Centralisation of upper gastrointestinal cancer surgery

Upper gastrointestinal surgery comprised of the separate disciplines of oesophagogastric (OG) and hepato-pancreato-biliary (HPB) surgery includes the operative care of the most complex cancers in alimentary surgery. Historically, any given general surgeon would see relatively few cases each year, resect even fewer and outcomes were notoriously poor.^{1,2} The emergence in the last decade of data from North American centres^{3,4} reporting improvements in outcome following concentration of workload into more specialised units has had a profound influence both on clinical practice and organisational infrastructure. Birkmeyer's seminal study demonstrated that outcome in patients undergoing pancreatic or oesophageal cancer resection was better in centres which carried out greater numbers of these procedures in any given period.⁵ These findings have been echoed in other reports and in other disciplines and do appear to be a genuine and reproducible feature of contemporary healthcare.⁶ Whilst the precise reasons for this improvement in outcome following centralisation are multiple and complex, they include as constant features the benefits of a skilled multidisciplinary team, the use of sophisticated tumour imaging methods, surgeons working as clinical teams and better postoperative care facilities. In the UK, this evidence of improved outcome led inevitably to governmental guidance in the form of the Department of Health's 2001 document: *Improving outcomes in upper gastrointestinal cancers*.⁷ Implementation of the recommendations of this document generated a major change in the delivery of gastrointestinal surgery with the effects being on-going. In brief, oesophagogastric and HPB surgery were to be centralised into units with large catchment populations, working as multidisciplinary teams spelling the end for the 'occasional' resectionist. The guidance simply follows the evidence-base of improved outcome from centralisation of delivery of cancer care. This evidence appears not to be confined to North American healthcare as improved outcome with centralisation has been reported from Germany,⁸ Australia,⁹ New Zealand¹⁰ and India¹¹ with the common factor being access to specialist care.

In the National Health Service, the central problem underlying implementation of this guidance is the achievement of a balance between cancer specialist care and general surgical service delivery. Prior to the 2001 guidance, oesophagogastric cancer surgery was undertaken principally by general surgeons with a declared interest in this field and also by thoracic sur-

geons. Similarly, HPB work was undertaken in transplant units and in non-transplant HPB centres. Within HPB, pancreas cancer surgery in particular was often undertaken by surgeons working as lone practitioners in small-to-medium sized hospitals.

For many of these individuals, these forces of centralisation have led to painful and difficult changes in practice. In the UK, regional cancer networks have largely resolved the inevitable conflicts that arose and a number of designated OG and HPB centres are now recognised. In all probability, the numbers of these units will reduce still further as individual hospital trusts re-prioritise their services in the light of the likely high costs of providing this type of cancer work. This re-organisation of cancer care creates problems on both sides of the equation. For the recognised centres, upper gastrointestinal cancer work has to be delivered to increasingly tight national deadlines whilst providing a general surgery service and accommodating other care targets. The core problem here being that the designation of a trust as a 'cancer centre' does not obviate responsibilities across the spectrum of healthcare provision and the additional cancer workload can place a critical burden on the infrastructure of radiological, critical care and laboratory support services.

On the other side of the equation, those hospitals facing loss of cancer work often face an even harsher problem. Although there is an increase in non-cancer upper gastrointestinal surgery, particularly in the field of bariatric surgery, there is no recognised discipline of non-cancer upper gastrointestinal surgery and any medium-sized acute hospital providing acute care surgery must have surgeons able to deal with bleeding gastroduodenal ulcer disease, acute pancreatitis and complex biliary ductal stone disease. Although in all these settings, patients with more severe disease presentations will continue to be transferred to larger centres, it seems a very real risk that hospitals not designated as upper gastrointestinal cancer centres will face de-skilling of their surgical cadre and thus it seems unfair that organisational changes designed to enhance outcome for one group of patients (cancer sufferers) may lead to disadvantaging of other groups of patients.

There are no readily apparent solutions to this problem. In the short-term, surgeons in hospitals that lose their 'cancer work' may take cases to their nearby centre whilst continuing

to provide general surgery services at their local hospital. This two-site working seems to disadvantage the surgeon moving his or her patient and better solutions may be found by merging services with all of the newly merged group taking turns to provide care in the smaller centre. In the near future in the UK, the forces of cancer centralisation are likely to be impacted further by the effects of shortened surgical training.

Any practical solution is likely to require some form of 'hub and spoke' arrangement as the majority of patients with upper gastrointestinal cancer do not require complex resection but more simple methods of palliation. In any given region, assessment of these cases must be standardised with all having access to high-quality, multidisciplinary assessment. Increasingly, this assessment can be delivered by electronic media or by video-conferencing technology avoiding the patient the need for long journeys. Following this assessment, patients requiring palliation are better served closer to their homes. This form of solution may facilitate the retention of some form of upper gastrointestinal specialist skills in hospitals that no longer provide this service.

Whatever the eventual outcome, it is clear that the forces for centralisation of upper gastrointestinal cancer surgery are potent and global in their scope. There can be no return to a service provided by generalists with individuals undertaking only occasional cancer surgery. At the least, the twin pressures of clinical governance and the threat of medico-legal action will ensure this. The shape of provision continues to evolve but it is likely that the centralisation of upper gastrointestinal cancer will produce profound alterations to the shape of 'general surgery' across many healthcare systems.

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