Contents

| Subjects | Page |
|--|------|
| List of abbreviations | II |
| List of figures | IV |
| List of tables | V |
| • Introduction | 1 |
| Aim of the work | 6 |
| • Review of Literature | |
| ♦ Chapter (1): Preterm Birth | 7 |
| ♦ Chapter (2): Prevention of Preterm Birth | 20 |
| ◆ Chapter (3): Assisted Reproduction and Preterm Birth | 30 |
| ♦ Chapter (4): Twin and Preterm Birth | 42 |
| ♦ Chapter (5): Cervical Cerclage | 60 |
| Patients and Methods | 74 |
| • Results | 82 |
| • Discussion | 107 |
| Summary and Conclusion | 122 |
| • References | 124 |
| Arabic Summary | |

List of Abbreviations

ART : Assisted reproductive technologies

BMI : Body mass index

CARTR: Canadian Assisted Reproductive

Technologies Register

CI : Confidence interval

COS : Controlled ovarian stimulation

CRI : Cervical Resistance Index

fFN : Fetal fibronectin

FIGO: International Federation of Gynecology and

Obstetrics

ICSI : Intra Cytoplasmic Sperm Injection

IUI : Intrauterine Insemination

IVF : In-vitro fertilization

IVF : In-vitro fertilization

NICU : Neonatal intensive-care unit

OCAP : Oral Conditions and Pregnancy

List of Abbreviations

PROM: Premature rupture of membranes

PTL : Preterm labor

TAC : Transabdominal cervical cerclage

TVUS : Transvaginal ultrasonography

US : Ultrasound

WHO : World health organization

List of Figures

| No. | <u>Figure</u> | Page |
|----------|--|------|
| 1 | Distribution of ART cycles according to the source of the ovum and whether the cycle was fresh or frozen | 33 |
| <u>2</u> | Comparison between intervention and control group as regards the mean age in years. | 84 |
| <u>3</u> | Comparison between intervention and control group as regards the mean body mass index. | 84 |
| <u>4</u> | Comparison between intervention and control group as regards the mean gestational age at delivery in weeks. | 86 |
| <u>5</u> | Comparison between intervention and control group as regards the presence of pre term neonates at delivery. | 89 |
| <u>6</u> | Comparison between intervention and control group as regards the presence of pre term neonates at delivery best case scenario (Intention to treat analysis). | 91 |
| 7 | Comparison between intervention and control group as regards the presence of fetal complications (Deleted missing cases). | 95 |
| 8 | Comparison between intervention and control group as regards the presence of fetal complications (Best case scenario) (Intention to treat analysis). | 97 |

List of Figures

| No. | <u>Figure</u> | Page |
|-----------|--|------|
| 2 | Comparison between intervention and control group as regards the presence of maternal complications (Deleted missing cases). | 102 |
| <u>10</u> | Comparison between intervention and control group as regards the presence of Maternal complications (best case) (Intention to treat analysis). | 103 |

List of Tables

| No. | <u>Table</u> | Page |
|-----------|---|------|
| 1 | Recommended limits on the numbers of embryos to transfer. | 38 |
| <u>2</u> | Comparison between the two studied groups as regards the mean age and body mass index. | 83 |
| <u>3</u> | Comparison between the two studied groups as regards the mean hemoglobin and mean fasting blood sugar. | 85 |
| <u>4</u> | Comparison between the two studied groups as regards the mean gestational age at delivery. | 86 |
| <u>5</u> | Comparison between the two studied groups as regards the mean cervical length by US. | 87 |
| <u>6</u> | Comparison between the two studied groups as regards the presence of immaturity. | 88 |
| <u>7</u> | Best case scenario (imputed good outcome with intervention and bad outcome with the control missing outcomes). | 90 |
| 8 | Worst case scenario (imputed bad outcome with intervention and good outcome with the control for missing outcomes). | 92 |
| 9 | Comparison between the two studied groups as regards the presence of fetal complication. | 93 |
| <u>10</u> | Comparison between the two studied groups as regards the presence of fetal complications. | 94 |

List of Tables

| No. | <u>Table</u> | <u>Page</u> |
|-----------|--|-------------|
| <u>11</u> | Comparison between the two studied groups as regards the presence of fetal complications. | 96 |
| <u>12</u> | Comparison between the two studied groups as regards the presence of fetal complications. | 98 |
| <u>13</u> | Comparison between the two studied groups as regards the presence of maternal complications. | 99 |
| <u>14</u> | Comparison between the two studied groups as regards the presence of puerperal sepsis. | 100 |
| <u>15</u> | Comparison between the two studied groups as regards the presence of maternal complications. | 101 |
| <u>16</u> | Comparison between the two studied groups as regards the presence of maternal complications. | 103 |
| <u>17</u> | Comparison between the two studied groups as regards the presence of maternal complications. | 104 |
| <u>18</u> | Comparison between body mass index and outcome in intervention group. | 105 |
| <u>19</u> | Comparison between body mass index and outcome in control group. | 106 |



Protocol





Introduction





Aim of the Work





Review of Literature





Chapter 1

Preterm Birth





Chapter 11

Prevention of Preterm Birth





Chapter 111

Assisted Reproduction and Preterm Birth





Chapter 1V

Twin and Preterm Birth

