
Quill on Scalpel

Plume et scalpel

LEAVE NO STONE UNTURNED

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Progress, far from consisting of change, depends on retentiveness.... Those who cannot remember the past are condemned to fulfill it.

George Santayana, *Life of Reason*

The lesson embodied in this often-misquoted quotation is brought home by two interesting papers in this issue. Nagy and Patterson (page 300) remind us of the old knowledge that organic foreign bodies in the peritoneal cavity are not a good thing! Laparoscopic surgery for gallstone disease, they aver, is all too often the contemporary source. One can take it for granted that this important case report is the proverbial tip of an iceberg. Quantz and Brown (page 305), in another case report, make two important points: first, major morbidity can occur a very long time after the primary event; second, the offending foreign body can be inorganic.

When a new therapy (surgical or medical) succeeds an old one, it must do better than the ones we are used to. It must not lead to a return of old problems or, worse still, generate new ones. How did we even fleetingly forget this aphorism? In the rush to judge a new technology, it is distressingly easy to do just that. You want to will the new technique to success, sweep aside the naysayers

and join the pioneers on the high ground.

Experimental studies in rats are likely of little significance. As I learned the hard way some years ago, these animals do have a few things going for them. Fortunately for the rats (if not for surgical researchers), they do not extend an ideal model for the creation of experimental peritoneal sepsis. And as we are reminded by Quantz and Brown, those quoted studies supporting a "rosy" view of spilled foreign bodies in humans, may have to be rewritten in another few decades. Perhaps the "cognoscenti" knew these things all along!

The really important contribution of Nagy and Patterson lies in the clearly described prescription for dealing with this potential calamity. First, prevent the problem. Thus, they astutely point out that the operation is by no means over when the stress of correctly identifying the ductal and vascular anatomy is behind the surgeon. Equal care must be exercised in the often tedious task of removing the body of the organ from its liver bed.

Once a spill has taken place, the simple and clear steps outlined by Nagy and Patterson can hardly be improved upon. It is tempting, however, to argue that since the incidence of serious sequelae (of the magnitude de-

scribed) from spills appears small, one might delay laparotomy but be prepared to change horses at the slightest provocation. Later it might be well to tell the patient what new symptoms to watch for.

Finally, the authors say that retrieving stones during laparoscopic operations is inherently far more difficult than under open conditions. This is another example of the many ways in which minimal access video-assisted surgery is qualitatively different. Although laparoscopic cholecystectomy may just be an old operation performed in a new way, it has introduced some new problems and hazards. The proffered list following stone spills is a formidable one. If, as Nagy and Patterson state, the laparoscopic technique is now the "standard," in my view it is winning by something less than a country mile. When compared to mini-open techniques, which are merely an extension of "horse and buggy" surgical methods, a recent exhaustive review¹ concluded that if there is a difference it is too small to measure accurately.

Much ink has been used and many slides shown in the cause of ensuring safety during the performance of laparoscopic cholecystectomy. Each presentation gives the authors' sure-fire manoeuvres for

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avoiding trouble. "Do this" or "do that" and all will be well. I prefer to paraphrase Ghandi on his sagacious words about peace and say "There are no roads to safety; safety is the road." The surgeon must do whatever is necessary to see well, and

there are no immutable rules that apply in every situation. However, while always being ready to respond to changing conditions and detour signs, you should keep the road map described by Nagy and Patterson in your glove compartment.

Reference

1. Downs SH, Black WA, Devlin HB, Royston CMS, Russell RCG. Systematic review of the effectiveness and safety of laparoscopic cholecystectomy. *Ann R Coll Surg Engl* 1996; 78(3 Pt II):241-323.

FIXED HINGE KNEE ARTHROPLASTY

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In reviewing their results in this issue (page 278) of hinged arthroplasty used for revision of total knee replacement, Cameron, Hu and Vyamont have returned us to the early days of total knee arthroplasty, when many of the knee designs attempted to replace the changing axis of rotation of the knee during flexion with a fixed hinge. This alteration of the normal flexion present in the anatomic knee also eliminated normal rotation that occurs during extension and flexion.

The initial results of fixed hinge arthroplasty were complicated by an unacceptably high infection rate. This was more likely due to the surgeon's learning curve for arthroplasty than to specific inadequacies in design. However, even in patients who had no infection, the hinge arthroplasty was associated with a high rate of loosening at the cement-bone interface. Several reasons have been proposed for this high rate of break-

down. It is likely that an attempt to convert the multiple axes of joint rotation present in the knee to a single axis of flexion will not be successful while the normal ligaments that guide polyaxial motion are maintained. This abnormal rotation about a fixed hinge, the lack of rotation of the tibia on the femur during full extension and the inability of the knee to glide in response to sudden impacts probably were the major reasons for the high rate of loosening.

Cameron, Hu and Vyamont have suggested that this high complication rate experienced in the early days of knee arthroplasty should not prevent us from using fixed hinge prostheses in selected patients today. There is no doubt that extreme revision problems do exist for which replacement with a fixed hinge prosthesis may be the only alternative to arthrodesis or amputation. These situations include extensive loss of bone stock due to tumour resection or bone resorption, or

trauma associated with a loose arthroplasty. If the soft-tissue envelope surrounding the knee is inadequate to provide stability with highly constrained revision arthroplasty components, fixed hinge prostheses may provide an extremity-saving solution.

However, it should be emphasized that these situations are rare in revision arthroplasty. The wide range of thick components, stemmed components and highly constrained revision arthroplasty systems optimizes the residual biologic constraint at the knee in most cases of arthroplasty revision. It is suggested that the use of a fixed hinge arthroplasty should not be part of the armamentarium of all orthopedic surgeons. Rather the use of this device should be limited to centres that specialize in revision arthroplasty. The fixed hinge knee replacement, similar to structural allograft bone stock replacement, should be reserved for exceptional patients treated in tertiary or quaternary care centres.

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