

Table of contents

| | |
|--|-----------|
| INTRODUCTION | 3 |
| PART I. MISCARRIAGE – THE LOSS..... | 11 |
| CHAPTER 1 | 11 |
| THE NATURAL HISTORY OF MISCARRIAGE..... | 11 |
| SUMMARIZING QUESTIONS AND ANSWERS | 14 |
| HELPFUL HINTS FOR SUPPORTIVE FRIENDS AND FAMILY | 15 |
| CHAPTER 2 | 17 |
| THE EMOTIONAL IMPACT OF REPRODUCTIVE LOSS | 17 |
| PSYCHOLOGICAL FACTORS IN RESPONSE TO MISCARRIAGE | 17 |
| HELPFUL HINTS FOR SUPPORTIVE FRIENDS AND FAMILY | 18 |
| NORMAL AND PATHOLOGIC GRIEF | 20 |
| CASE REPORT | 24 |
| CASE REPORT | 24 |
| INFORMATION ABOUT SUPPORT GROUPS | 25 |
| YOU CAN SURVIVE PREGNANCY LOSS | 26 |
| "The Truth Is..." | 27 |
| CHAPTER 3 | 31 |
| THE SIX TYPES OF MISCARRIAGE | 31 |
| BLIGHTED OVUM | 31 |
| ECTOPIC PREGNANCY | 31 |
| SPONTANEOUS MISCARRIAGE IN THE 1 ST TRIMESTER..... | 33 |
| MOLAR PREGNANCY..... | 35 |
| INCOMPETENT CERVIX..... | 36 |
| STILLBIRTH..... | 37 |
| A WOMAN'S STORY | 38 |
| SUMMARIZING QUESTION & ANSWER | 39 |
| PART II. THE HOW AND WHY OF MISCARRIAGE | 41 |
| CHAPTER 4 | 41 |
| EVALUATION OF YOUR MISCARRIAGE..... | 41 |
| I. WHAT YOU MAY BE CONCERNED ABOUT | 41 |
| <i>How common is miscarriage?</i> | 41 |
| <i>What is a recurrent miscarriage?</i> | 42 |
| <i>Who should I see for help?</i> | 44 |
| II. EVALUATION: HELP FROM YOUR DOCTOR – WHAT IS IMPORTANT TO KNOW..... | 52 |
| <i>Maternal Factors</i> | 53 |
| <i>Paternal factors</i> | 54 |
| III. CASE HISTORY | 60 |
| CHAPTER 5 | 61 |
| THE BIOLOGIC CLOCK - IMPACT OF A WOMEN'S AGE | 61 |
| REPRODUCTION AND AGE | 61 |

| | |
|---|-----------|
| AGE AND EGG QUALITY: LOWER FERTILITY AND HIGHER MISCARRIAGE | 61 |
| ANATOMY OF THE EGG: ZONA PELLUCIDA | 61 |
| CHROMOSOMES AND THE EGG | 62 |
| EGG DONATION | 62 |
| CHAPTER 6 | 63 |
| GENETIC FACTORS ASSOCIATED WITH MISCARRIAGE | 63 |
| CHROMOSOMAL ANALYSIS OF GAMETES AND EMBRYOS | 63 |
| GENETIC CAUSES OF RECURRENT PREGNANCY LOSS | 65 |
| <i>A. Translocations</i> | 65 |
| <i>B. Inversions</i> | 66 |
| <i>C. Mosaicism</i> | 67 |
| CHROMOSOMAL STRUCTURAL REARRANGEMENTS IN PARENTS | 68 |
| CHAPTER 7 | 71 |
| ENVIRONMENTAL & OCCUPATIONAL INFLUENCES FOR MISCARRIAGE..... | 71 |
| ENVIRONMENTAL FACTORS | 72 |
| <i>Tobacco and Alcohol Exposure</i> | 72 |
| <i>Alcohol</i> | 72 |
| <i>Electromagnetic Fields</i> | 73 |
| <i>Radiation</i> | 73 |
| DRUGS | 73 |
| <i>Prescription and Non-Prescription Drugs</i> | 74 |
| <i>Cancer Treatments</i> | 74 |
| <i>DES</i> | 74 |
| <i>Isotretinoin</i> | 75 |
| OCCUPATIONAL EXPOSURES AND ENVIRONMENTAL POLLUTANTS | 75 |
| <i>Organic Solvents</i> | 76 |
| <i>Paternal Occupational Exposures</i> | 76 |
| <i>Anesthetic Gases</i> | 77 |
| <i>Mercury</i> | 77 |
| <i>Pesticides</i> | 77 |
| NUTRITION AND EXERCISE | 77 |
| PSYCHOLOGICAL FACTORS | 78 |
| PART III. TREATMENT – NEW HOPE FOR MISCARRIAGE PATIENTS..... | 81 |
| CHAPTER 8 | 81 |
| FIBROIDS AND MISCARRIAGE..... | 81 |
| A. FIBROIDS | 81 |
| CHAPTER 9 | 91 |
| ANATOMY – WAYS TO CORRECT PREGNANCY LOSS | 91 |
| UTERINE CAUSES OF MISCARRIAGE | 91 |
| A. UTERINE MALFORMATIONS | 91 |
| <i>1) Septate Uterus</i> | 93 |
| <i>2) Double Uterus</i> | 94 |
| <i>3) Unicornuate Uterus</i> | 94 |
| B. ASHERMAN'S SYNDROME | 96 |
| C. CERVICAL INCOMPETENCE | 98 |

