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The Decline of Laparoscopic Sterilisation

Abstract:
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Female sterilisation is an extensively used method of contraception all over the world but there appears to be a decline in the performance of this procedure in Ireland. There also appears to be an increased uptake of alternative contraceptive methods in the last 20 years. We set out to establish the extent of the decline in the performance of laparoscopic sterilisation and to explore possible explanations. Data for female sterilisation from Ireland obtained from the Hospital In-Patient Enquiry Scheme (HIPE) section of the Economic and Social Research Institute for the years 1999 to 2004 show a marked reduction in the number of laparoscopic sterilisation procedures performed. Laparoscopic tubal ligation procedures fell from 2,566 to 910 during the study period, a 65% decrease. The LNG-IUS (Mirena) and the etonogestrel implant (Implanon) were obtained from their suppliers, Schering (Ireland) and Organon (Ireland) respectively. The HIPE Scheme is a computer based health information system designed to collect medical and administrative data regarding discharges and deaths from acute hospitals. Each HIPE discharge record represents one episode of care for one patient and not one hospital admission. The records therefore facilitate analyses of hospital activity rather than "incidence" of disease. In the current study, all laparoscopic and open sterilisation procedures, which have individual codes depending on the method of tubal occlusion or destruction, were divided into two simple groups, laparoscopic or open (which include procedures carried out at time of Caesarean section).

Results
HIPE data for female sterilisation from Ireland were obtained for the years 1999 to 2004 (Table 1). These show a marked reduction in the number of laparoscopic sterilisation procedures performed. Laparoscopic tubal ligation procedures fell from 2,566 to 910 during the study period, a 65% decrease. The LNG-IUS (Mirena) and the etonogestrel implant (Implanon) were obtained from their suppliers, Schering (Ireland) and Organon (Ireland) respectively. The HIPE Scheme is a computer based health information system designed to collect medical and administrative data regarding discharges and deaths from acute hospitals. Each HIPE discharge record represents one episode of care for one patient and not one hospital admission. The records therefore facilitate analyses of hospital activity rather than "incidence" of disease. In the current study, all laparoscopic and open sterilisation procedures, which have individual codes depending on the method of tubal occlusion or destruction, were divided into two simple groups, laparoscopic or open (which include procedures carried out at time of Caesarean section).

Discussion
We are satisfied that the HIPE data provide a reasonable estimate of female sterilisation activity since the records for all but 10% of Irish women are thought to represent 95% of national coverage by the Department of Health and Children. We have shown a dramatic decline in laparoscopic sterilisation in Ireland in recent years. This decline has coincided with the introduction of progestogen-loaded contraceptive devices, particularly the LNG-IUS, which has seen a huge increase in sales over the same period.

The swiftness of the change in medical practice probably suggests that this has been physician led, rather than patient demand led, from the outset. It may reflect that doctors, particularly gynaecologists, were not very enthusiastic about laparoscopic sterilisation and were eager to adopt potentially safer and reversible alternatives. No remarkable decline in nonlaparoscopic sterilisation (which are almost all performed at time of Caesarean section) was observed. This suggests that there is no aversion to sterilisation per se among obstetricians or patients but rather to the method involved.

Issues likely to have been responsible for the change in medical practice include reversibility, safety and the availability of reliable alternatives. Reversibility is an important feature of contraception as regret and requests for reversal or in-vitro fertilisation are not uncommon after sterilisation. In a US study involving 11,232 women, the 14-year cumulative probability of expressing regret was 20.3% for women aged 30 or younger at the time of sterilisation and 5.9% for women over age 30 at sterilisation. The 14-year cumulative probability of requesting reversal information was 11% and the probability of obtaining reversal was 1.1%.

Female sterilisation is a surgical procedure and is therefore unusual in that the indication for surgery is generally patient request for social reasons and not a treatment prescribed by a doctor for medical reasons. Also, it is the responsibility of the doctor to ensure that the patient has all the information required to make an informed decision. This is important, as female sterilisation is a frequent cause of medical litigation”. Major morbidity caused by laparoscopic sterilisation is a rare event but serious complications occur. In the largest series of these complications, 3% of patients required blood transfusions, 1% required laparotomy or lead to death. The risk of laparotomy as a result of severe, complications was 1.5/1,000 procedures. The complication rate of laparoscopic sterilisation is significantly lower than the relative risk of complications and need for laparotomy. Many women in Ireland now have had at least one Caesarean section and are either overweight (BMI = 25.0-29.9) or obese (BMI 30) and the prevalence of pelvic inflammatory disease is also increasing.

Some of the newer long-acting contraceptive methods are as effective as tubal occlusion and yet preserve reversibility and have the huge advantage of being office procedures, requiring relatively little training, and associated with a very small risk of procedure-related injury. The cumulative pregnancy rate for the LNG-IUS is 1/100 after five years of typical use.
In our own units, laparoscopic sterilisation has almost disappeared completely. Some consultants stopped offering the procedure once the LNG-IUS became available as an alternative. There was little resistance from patients or from referring physicians and it is apparent that the change in policy has been broadly accepted. Thus, it would seem that a procedure that was introduced in Ireland to considerable furore is becoming rapidly obsolete. Many will have no regrets about its passing.

References


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