MINILAPAROTOMY FOR FEMALE STERILIZATION

An Illustrated Guide for Service Providers
Contents

Preface .................................................. xi
Acknowledgments ................................. xiii

1 Introduction ................................. 1
   What is minilaparotomy? 1
   Why minilaparotomy? 4

2 Personnel ................................. 7
   The minilaparotomy team 7

3 Facilities, Equipment, Instruments, and Supplies .............. 11
   Facilities 11
   Equipment, instruments, and supplies 13

4 Counseling, Preoperative Assessment, and Scheduling ...... 15
   Counseling the client for female sterilization 15
   Preoperative assessment 16
   Medical eligibility criteria for female sterilization 19
   Scheduling 21

5 Anesthesia ................................. 25
   Guiding principles 25
   Preoperative assessment 25
   Types of anesthesia 26
   Preparing the client for anesthesia 27
   Medications for minilaparotomy under local anesthesia with sedation 27
   Techniques for local anesthesia 30
   Infiltration techniques 31
   Infiltration: Fan-shape technique 33
6 Preoperative Preparation ........... 39

Preparation of the operating theater 39
Aseptic technique 39
Client preparation 40
Establishing and maintaining a sterile field 41
Operating in the era of HIV 42
Good surgical technique 42
Positioning of the team 42

7 Surgical Approach to the Tubes:
Suprapubic Minilaparotomy ........ 45

Evaluation of the client 45
Client preparation just before entering the operating theater 46
Positioning the client 47
Inserting the uterine elevator 48
Preparing the client's abdominal area 50
Selecting the incision site 53
Entering the abdomen 54
Accessing and delivering the fallopian tubes 62

8 Surgical Approach to the Tubes:
Subumbilical Minilaparotomy ..... 71

Evaluation of the client 71
Client preparation just before entering the operating theater 72
Positioning the client 72
Preparing the client's abdominal area 73
Selecting the incision site 73
Entering the abdomen 74
Accessing and delivering the fallopian tubes 79
9 Occluding the Fallopian Tubes ... 85
   Modified Pomeroy technique 85

10 Closing the Abdomen ................. 91

11 Postprocedure Tasks and Client
   Recovery .................................... 93
   Client-related tasks that take place in the
   operating theater 93
   Infection prevention tasks in the operating
   theater 93
   Client recovery tasks 93
   Discharge 94

12 Emergency Prevention and
   Management ............................... 95

Appendixes
A Minilaparotomy Equipment, Instruments,
   and Supplies .............................. 99
B Informed Consent Form for Sterilization
   Clients .................................... 101
C World Health Organization (WHO)
   Screening Guidelines for
   Female Sterilization ..................... 103
D Provider Checklist for Reproductive
   Health Services: How to Be Reasonably
   Sure a Client Is Not Pregnant .......... 113
E Sample Preoperative and Postoperative
   Instructions to Clients (Oral and
   Written) ................................. 115
F Emergency Management Equipment
   and Drugs ................................. 117

References .................................. 119
Figures

1 Minilaparotomy procedure incision sites 3
2 Instruments specific to minilaparotomy procedures 13
3 Instruments used for inserting the uterine elevator 14
4 Instrument tray used for performing minilaparotomy 14
5 Bimanual pelvic examination of a normal anteverted uterus 18
6 Bimanual pelvic examination of a retroverted or a retroflexed uterus 19
7 Cross-section of the layers of the abdominal wall 30
8 Drawing the local anesthetic from the vial (held by the circulating nurse) 32
9 Field block using the fan-shape technique 33
10 Field block using the diamond-shape technique 36
11 The sterile field 41
12 Positioning of the surgical team 43
13 Positioning the client for suprapubic minilaparotomy 47
14 Inserting the uterine elevator 49
15 An alternative method for inserting the uterine elevator using a Jackson vaginal retractor 51
16 Preparing the client's abdominal area before a suprapubic minilaparotomy 52
17 Draping the client 52
18 The suprapubic minilaparotomy: Incision site 53
19 Entering the abdomen: Opening the skin 55
20 Entering the abdomen: Grasping the fascia  56
21 Entering the abdomen: Dissecting the fascia  56
22 Entering the abdomen: Visualizing the muscle layers  57
23 Entering the abdomen: Opening the rectus muscles  58
24 Entering the abdomen: Grasping the peritoneum  60
25 Entering the abdomen: Opening the peritoneum  61
26 Elevating the uterus  63
27 Viewing the fundus and anesthetizing the fallopian tubes  64
28 Accessing the tubes: Rotating the uterus to position the tube at the incision site  65
29 Using the tubal hook: Bringing the tube to the incision  66
30 Grasping the tube with a baby Babcock forceps  68
31 Confirming the identity of the tube  69
32 Positioning the client for subumbilical minilaparotomy: Assessing the height of the uterine fundus  73
33 Preparing the client’s abdominal area before a subumbilical minilaparotomy  74
34 The subumbilical minilaparotomy: Incision site  75
35 Entering the abdomen: Visualizing the fascia  76
36 Anterior view of the layers of the abdominal wall  76
37 Entering the abdomen: Opening the fascia  77
38 Entering the abdomen: Opening the peritoneum  78
39 Using the retractors to expose the uterus and tubes  79
40 Accessing the tubes  80
41 Using the tubal hook: Bringing the tube into view 82
42 Grasping and identifying the tube 83
43 Holding the tubal loop with the baby Babcock forceps 86
44 Steps in the modified Pomeroy technique 87
45 Cutting the tube 89
46 Checking the stump for bleeding 90
47 Closing the fascia 91
48 Closing the skin 92
49 Dressing the wound 92
50 The emergency trolley 96
51 Appropriate emergency equipment for the recovery room 96
Tables