| | |
|--|------------|
| <i>Pregnancy Outcome with Cervical Cerclage</i> | 101 |
| CHAPTER 10 | 103 |
| INFECTION AND PREGNANCY LOSS | 103 |
| MYCOPLASMAS | 103 |
| LISTERIA | 104 |
| CHLAMYDIA | 105 |
| GROUP B STREPTOCOCCUS | 105 |
| CHAPTER 11 | 107 |
| HORMONES AND MISCARRIAGE..... | 107 |
| LUTEAL PHASE DEFECT | 107 |
| <i>Serum Progesterone</i> | 110 |
| <i>Endometrial Biopsy</i> | 110 |
| <i>Clomiphene Citrate</i> | 112 |
| <i>Progesterone</i> | 112 |
| <i>Human Chorionic Gonadotropin</i> | 113 |
| <i>Elevated Prolactin</i> | 113 |
| THYROID DISEASE | 114 |
| DIABETES MELLITUS | 114 |
| POLYCYSTIC OVARY (PCO) SYNDROME | 116 |
| CHAPTER 12 | 117 |
| REPRODUCTIVE IMMUNOLOGY..... | 117 |
| AUTOIMMUNITY AND RECURRENT PREGNANCY LOSS | 117 |
| <i>Systemic Lupus Erythematosus</i> | 117 |
| THROMBOPHILIAS | 117 |
| <i>The Antiphospholipid Syndrome (APS)</i> | 117 |
| PART IV. ART – NEW HORIZONS | 123 |
| CHAPTER 13 | 123 |
| ASSISTED REPRODUCTIVE TECHNOLOGY..... | 123 |
| IN – VITRO FERTILIZATION – EMBRYO TRANSFER (IVF-ET)..... | 124 |
| <i>Fertilization</i> | 126 |
| <i>Embryo Transfer</i> | 127 |
| FACTORS AFFECTING THE SUCCESS OF IVF-ET..... | 128 |
| GAMETE INTRAFALLOPIAN TRANSFER (GIFT) | 130 |
| ZYGOTE INTRAFALLOPIAN TRANSFER (ZIFT)..... | 131 |
| EMBRYO CRYOPRESERVATION | 131 |
| INTRACYTOPLASMIC SPERM INJECTION (ICSI) | 132 |
| ASSISTED HATCHING | 132 |
| EGG DONATION | 133 |
| PREIMPLANTATION TESTING (PGD) | 133 |
| GESTATIONAL SURROGACY | 133 |
| EMBRYO DONATION | 134 |
| CONCLUSION | 135 |
| MAGNITUDE OF THE PROBLEM | 135 |
| THERAPEUTIC OPPORTUNITIES | 135 |
| PLANNING FOR THE FUTURE | 135 |