



Structures in relation to pelvic floor

The superior surface is related to the following:

1. Pelvic organs from anterior to posterior are bladder, vagina, uterus and rectum.
2. Pelvic cellular tissues between the pelvic peritoneum and upper surface of the levator ani which fill all the available spaces.
3. Ureter lies on the floor in relation to the lateral vaginal fornix. The uterine artery lies above and the vaginal artery lies below it.
4. Pelvic nerves

The inferior surface is related to the anatomical perineum.

NERVE SUPPLY

It is supplied by the 4th sacral nerve, inferior rectal nerve and a perineal branch of pudendal nerve S2, 3, 4.

Functions

1. To support the pelvic organs - The pubovaginalis which forms a 'U' shaped sling, supports the vagina which in turn supports the other pelvic organs, bladder and uterus. Weakness or tear of this sling during parturition is responsible for prolapse of the organs concerned.
2. To maintain intra abdominal pressure by reflexly responding to its changes.
3. Facilitates anterior internal rotation of the presenting part when it presses on the pelvic floor.
4. Puborectalis plays an ancillary role to the action of the external anal sphincter.
5. Ischiococcygeus helps to stabilise the sacroiliac and sacrococcygeal joints.
6. To steady the perineal body.

PELVIC FLOOR DURING PREGNANCY AND PARTURITION

During pregnancy levator muscles hypertrophy, become less rigid and more distensible. Due to water retention, it swells up and sags

down. In the second stage, the pubovaginalis and puborectalis relax and the levator ani is drawn up over the advancing presenting part in the second stage. Failure of the levator ani to relax at the crucial moment may lead to extensive damage of the pelvic structures. The effect of such a displacement is to elongate the birth canal which is composed solely of soft parts below the bony outlet. The soft canal has got deep lateral and posterior walls and its axis is in continuation with the axis of the bony pelvis.

BREASTS

The breasts, or mammary glands, are considered accessory organs of reproduction because of their functional relationship to reproduction, that is, to secrete milk for the infant (Fig. 1.8). The process is called lactation. The nipple, in the center of the breasts, is surrounded by a pigmented areola, which darkens during pregnancy. Montgomery's glands (Montgomery's tubercles) are small sebaceous glands in the areola that secrete a substance that lubricates and protects the breasts during lactation (when the infant sucks). Each breast is divided into a number of lobes (15 to 20), which can be visualized as a tree-like structure. They are separated by adipose and fibrous tissue. Beginning at the nipple are 10 to 20 branch like structures called lobes. Branching off from each lobe are 20 to 40 lobules; each lobule branches further, dividing into 20 to 80 sac like structures called alveoli. These sac like structures have a lining that contains tiny secretory cells called acini, which secrete milk. Surrounding the alveolar cells are contractile cells called myoepithelial cells, which contract the alveolus and eject milk into the reservoir called the lactiferous ducts. It is from these ducts that the infant, by sucking, gets milk through the nipple.

During pregnancy, high levels of estrogen and progesterone produced by the placenta inhibit milk secretion. After the expulsion of the placenta, there is an abrupt change in estrogen





developing blastocyst) is called the *decidua basalis* (Fig. 2.9). The part of the decidua that separates the embryo from the uterine lumen is called the *decidua capsularis*, while the part lining the rest of the uterine cavity is called the *decidua parietalis*. The decidua basalis consists predominantly of large decidual cells which contain large amounts of lipids and glycogen (that presumably provide a source of nutrition for the embryo). The decidua basalis is also referred to as the decidual plate, and is firmly united to the chorion.

At the end of pregnancy, the decidua is shed off, along with the placenta and membranes.

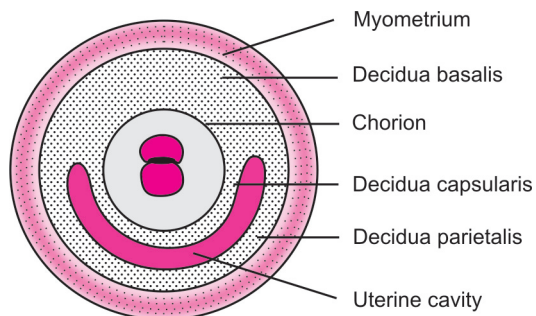


Fig. 2.9: Subdivisions of decidua

FORMATION OF CHORIONIC VILLI

The essential functional elements of the placenta are very small finger-like process or villi. These villi are surrounded by maternal blood. In the substance of the villi, there are capillaries through which the fetal blood circulates. Exchanges between the maternal and fetal circulations take place through the tissues forming the walls of the villi (Fig. 2.10).

The villi are formed as off shoots from the surface of trophoblast, along with the underlying extra-embryonic mesoderm, constitutes the chorion (the villi), the arising from it, are called chorionic villi.

The chorionic villi are first formed all over the trophoblast and grow into the surrounding decidua (Fig. 2.11). Those related to the decidua

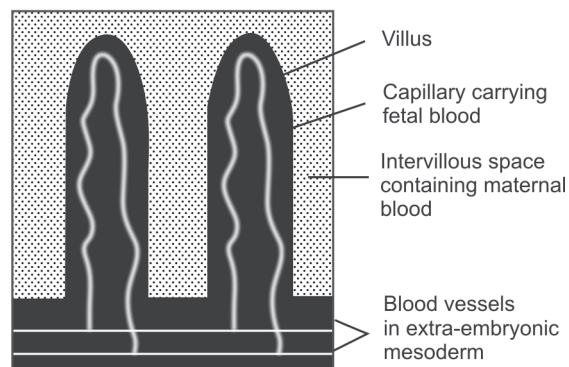


Fig. 2.10: Scheme to show that fetal blood circulating through capillaries of villi is in close relation to maternal blood in the transverse space

capsularis are transitory. After sometime they degenerate. This part of the chorion becomes smooth and is called the *chorion laevae*.

