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When might an operative complication be regarded as acceptable? Part 1: Surgical factors that influence courts when finding fault during litigation

R Wheeler[1], S Blackburn[2], H Biggs[3]

[1]University Hospital Southampton NHS Foundation Trust, UK
[2]St George's Healthcare NHS Trust, UK
[3]University of Southampton, UK

ABSTRACT

In cases where surgeons face litigation over operative misadventure, the result of a trial is uncertain. In order to identify factors in cases of surgical litigation that have influenced the final decision of the courts, we have reviewed recent reported cases, noting both surgical and evidential influences on outcome. Taken together, these reveal that among other influential factors, the acceptability of more than one reasonable operative approach, the court's approach to inappropriate delegation and the uncertainties of expert evidence all play a role in the determination of the case.

KEYWORDS

Litigation – Surgery – Standard of care – Bolam – Bolitho – Reasonable standard – Misadventure

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CORRESPONDENCE TO

Robert Wheeler, E: robert.wheeler@uhs.nhs.uk

Most surgeons will be aware of the aftermath of an operative misadventure. Adverse incident forms will be completed and serious case reviews are regrettably commonplace in National Health Service (NHS) trusts. In the UK, we are familiar with the concept that some misadventures are deemed so serious by the NHS that they should never happen; 'never events', such as the loss of an abdominal swab, have entered the surgical lexicon.

Surgeons are given the opportunity to learn from the misadventures of their colleagues (including via local governance mechanisms or through the admirable Confidential Reporting System for Surgery [CORESS, http://www.coress.org.uk/])[1] but the assertion that a particular misadventure equates to substandard surgical practice is rare. In a group of cases where adnexa of the uterus were mistaken for the appendix, nowhere in the analysis was the reader told whether such a mistake fell below the standard expected from a reasonable surgeon. We make no criticism of that since each case depends on its facts but, nevertheless, some surgeons may find clarification and guidance helpful.

It is the legal process that provides the definitive determination of the reasonable acceptable standard of care and consequently the threshold of an unacceptable misadventure. One sign of a settled judicial view relating to a particular operative accident is the cessation of litigation in court; no case involving a lost swab has been brought to court in England since 1961,[2] a sign that claimants achieve their aims without resorting to the courts and that defendants tend to capitulate early when faced with this indefensible suit, if only to minimise costs.

However, no such settled view is evident in cases of inadvertently divided ureter or damaged bile ducts, among others. In these cases, therefore, the outcome of litigation is by definition uncertain, depending as it does on the findings of the court.

An expectation of success?

English courts have made it quite clear that no patient may assert that a surgeon must achieve success. Consider, for example, the case of a 37-year-old woman with a shallow acetabulum and evidence of dysplasia who had a total hip replacement, resulting in an alignment that caused impingement between the cup and the femoral neck, causing significant pain.[3] The patient alleged that the acetabular cup's position was indicative of substandard surgery but at trial the court found that although the 30–45° of anteversion was less than ideal, it was not by itself indicative of substandard care.

This finding was based on literature revealing that suboptimal cup placement was not uncommon in the practice of reasonable surgeons and that to achieve a balance between full flexion at the hip and the risk of impingement, the surgeon has to seek a compromise position of anteversion. In these circumstances, the claimant expert's

contention that the surgeon 'must' bring about a successful outcome was found to be 'inappropriate'.

Delegation and the competence of trainees

A case in 2008 involved a 35-year-old woman, Mrs Greenhorn, who a suffered a catastrophic haemorrhage during a colposuspension and the subsequent hypotension resulted in neurological injury.[4] The court found that the gynaecologist had moved out of the operative field and, in attempting to put a suture through the ileopectineal ligament, she had strayed sufficiently to make a hole with the needle in a branch of the right internal iliac artery. From this, the patient bled uncontrollably until the vessel was embolised by a radiologist. The operating surgeon was a senior trainee who had been assisted by an experienced supervisor. The trainee had performed 16 colposuspensions as lead surgeon (and had assisted in many more) in early training but had only been involved in 4 cases, including 1 as lead surgeon, in the 6 years prior to the day of Mrs Greenhorn's operation.

In providing background to the rest of the judgement, the court first found that a surgeon supervising an operation is under a duty to be satisfied, by making enquiries, that the trainee has sufficient recent experience of the procedure. In terms of the supervision itself, the court found this to fall below the reasonable standard because had the trainee been properly supervised, she would not have been allowed to execute the manoeuvre that led to the needle going through the branch of the right internal iliac artery.

When considering the standard of care demonstrated by the trainee, the court refrained from providing an explicit judgement on the cause of the bleeding. Instead, it relied on the expert's agreed view that arterial damage is not a recognised complication of colposuspension. In these circumstances, the court found that the onus was placed on the defendants to explain how such an injury could have occurred in the absence of negligence. Since the defendants did not produce this explanation, the court held that the surgery fell below the reasonable standard that Mrs Greenhorn was entitled to expect.

