitis caused by gallstones had definitive management during their admission. In the case reviewers' opinion, of 179 patients not undergoing definitive treatment for gallstones during the index admission, 53 should have done with an additional 36 cases where this could not clearly be determined. This was often because of a lack of access to emergency theatres.

Given the increasing complexity of the management of acute pancreatitis and its multidisciplinary nature, formal networks should be established so that every patient has access to specialist interventions, regardless of which hospital the patient presents to and is initially managed in (Working Group IAP/APA Acute Pancreatitis Guidelines, 2013). However, only approximately one third of hospitals in the current study reported being part of a formal regional care network for acute pancreatitis; of the remainder, 81/107 hospitals reported being part of an informal network but nearly a quarter (26/107; 24%) were not even part of an informal network.

How do I play a part in implementing this NCEPOD report?

The authors recommend that clinicians fully investigate patients for the cause of acute pancreatitis. They should ensure early treatment for patients with gallstones, and alcohol cessation advice where indicated. They recommend judicious use of antibiotics – most patients with acute pancreatitis do not require them. The organization of care should also be improved: development of better networking arrangements and regional pancreatitis units with shared management guidelines is essential to improve the coordination of care.

Some of these recommendations are aimed at clinical directors, commissioners and specialist associations but most are aimed at every clinician who plays a role in the care of a patient with acute pancreatitis. Every clinician can play their role in improving outcomes in acute pancreatitis by adopting these recommendations and auditing their results. Make a start by downloading the report at www.ncepod.org.uk/2016ap.html **BJHM**

KEY POINTS

- For all early warning scores, all acute hospitals should have local arrangements to ensure an agreed response to each trigger level.
- Antibiotic prophylaxis is not recommended in acute pancreatitis.
- Patients with an episode of mild acute gallstone pancreatitis should have early definitive surgery, either during the index admission, as recommended by the International Association of Pancreatology (IAP), or on a planned list within 2 weeks.
- Formal networks should be established so that every patient has access to specialist interventions, regardless of which hospital the patient presents to and is initially managed in.

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