Endoscopic retrograde cholangiopancreatography training in the United Kingdom: A critical review

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Abstract

Endoscopic retrograde cholangiopancreatography training used to be in virtually all district general hospitals, resulting in a large number of trainees with an inadequate case load and achieving poor levels of skill. Training is now restricted to a small number of trainees working in approved units. Continuous audit of outcomes and the appointment of a training lead in the unit are essential. Use of the global rating scale helps clinicians advise hospital administration on the priorities for a quality training program.

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INTRODUCTION

Endoscopic retrograde cholangiopancreatography (ERCP) remains an important tool in the management of biliary and pancreatic disease. Although supported by endoscopic ultrasound (EUS) and magnetic resonance imaging (MRI), ERCP is still frequently required to treat biliary diseases, often in acutely ill and elderly patients. High standards of training and practice are very necessary.

Gastrointestinal endoscopy in the health services of the UK have undergone major investment and reforms in the last ten years driven by the need to massively expand the provision of endoscopy and improve the quality of the service. The investment has been successful in that the initial targets for waiting times have been achieved, resulting in more stringent targets. The reforms of service provision have been paralleled by reform of training systems.

The quality and safety of ERCP was examined by the national confidential enquiry into patient outcome and death (NCEPOD)\(^1\) in 2004 as part of its examination of deaths after therapeutic endoscopy. It found that 68% of ERCP examinations were futile and that complications were unacceptably high.

This prompted the British society for gastroenterology (BSG) to undertake a survey of ERCP practice in the UK in 2005\(^2\) which found that there were some shortcomings of clinical practice and training. Of the 5264 ERCPs performed by 213 endoscopists, 94% were with therapeutic intent and in only 70% was the therapeutic aim was achieved. There was a complication rate of 5.1%, including a 1.6% incidence of pancreatitis and a procedure-related mortality of 0.4%. Patient selection was appropriate. The group concluded that the number of operators and possibly the number of units performing ERCP was too high and that a small number of trainees should be selected and given focused programs. They recommended that the selected trainees should have a firm intention of providing ERCP services after the completion of their training. The working group predicted a
need for 0.9 ERCP procedures per 1000 population per annum and, given the number of units requiring at least 2 ERCPists and the predicted retirement rate, concluded that about 30 per annum should complete ERCP training in the UK.

In the USA, a similar situation was prevailing, with a majority of trainees concluding that their training had been inadequate even though they were intending to practice ERCP[3].

Standards for training and service quality in the UK are set by the royal colleges joint advisory group (JAG)[4]. Comprising of representatives from the Royal Colleges of Physicians, Surgeons, Radiologists and General Practitioners, JAG advises the department of health (DoH) and thereby the national health service (NHS) on the provision of endoscopic services. JAG certifies the competence of endoscopists.

The DoH appointed Dr Roland Valori as National Endoscopy Lead and he introduced GRS[5] as the self-assessment tool for endoscopic services. The JAG has adopted the global rating scale (GRS) as the structure for their assessment. Using GRS, units gather documentary evidence to prove their quality. The four GRS domains are clinical quality (scores for consenting, safety, comfort, quality of the procedure, appropriateness, communication of findings), quality of patient experience (equality of access, patient experience, booking and choice, privacy, aftercare, feedback), training (the training environment and opportunities, trainers, assessment, equipment and educational materials) and the workforce (skill-mix, orientation, appraisal, caring for staff). JAG inspection of endoscopy services has had real effects. Failure to receive approval would have disastrous results on the income of a unit.

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The JAG has set standards for units performing ERCP; a unit is required to have all the standard ERCP accessories, hemostasis equipment and an emergency lithotripter present for all procedures.

The role of ERCP must be agreed in a local protocol, including the use of prophylactic antibiotics, a consultant must write that ERCP is indicated and all patients must be assessed by suitably trained staff. A contemporaneous report of the ERCP must be written in the record and complications recorded for audit.

The staffing for the procedure must be a minimum of 3 appropriately trained assistants, usually gastroenterology nurses.

Auditable records for the unit must show less than 10% of procedures without therapeutic intent (less now with EUS and MRI), decompression of obstructed bile duct in >80% and, if ERCP failed, decompression by alternative method within 5 d (within 1 d if severe cholangitis present). The complications should be <1% transfusion-requiring sphincterotomy bleeding, <2% perforation, <5% pancreatitis and procedure-related mortality of <1%.

The initial accreditation inspection of a unit is rigorous and is preceded by a so-called pre-JAG visit by a local gastroenterologist who advises on the potential shortcomings of the unit. This is useful in helping the unit to acquire adequate resources from their hospital management, including equipment or administrative staff to ensure that the unit has the best chance of passing the JAG inspection. If a unit is clearly in the process of development, a provisional accreditation may be given and the inspection team will visit again after a 6 mo interval to ensure that the standards are met. Once full accreditation has been achieved, the unit reports its GRS ratings to JAG which may decide on a re-inspection after a longer interval of up to 5 years.

Growing out of the JAG and GRS initiatives, the NHS recognized the need for a national endoscopy training system (NETS) which serves the needs of all staff including endoscopists, nurse endoscopists, endoscopy nurses and endoscopy unit administrators.

Units wishing to establish themselves as training units in countries which do not yet have training and a service quality program should certainly consider appointing an endoscopy training lead and an audit program. The endoscopists must all use the electronic endoscopy management system (EMS) and agree on and use a robust system for the recording of complications. Such records are difficult to achieve and only are meaningful if fully agreed by the ERCPists of a unit. Because ERCP may be performed on patients who are day cases (admitted to the hospital for a period of 8 h only) or on patients in surgical or geriatric wards as well as in the gastroenterology service, complications such as respiratory infection and pancreatitis may not always be reported to the endoscopists. Ideally all ERCP patients should be contacted or seen 30 d after the procedure. Many units depend on case notes retrieval and review to obtain outcome data which would be more efficiently analyzed if it had been entered in the EMS contemporaneously. Responsibility for this rests with the trainer endoscopists who could delegate data input to the trainee.