1 Comparison of the characteristics of interval, postabortion, and postpartum minilaparotomy procedures 2

2 Comparison of minilaparotomy and laparoscopy for female sterilization 5

3 Instruments for minilaparotomy for female sterilization 12

4 Conditions warranting either delay of surgery or observation of special considerations before surgery is performed 20

5 Drugs used for sedation and analgesia, and recommended dosages and routes 29
Preface

Minilaparotomy and laparoscopy have transformed female sterilization into a quick, highly effective, and safe outpatient procedure that can and should be performed under local anesthesia. Since development of the minilaparotomy technique in the 1970s, the number of women sterilized has doubled. More than 210 million couples are currently protected from unintended pregnancy by female sterilization, which is currently the most widely used contraceptive method in the world and is projected to remain the most widely used method over the next quarter century.

Minilaparotomy for Female Sterilization: An Illustrated Guide for Service Providers is thus of potentially great current and future usefulness. The illustrated guide offers service providers an easy-to-use reference for learning about minilaparotomy for female sterilization. It presents a detailed description of the procedure and also illustrates the step-by-step surgical technique to follow in performing a suprapubic or subumbilical minilaparotomy under local anesthesia, with or without sedation. In addition, the guide reviews basic requirements that are essential to ensure the safety and effectiveness of any female sterilization procedure. Details related to providing female sterilization services can be found in the World Health Organization's Guide to Female Sterilization Services (WHO, 1992).

The illustrated guide is designed for four audiences:

- Experienced providers of female sterilization who want to change from other surgical techniques to the minilaparotomy technique
- Providers who have never performed female sterilization and who want to begin to provide female sterilization services using the minilaparotomy technique under local anesthesia
- Trainers, who may rely on this guide as a reference text while teaching the minilaparotomy technique
Trainees, who may use the illustrated guide during their training and later for reference to further develop proficiency in their technique.

This guide focuses on performing minilaparotomy under local anesthesia, with or without sedation. However, the surgical techniques described can be implemented using other anesthetic regimes. Similarly, the guide describes the modified Pomeroy technique for tubal occlusion, but other occlusion techniques can also be used.

Finally, as useful as this guide may prove to be, it alone is not sufficient preparation for the performance of minilaparotomy under local anesthesia. EngenderHealth strongly recommends that those interested in learning and mastering the minilaparotomy technique obtain hands-on training from a skilled provider. In addition to this guide, EngenderHealth has developed a training curriculum for minilaparotomy under local anesthesia. For more information about this curriculum or about training in minilaparotomy, contact:

EngenderHealth
440 Ninth Avenue
New York, NY 10001 U.S.A.
Telephone: 212-561-8000
Fax: 212-561-8067
e-mail: info@engenderhealth.org

We are confident that this guide will serve as an important resource for making safe, high-quality female sterilization services more accessible and available throughout the world.

Roy Jacobstein, M.D., M.P.H.
Medical Director, EngenderHealth
EngenderHealth’s work to facilitate and improve access to safe and effective female sterilization services is core to our organizational mission to improve women’s reproductive health worldwide. Thus, every member of EngenderHealth’s staff has contributed in some fashion to our work to advance female sterilization—and the production of this guide is no exception. In particular, experience accrued over the years by EngenderHealth’s medical and program staff in the provision of quality minilaparotomy services was drawn upon during the writing, review, and revision of this guide.

Dr. Carmela Cordero and Lori Leonhardt worked on the iterative development of manuscripts and were in charge of the overall process of creating the guide. At a meeting held in India in March 2003, a number of EngenderHealth senior medical associates—Dr. Francis Floresca, Dr. Job Obwaka, Dr. Mizanur Rahman, Dr. Marcel Reyners, and Dr. Jyoti Vajpayee—reviewed the manuscript and illustrations and provided invaluable feedback. Dr. Jean Ahlborg, Dr. José Figueroa, Dr. Roy Jacobstein, John Pile, Dr. Amy E. Pollack, and Dr. Joseph Ruminjo (all of EngenderHealth) reviewed subsequent drafts of the guide and provided useful input. In addition, Dr. Pío Iván Gómez of EngenderHealth and Dr. Javier Esclava of the International Clinical Epidemiology Network (INCLEN) were key contributors to the chapter on anesthesia. Finally, a number of external experts and organizations helpfully reviewed the guide in draft, including Dr. James Shelton (USAID), Dr. Herbert Peterson (WHO), Dr. Ali Samba (Korle-Bu Teaching Hospital, Ghana), Dr. Marianne Parry (Marie Stopes International), and Dr. John Naponick (Louisiana Department of Health).

Laura Pardi Duprey created the original illustrations for this guide. All photographs included in the guide were provided by Instituto de Investigaciones y Servicios en Salud Reproductiva (INSAR). The following members of
EngenderHealth’s Publishing Team were instrumental in the editing, design, and production of this guide: Karen Landovitz supervised the publication process, Michael Klitsch edited the manuscript, Anna Kurica supervised production, and Margaret Scanlon proofread the book. Typesetting and layout were done by Maryland Composition, Inc.

Funding for this book was provided by the U.S. Agency for International Development and by individual EngenderHealth members.