Following a cardiac catheterisation in 1987, the sutured closure of a middle aged man's brachial artery led to stenosis.[5] Then followed a chain of events that included vascular reconstructions and, ultimately, an upper brain stem infarction after arch aortography that was performed to facilitate further vascular surgery.

That the vascular injury was caused by the operator picking up the endothelium of the posterior wall of the brachial artery with the stitch that closed the arteriotomy was not contested. The closure was performed by a registrar who, by the time the case was heard, had become established in consultant practice, with an exemplary reputation. The first instance judge was criticised at appeal for overreliance on the doctor's reputation and oral evidence seven years after the surgery had taken place. The Court of Appeal found that for doctors in training, it was particularly important to assess their competence at the time of a misadventure.

The extraordinary: occurrences and anatomy

Courts are unsettled when extraordinary injuries occur. This is illustrated by *Bovenzi*,[6] where a woman's small bowel was eviscerated through her uterus after it was perforated by a forceps during the evacuation of products of conception. The court found that the surgeon's own account was evidence that he failed to appreciate that the recently pregnant uterus could be soft and that the experts' opinion that the perforation constituted substandard care was compelling. Furthermore, the judge noted that he was 'also influenced by the rarity of this occurrence. This wholly extraordinary result supports evidence that it was caused by the negligence of the defendant'. It is unlikely that present day judgements would make this assertion. Nevertheless, when an extraordinary injury occurs, the claimant will ask the defendant how it could have occurred in the absence of substandard care.

It is natural that surgeons occasionally plead that an operative injury resulted from abnormal anatomy, sometimes quite rightly. In the case of a woman whose right ureter was encircled and obstructed by a ligature during an abdominal hysterectomy, the defence pleaded that the ureter lay in an abnormally lateral position, making it prone to ligation despite a reasonable standard of surgery.[7] The court accepted that some cases of ureteric damage have been recorded despite apparently normal anatomy but this was rare, no greater than 0.1%. However, the court reasoned that if nonculpable cases of ureteric damage were to be attributable to a lateral site that nevertheless remained within the normal range for ureteric position, then these cases would (i) be more common than is observed and (ii) would render the conventional methods of displacing the ureters to a safe site (by pushing down on the bladder) less reliable.

Having found that neither (i) nor (ii) were proved, the court dismissed the possibility that ureters sited at the lateral margin of the normal range could be prone to nonculpable damage although it accepted that ureters lying in an abnormally medial site, close to the uterus, might be damaged during a operation conducted with reasonable skill. When combined with the evidence from the reparative operation that the ureter was normally sited, this led to the failure of a defence of abnormal lateral ureteric anatomy. Any defendant surgeon who pleads abnormal anatomy will have to face this level of forensic analysis.

The same degree of scrutiny is applied to defence pleas that inexplicable events cannot be held to constitute substandard care. Following the diagnosis of a solitary gallstone, in the absence of cholecystitis or other complications, a female patient, Mrs Thomas, underwent an apparently straightforward laparoscopic cholecystectomy.[8] Four days later, she presented with abdominal pain and a bile leak was diagnosed. During the litigation that followed, she alleged that an iatrogenic injury to the bile duct had been caused. Having been told that her cystic duct arose from the right hepatic duct, the court found that a hole had been made in her common bile duct since during later reparative stenting, the stent was visible through a defect in that duct's anterior surface.

The expert witnesses for both parties agreed that Mrs Thomas' common bile duct defect was caused either by traction, diathermy or laceration; the court found, on evidence, that diathermy was the cause of the injury. The defendants noted that bile duct injuries were 'an extremely common complication' (and this risk had been disclosed to Mrs Thomas during consent). In the recent past, biliary leaks after laparoscopic cholecystectomy were considered commonplace, and in general, it was the time taken to diagnose the leak (rather than the cause of the leak) on which litigation was based.[9]

However, the court in *Thomas* found that the hole in the common bile duct was distant from the operative site, which had been at the junction of the cystic and right hepatic ducts. The defendants pleaded that the claimants were unable to identify the cause of the patient's injury and that for this reason, the case should be dismissed. On the contrary, the court found that the defendant expert could not provide an explanation as to how a diathermy injury might occur at a distant site from the origin of the cystic duct (and therefore the dissection).

Describing an approximate separation between cystic duct origin and the site of the common bile duct injury, the expert noted: 'I would have thought three centimetres … that's an awfully long distance to assume diathermy injury'. The court report does not reveal how this comment was construed. It could either mean that a diathermy burn 3cm from the point of touch was unlikely or that since such a distant touch with the diathermy point was unlikely to cause damage 3cm away, a second (inadvertent) diathermy touch on the damaged area could be deduced.