TRAINING OF ENDOSCOPISTS

For trainees there have also been major changes. Specialty training, including that in gastroenterology, is regulated by the general medical council (GMC) which, since April 2010, has incorporated the Postgraduate Medical Education Training Board.

The GMC has the authority to approve training programs which are delivered in the NHS under the direction of the Dean of Postgraduate Medical Education. The training program delivers the competences laid out in a specialty curriculum approved by the joint committee on higher medical training (JCHMT) which consults the Royal Colleges and the British Society for Gastroenterology.

Postgraduate training changed in 2006 by the DoH initiative modernising medical careers (MMC)[6], which
moved to widen the experience in early postgraduate years with a compulsory 2 year foundation program (FY1-2), then selection into a 2 year core medical or surgical training (CMT1-2), followed by competition for 5 years as a Specialty Registrar (StR1-5). CM and StRs rotate through hospitals in one of the 12 UK Deaneries. The Deanery establishes a specialty training committee (STC) for each specialty.

After a disastrous start of MMC occasioned by a complex selection process further marred by computer system failures, the mechanisms are now established. However, shift work enforced by the European Working Time Directive together with MMC has sometimes had adverse effects on the amount of time the trainee has in endoscopy.

UK trainees in gastroenterology are StRs training to both the specialty training curriculum in gastroenterology and the general internal medicine (GIM) curriculum laid down by the JCHMT. StRs are required to undergo an annual review of competence progression (ARCP) with their STC. At the third year, the Specialty Training Committee of the Deanery will select the required number from the StRs who wish to undergo ERCP training. Within the endoscopy units of a Deanery, there will be other staff members undergoing ERCP training, such as other gastroenterologists on the permanent staff and visiting fellows.

It is the responsibility of the Endoscopy Training Lead of the unit to ensure that anyone undergoing training in their unit has a training plan which includes learning objectives and assessments. After their 5 years of gastroenterology/GIM training, StRs pursuing the ERCP track may also obtain further experience and skills as an Endoscopy Fellow in a UK or foreign unit. The BSG stakeholder group recommended that such fellowships should be of 12 mo.

The group also recommended that the number of trainees should be reduced and at present there are 2 in each of the 16 deaneries. Trainees now decide whether they wish to be considered for the ERCP training track to match an interest in hepatobiliary disease or to take an interest, for example in colonoscopy or nutrition, as special subspecialty interests. This has been accepted by UK trainees as a practical way to ensure that they all have a special interest and that training in these is kept to a high standard.

The group did not recommend that trainees participate in a mandatory workshop on ERCP technique which has been shown to reduce training time in the USA and China. The UK has not introduced computerized endoscopy simulators which have also proved to be an effective way of rapidly increasing the basic competences of trainees.

The number of UK SpRs undergoing official ERCP training has certainly reduced from approximately 50 to 25 with a consequent improvement in the clinical experience of trainees. Anecdotal evidence suggests that the rationalization of ERCP training has produced more satisfied trainees and proof of their ability may be evident in the next national audit of ERCP.

For a unit to be accredited as a training unit, it would have to deliver a minimum of 200 ERCPs per annum (either within the unit or as a network of units currently taking trainees) including sufficient complex cases to ensure breadth of training.

The trainers in ERCP should be personally carrying out at least 75 procedures per annum and have continuous audit showing a therapeutic procedure completion rate of > 90% and a complication rate of < 5%. At least once every 5 years, trainers would be expected to participate in an ERCP training course as an observer or a member of faculty.

At the completion of their StR training, trainees will be awarded certificates of completion of training (CCTs) in GIM and gastroenterology. A CCT can only be awarded to a doctor who has been allocated a National Training Number (NTN) by competitive appointment to a training program designed to lead to the award of a CCT and who has successfully completed that program.

Their competence in endoscopy is certified by the JAG which receives the evidence of competence from the endoscopy unit training lead supported by a log book of all ERCP endoscopic procedures performed. JAG had previously specified a minimum number of ERCPs but from 2010 the requirement is competence rather than number of procedures.

Assessment of competence of the trainee in performing ERCP is recorded by completing directly observed procedural skills (DOPS) evaluation forms during the training lists. The DOPS process evaluates the trainee under 4 headings: consent, safety and sedation, insertion, diagnostic and therapeutic ability. The assessor also rates the difficulty of the case. The trainee is given feedback on their technique during the list and in writing on the DOPS form. At the end of training, a so-called summative DOPS must be performed by two ERCP trainers who are not the trainee’s usual trainer to certify competence in basic ERCP. The trainee must produce a record certified by the supervisor which, for provisional JAG accreditation, should show a complication rate (death, transfusion-requiring hemorrhage or perforation) of < 5%, satisfactory completion of intended therapeutic procedure of > 80% and more than 75 procedures performed in the last 12 mo.

The endoscopists may then proceed into “continued practice” during which the same minimum standards must be achieved. In continued practice, the supervisor must be available in the endoscopy unit for the next 50 procedures, within the hospital for the next 50 and there must be “targeted training” for complex cases, an annual peer review with a summative DOPS by consultant trainers over four cases and then full JAG certification is granted. After full certification, the ERCPist works independently but should maintain continued endoscopic professional development which would entail attending a master class or an ERCP training course as a member of faculty every three years.
It remains to repeat the national audit and to assess the effects of the reforms.

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