<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>The decline of laparoscopic sterilisation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Author(s)</strong></td>
<td>Horgan, Richard P.; Higgins, John R.; Burke, Gerard J.</td>
</tr>
<tr>
<td><strong>Publication date</strong></td>
<td>2008-02</td>
</tr>
<tr>
<td><strong>Type of publication</strong></td>
<td>Article (peer-reviewed)</td>
</tr>
<tr>
<td><strong>Rights</strong></td>
<td>© Copyright 2008 Irish Medical Journal</td>
</tr>
<tr>
<td><strong>Item downloaded from</strong></td>
<td><a href="http://hdl.handle.net/10468/481">http://hdl.handle.net/10468/481</a></td>
</tr>
</tbody>
</table>

Downloaded on 2018-12-02T20:36:09Z
The Decline of Laparoscopic Sterilisation

Abstract:

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 other contraceptive methods. We set out to establish the extent of the decline of laparoscopic sterilisation and to explore possible explanations. Data for female sterilisation from Ireland was obtained from the Hospital In-Patient Enquiry Scheme (HIPE) section of the Economic and Social Research Institute for the years 1999 to 2004. The first year for which data of this returns was obligatory was 1999 and from 2005 the coding scheme was modified and now uses the ICD-10 Australian Classification of Medical Interventions. Recent sales figures for long acting reversible contraceptives, specifically the levonorgestrel-loaded intrauterine system (LNG-IUS) (Mirena) and the etonogestrel implant (Implanon) were obtained from their suppliers, Schering (Ireland) and Organon (Ireland) respectively.

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 ligations fell from 2,566 (1999) to 910 (2004). In the corresponding period the use of Mirena coils increased from 4,840 (1999) to 17,077 (2004). The LNG-IUS is a sub-dermal implant and is effective for three years. Implanon was launched in Ireland in 2001 and from 2002 to the end of 2005 over 30,000 units were distributed in Ireland (Table 1). We are satisfied that the HIPE data provide a reasonable estimate of female sterilisation activity since 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 ligations fell from 2,566 (1999) to 910 (2004). In the corresponding period the use of Mirena coils increased from 4,840 (1999) to 17,077 (2004). The LNG-IUS is a sub-dermal implant and is effective for three years. Implanon was launched in Ireland in 2001 and from 2002 to the end of 2005 over 30,000 units were distributed in Ireland (Table 1).

Discussion

We are satisfied that the HIPE data provide a reasonable estimate of female sterilisation activity since 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). This decline has coincided with the introduction of progestogen-loaded reversible contraceptives which are usually performed laparoscopically, as a day-case, most commonly with application of Filshie clips. Over the last decade a number of novel, safe, long-acting, progestogen-loaded, reversible contraceptives have also become available. We set out to establish the extent of the decline of laparoscopic sterilisation and to explore possible explanations.

Methods

Data for female sterilisation from Ireland was obtained from the Hospital In-Patient Enquiry Scheme (HIPE) section of the Economic and Social Research Institute for the years 1999 to 2004. The first year for which returns of this data was obligatory was 1999 and from 2005 the coding scheme was modified and now uses the ICD-10 Australian Classification of Medical Interventions. Recent sales figures for long acting reversible contraceptives, specifically the levonorgestrel-loaded intrauterine system (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 and may record a number of different diagnoses and procedures. 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).

The Decline of Laparoscopic Sterilisation

Introduction

Sterilisation, which is also called tubal ligation or tubal occlusion, is the most widely used contraceptive method in the world today. From 1950 until 1982 the number of couples using voluntary sterilisation increased thirty fold. Over a hundred million women of child bearing age have been sterilised and it is estimated that more than 100 million women in the world today will seek sterilisation in the next 25 years. In 2001, in Great Britain, 15% of women aged 16-49 years had been sterilised.

A study of the General Practice Research Database data suggests that in 1999 an estimated 47,268 tubal occlusions were performed in England in the National Health Service (NHS) and charitable sectors.

Sterilisation became widely available in Ireland in the early 1980s, amid considerable controversy. Its non-availability, for religious and ethical reasons, in certain institutions was a source of debate. While sterilisation at time of repeat caesarean section (usually third or more) remains a popular option with Irish doctors, there has been a notable decline in the number of inter (i.e., between pregnancies) sterilisations which are usually performed laparoscopically, as a day-case, most commonly with the application of Filshie clips. Over the last decade a number of novel, safe, long-acting, progestogen-loaded, reversible contraceptives have also become available. We set out to establish the extent of the decline of laparoscopic sterilisation and to explore possible explanations.

Methods

Data for female sterilisation from Ireland was obtained from the Hospital In-Patient Enquiry Scheme (HIPE) section of the Economic and Social Research Institute for the years 1999 to 2004. The first year for which data of this returns was obligatory was 1999 and from 2005 the coding scheme was modified and now uses the ICD-10 Australian Classification of Medical Interventions. Recent sales figures for long acting reversible contraceptives, specifically the levonorgestrel-loaded intrauterine system (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 and may record a number of different diagnoses and procedures. 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 ligations fell from 2,566 (1999) to 910 (2004). In the corresponding period the use of Mirena coils increased from 4,840 (1999) to 17,077 (2004). The LNG-IUS is a sub-dermal implant and is effective for three years. Implanon was launched in Ireland in 2001 and from 2002 to the end of 2005 over 30,000 units were distributed in Ireland (Table 1).

Discussion

We are satisfied that the HIPE data provide a reasonable estimate of female sterilisation activity since 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). This decline has coincided with the introduction of progestogen-loaded reversible contraceptives, 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 be 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 Cochrane Review of 11,232 women, 22% of the women who had sterilisation regretting 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 13.8% 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 up to the patient to ensure that the surgeon has 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 such as perforation of the bowel, blood vessels that require laparotomy or lead to death. The risk of laparotomy as a result of a severe, complications of sterilization was 1/9,100 procedures (95% CI 0.46, 0.90). In a recent study of 2,227 women, the laparoscopic sterilisation was 1.43/1,000 cases. The risk of death with a laparoscopy is one in 12,000. Some women are at increased risk from conditions such as previous abdominal surgery or obesity. Previous abdominal surgery increases the risk of death from laparoscopic sterilisation disease and pregnancy. The relative risk of complications and need for laparotomy is 2.1. In women in Ireland now have had at least one Caesarean section between 60% of Irish women 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 small risk of procedure related injury. The cumulative pregnancy rate for the LNG-IUS is 1/100 after five years of 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


Comments: R Horgan<br>Email: richard.horgan@ucc.ie