There was no explanation as to how an inadvertent injury could have been caused in this case by a reasonable surgeon. Identifying groups of patients in which iatrogenic bile duct injuries are not automatically equated with substandard care, the defence expert noted patients with very abnormal anatomy or where the whole area of Calot's triangle is inflamed. However, since Mrs Thomas did not fall into any groups of patients in whom bile duct damage had been asserted as consistent with a reasonable standard of care, the court deduced that her injury must have been caused by substandard surgery.

From the court report, it is clear that the judge regarded this as compelling evidence in supporting the claimant's case. In a judgment reminiscent of (but explicitly not based on) the doctrine of *res ipsa loquitur*, the court found that a diathermy injury to the common bile duct, in the absence of a non-negligent explanation for its occurrence, was indicative of substandard care.

There are instances when, on the contrary, courts are provided with non-negligent alternative explanations for injuries that seem plausible but that are ultimately rejected. For example, Morgyn Peters was born with an abnormal left leg, where the foot was hanging from a thread of tissue connected to the remnants of the tibia and fibula that protruded from his knee.[10] At 18 weeks gestation, he had undergone an antenatal intervention. It was claimed that this intervention was indicative of substandard care and that it had caused his injury, resulting in a below-knee amputation during the neonatal period. Antenatal imaging had shown bilateral hydronephrosis and a full bladder. Fearing a diagnosis of posterior urethral valves, a fetal medicine specialist had attempted to decompress the distended bladder with a percutaneous 20G needle under ultrasonography control at 18 weeks gestation. The estimated volume of the fetal bladder was 1.6ml.

The court found that the claimant's assertion that the needle had penetrated the left external iliac artery, resulting in embolic obstruction to the blood supply to tissue below the knee, was correct. Although it was not disputed that embolism in these circumstances had never been reported, this explanation was preferred to that led by the defendant that the injury was coincidental and caused by amniotic bands.

The surgeon performing the operation indicated that transfixing the bladder in a fetus of this size was not by itself an indicator of substandard care although he conceded that during the procedure, it was possible that he had transiently lost sight of the needle's tip. There is no reference to the court being presented with any evidence for how much further a needle that had transfixed the bladder would need to travel in an 18-week fetus (approximately 190g) to reach the left external iliac artery. Experts from both parties asserted that damage to the fetal vessels in these circumstances was indicative of substandard care, thereby setting the standard for their colleagues working in this jurisdiction.

Leaving the patient in a dangerous state

In two recent cases, litigation was founded on the allegation that following surgery, patients had been left with twisted or trapped bowel. The first arose when, two days after the elective reversal of a previous Hartman's operation for perforated diverticular disease, a patient deteriorated and subsequently died.[11] The Hartman's reconnection had been covered by a loop ileostomy. The claimant suggested that a small bowel loop had been left entrapped within adhesions and that the loop should have been freed during the reversal procedure.

The postmortem examination had revealed full-thickness infarction of the 10cm small bowel segment upstream of the patient's stoma. However, the court found that the stoma had been working satisfactorily for three days following the reversal of the Hartman's procedure; from this, it was deduced that no ischaemia was present and that the bowel could not have been trapped at this stage. Furthermore, the postmortem histology provided no evidence of changes in the ischaemic segment that would normally follow the time course pleaded by the claimant. The claim was dismissed.

In the second case a woman had an extended right hemicolectomy for a carcinoma of the transverse colon.[12] Small bowel obstruction developed one week later. After five days of conservative management, a laparotomy revealed the cause, with the notes reporting: 'Small bowel twisted approx 6cm proximal to anastomosis, causing an incomplete obstruction. Small bowel taken down, 180° twist to

the small bowel.' The defendants asserted that a side-to-side anastomosis had been performed that was contiguous with the antimesenteric borders.

The claimant expert made no criticism of the formation of the anastomosis but considered that the 180° twist reported during the laparotomy described a twist of the root of the small bowel mesentery, presumably akin to a midgut volvulus. This theory was not supported by the operative findings of the surgeon who discovered the 'twist'. Another possible explanation was that the bowel was not aligned so that the antimesenteric surfaces were stapled together. However, this was not proposed by the claimant so neither the defendant nor the court addressed that possibility. Thus, focused entirely on the claimant's case that the twist lay at the root of the small bowel mesentery, the court dismissed the claim.

Conclusions

It is clear that a surgeon's views of the likelihood of a successful operation, delegation, unusual anatomical arrangements and what constitutes an adequate procedure play a determinative role in the outcome of litigation over an operative misadventure. As will be seen in the second part of this legal review (published in a future issue of the *Annals*), understanding of judicial attitudes to the accident itself and the evidence on which it is pleaded may reduce the uncertainty that accompanies the defence of a claim.

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