The ovarian endometrioma: why is it so poorly managed?

Laparoscopic treatment of large ovarian endometrioma: why such a long learning curve?

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The laparoscopic management of ovarian endometrioma was reported more than 15 years ago. An anonymous survey conducted among gynaecologists in the UK showed that 50% of ovarian endometrioma are still managed by laparotomy. This surprising result is discussed emphasizing the difficulties of the learning curve, pitfalls in surgical training and mistakes of the pioneers. Endoscopic surgery will become the standard technique when all practising gynaecologic surgeons have been trained during their residency. The goal of the endoscopic surgeon should be to achieve adequate surgical treatment. Endoscopic surgery is not a technical gimmick used to avoid laparotomy and to attract patients.

Key words: endometrioma/laparoscopic surgery/laparoscopy

Introduction

Laparoscopic management of ovarian endometrioma was reported by our group and by others more than 15 years ago (Manhes et al., 1980; Nezhat et al., 1986; Reich and McGlynn, 1986). Consequently we were surprised and disappointed to read the results of an anonymous national survey recently conducted by Jones et al. in the UK (Jones et al., 2002). This study showed that only 50% of ovarian endometriomas are treated by laparoscopy.

These results are surprising for several reasons. Technological progress has made the technique much easier and faster than it was 20 years ago. Prospective randomized clinical trials have clearly emphasized the benefits of laparoscopic surgery in the management of adnexal masses (Mais et al., 1995; Yuen et al., 1997). Several non-randomized studies have shown that pregnancy and recurrence rates after laparoscopic treatment of ovarian endometrioma are similar to those obtained by laparotomy (Adamson et al., 1992; Bateman et al., 1994; Catalano et al., 1996; Crosignani et al., 1996; Busacca et al., 1998; Milingos et al., 1999; Sawada et al., 1999). The laparoscopic approach presents all the advantages of laparoscopy, including reduced stress, trauma and hospital stay, and shorter recovery time. Moreover a recent meta-analysis showed that laparoscopic surgery is not inherently dangerous for patients treated for benign adnexal disease (Chapron et al., 2002).

However the study by Jones et al is important (Jones et al., 2002). It describes current gynaecological practice and ‘a real world’ that is obviously different from the work of endoscopic pioneers, whose reports suggest a low rate of laparotomy, probably <5%. The survey calls for the following comments.

The long learning curve

The learning curve for difficult surgical procedures such as the adequate treatment of ovarian endometrioma is probably the first explanation for these results. It must be borne in mind that the practical consequences of prospective randomized trials are not the same in medicine and in surgery. A cardiologist or a medical oncologist acting on the results of prospective randomized trials will change their prescriptions and learn new dosages and new contra-indications, whereas a surgeon who decides to move from laparotomy to laparoscopy will be obliged to go through several steps.

Firstly, they will have to attend courses, buy books and find papers to learn the technique in detail. Secondly, they will have to convince the hospital directors that they should buy a new set of expensive and often fragile instruments; and to collaborate with the anaesthesiologist who may have to adapt their practice to the requirements of endoscopy. Thirdly, they will have to start the technique and train the operating theatre team. The first cases are likely to be difficult and longer than when dealt with by laparotomy, so that many members of the operating theatre team may consider this new approach as cumbersome and boring rather than as a major step forward. If they are lucky enough to avoid complications, and these are more likely during the initial part of the learning curve, their technique will improve, the conversion rate to laparotomy will decrease and the advantages of laparoscopy will become obvious.
Whatever the experience of others and the number of papers published, every surgeon has their own learning curve that depends on how interested they are in the technique, their manual ability and their technological environment. There is ample evidence to show that every gynaecologic surgeon should move to laparoscopy to manage benign adnexal conditions. They should be willing to learn the technique and simply have to accept the stress and the time involved with the development of the endoscopic revolution in their own department. Even the fastest and the best surgeons often become much slower and sometimes awkward when learning the techniques of laparoscopy. Moreover everyone in the room can see the difficulties on the screen, whereas by laparotomy the surgeon and the assistant are the only ones able to see the difficulties and/or mistakes. When discussing these results, however, we must bear in mind that for difficult procedures the learning curve was also very long for the experts. In our department, 7 years elapsed between the first laparoscopic hysterectomy and the description of our current technique. (Wattiez et al., 2002). Similarly Trimbos et al., discussing a series of 308 radical hysterecomies, showed that the results improved significantly over a period of 13 years.(Trimbos et al., 2000).

The mistakes of the pioneers

We and other promoters of laparoscopic surgery may be partly responsible for the current situation. To the best of our knowledge, more than 15 years after the first reports, the value of laparoscopic surgery in moderate and severe endometriosis has never been confirmed in a prospective randomized study. As a matter of fact endometriomas were excluded from the two prospective randomized trials which compared laparoscopy and laparotomy in the management of adnexal masses (Mais et al., 1995; Yuen et al., 1997). We and others rapidly, and may be prematurely, concluded that the advantages of laparoscopy were so obvious that it would be ‘unethical’ to propose a randomized study to our patients.

Promoters of endoscopy often suggested that expensive technological devices such as lasers were mandatory to manage severe endometriosis. Consequently, surgeons working in hospitals where lasers and other expensive tools were not available concluded that they could not manage it laparoscopically. As ovarian endometrioma is a common problem, it would be unrealistic to refer all these patients to specialized centres which already have long waiting lists. Instead we need to come up with simple techniques which may be achieved using basic and cheap instruments available everywhere.

To convince everyone of the advantages of their techniques, the endoscopic pioneers tend to describe the procedure as fast and simple, using the best pictures and wonderful (and indeed, sometimes perhaps lucky) video footage. This means that when back in their own operating theatre, the surgeon just starting to use the technique will not be able to reproduce the procedure and will conclude that they are not gifted enough and that they should go on performing laparotomy. Such a conclusion is even more likely when they remember that at the meeting most presentations finished with the words: ‘‘this procedure should be reserved for trained surgeons with excellent hand-eye co-ordination and ability to work in a three-dimensional environment using a two-dimensional screen...’’. Obviously surgery requires some manual dexterity, but training is neither more difficult nor important for laparoscopy than for laparotomy. As a matter of fact, training in endoscopy may have been reported as difficult and long, due to the fact that most of the pioneers of endoscopy moved from laparotomy to laparoscopy many years after their initial training. From our experience in teaching laparoscopy to residents, we are convinced that, for young surgeons, training for endoscopy is similar to training for laparotomy. We recently showed that laparoscopic hysterectomy when adequately taught may be performed by fellows and residents without increasing the incidence of complications (Wattiez et al., 2002). The endoscopic treatment of an endometrioma is a relatively simple procedure and requires specific training, just as it does to learn the treatment by laparotomy.

Surgical techniques are not adequately described in the literature, and the teaching material available is often not used to best advantage

To start a new surgical procedure, a surgeon needs a detailed description including instruments, patient selection, installation, steps in the procedures, difficulties, etc. This information is difficult to find. The cystectomy technique for ovarian endometrioma is often summarized as follows: ‘‘The cyst wall was stripped away using two atraumatic forceps pulling in opposite directions...’’ Obviously, one cannot learn a procedure from such a sketchy summary. On the contrary, detailed descriptions should be published, including the rules and the tricks that we use every day, to prevent complications and operative difficulties. Reporting the difficulties would emphasize that dissection of an ovarian endometrioma is different from dissection of other benign ovarian neoplasms, that the plane may be difficult to follow because of the fibrosis induced by the disease and that a specific technique should be used to avoid unnecessary ovarian damage (Canis et al., 2001).

There are several ways in which we can report surgical techniques. Teaching courses are often too short to allow an adequate description of simple techniques. Moreover a course dedicated to basic procedures would probably not attract many participants, as most surgeons want to attend advanced courses even before they have acquired a large experience of simple procedures. A textbook allows complete descriptions and may be one of the best ways to teach surgical procedures, if adequate pictures and figures are included. However writing a book is a long process and some papers may appear old fashioned just a few months after publication. Reading a book is longer than reading an abstract but beginners have to accept
that they need to spend a few h learning a new surgical technique. Description of surgical techniques is often considered as a waste of time and pages by reviewers and by editors of medical journals. Are they wrong, bearing in mind that most readers read the title, the abstract or the conclusion of the article, before having a quick look at the results and at the discussion?

Will these limits of medical publications be overcome using Internet technology? In any case, at present, the best time to learn surgical procedures is probably during the residency period.

Endoscopic surgery should not be considered and/or used as a technical gimmick

In the survey among gynaecologists who performed a laparoscopy (Jones et al., 2002) 53.1% also performed an ovarian cystectomy whereas the incidence of cystectomy was 94.7% among those who performed laparotomy. By laparoscopy 46.0% fenestrated the cyst and ablated the capsule with an electrosurgical device. However using electrosurgery the surgeon does not know the depth of destruction, and this technique was shown to be less effective than cystectomy in a multicentric prospective randomized study (Beretta et al., 1998). Laparoscopically, when a laser is not available, this approach is the only alternative to ovarian cystectomy. It is also much easier than cystectomy. It must be hoped that this is not the explanation for why it is used more often.

The goal of the endoscopic surgeon should not be to avoid laparotomy, but to achieve adequate surgical treatment. Laparoscopy is so attractive for the patients and conversion to laparotomy so frustrating for the surgeon, that they may be tempted to get by with an inadequate treatment in order to avoid a laparotomy. Obviously this would be a major mistake for the patients. Moreover such inadequate surgical management may explain why laparoscopic surgery was often, and still, is underrated by many consultants. It may also explain why endoscopy was sometimes considered as a kind of challenge (Barham, 2000), and why it was difficult to convince editors and reviewers to accept papers which described adequate endoscopic techniques (Canis et al., 1994), whereas papers about complications were already being published (Maiman et al., 1991).

We are convinced that laparoscopic surgery will remain a surgical revolution as adequate endoscopic treatments are as effective as those performed by laparotomy. However we are equally convinced that it would soon disappear if it was indeed simply a technical gimmick used to avoid laparotomy with resulting inadequate procedures (Pitkin, 1992).

Conclusions

The results reported by Jones et al. (2002) are the consequences of the learning curve and of some pitfalls and limitations of surgical teaching. The change from laparotomy to laparoscopy remains a slow process, which will end only when all practising gynaecologic surgeons have been trained in endoscopic surgery and in microsurgery during their residency. Until then we will have to teach and to explain again and again, remembering that ‘Rome was not built in a day’!

References