The part of the chorion that helps form the placenta is called the *chorion frondosum*.

The essential features of the formation of chorionic villi are as follows:

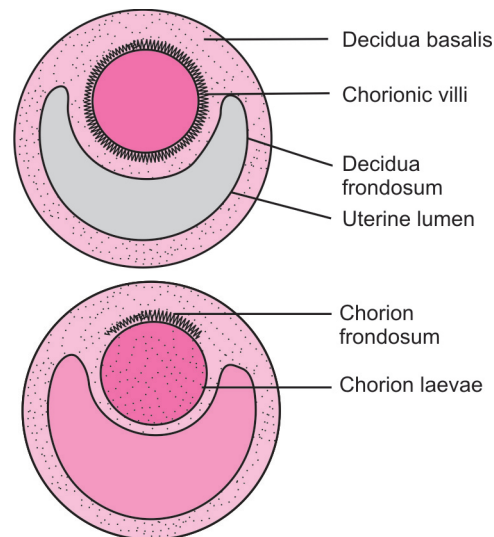


Fig. 2.11: Two stages in the formation of chorionic villi

The trophoblast is at first made up of a single layer of cells (Fig. 2.12). As these cells multiply, two distinct layers are formed. One continuous





MENSTRUAL DISORDERS

Menstrual disorders are the commonest gynecological problem among the women. The common menstrual disorders are:

- Amenorrhoea
- Dysmenorrhoea
- Metrorrhagia
- Menorrhagia
- Polymenorrhoea

1. AMENORRHOEA

Definition

Amenorrhoea is a symptom of absence of menses. This is not a disease but symptom of a disease.

Aetiology

Physiological amenorrhoea is caused by pregnancy, sometimes during lactation, after menopause and before menarche; pregnancy is the commonest cause of amenorrhoea.

Pathological amenorrhoea

- I. Primary
- II. Secondary

Primary amenorrhoea menarche does not appear in a girl who completed 18 year's age. The causes are grouped as:

1. Endocrinal

1. Hypothalamic

- obesity (>70 kg)
- Environmental change
- Anorexia nervosa in adolescents.
- Kallman's syndrome due to lack of hypothalamic GnRh—primary amenorrhoea, sexual infantilism and anosmia (loss of smell)
- Hydrocephalus
- Head injury, meningitis

2. Pituitary

- Pituitary dwarf
 - Empty sella syndrome—deficient pituitary tissue

- Pituitary tumours (adenoma) as in acromegaly (growth hormone, tumour) Cushing syndrome
- Hyperprolactinaemia
- Ovarian
- Polycystic ovarian syndrome
- Testicular feminisation syndrome—gonad is testes, external genitalia female, uterus absent, there is androgen insensitivity to end organ tissues
- ovarian tumours—arrhenoblastoma

3. Thyroid—hypo or hyperthyroidism

4. Adrenal—Congenital adrenogenital syndrome, adrenal tumours

5. Pancreas—Juvenile diabetes mellitus

I. **Nutrition:** Gross under nutrition in childhood and adolescence may cause amenorrhoea

II. **Drugs and disease**

Anabolic hormones GnRh analogue, Depo-provera in precocious puberty, testosterone, antipsychotic, antiepileptic drugs systemic diseases—tuberculosis of lungs, lymph nodes, bone, severe anaemia and other serious illness.

III. **Chromosomal** (a) Turner's syndrome (45×0)—streak gonad, absent breast, infantile uterus, primary amenorrhoea.

IV. **Uterovaginal atresia**

- Cryptomenorrhoea due to imperforate hymen
- Endometrial tuberculosis can be the cause in developing countries.
- Pregnancy is rarely encountered.

Secondary amenorrhoea common

This is cessation of menses for 3 months or more following normal menstrual cycles.

Causes are grouped as

I. Endocrinal

- Hypothalamic
- Anxiety, mental tension, environmental changes
- Obesity





- Breakthrough bleeding in oral contraceptive
- Post-IUCD bleeding.

Where the term is used for irregular vaginal haemorrhage, the vaginal and vulval growths, vaginitis, vaginal ulcer are the causes of metrorrhagia.

Treatment: The cause is investigated and appropriately treated.

4. MENORRHAGIA

Means excessive menstrual loss in amount or duration or both causing (more than 80 ml) blood loss. Menotaxis means prolonged menstruation in duration.

Aetiology

I. Pelvic causes

- Uterine fibroid
- Pelvic inflammatory disease, e.g. chronic salpingo-oophoritis, chronic endometritis (tubercular)
- Pelvic endometriosis, adenomyosis
- Endometrial polyps
- Carcinoma of the endometrium
- Uterine malformation, e.g. double uterus
- Intrauterine contraceptive device (IUCD)

II. Endocrinal disorders

- Dysfunctional uterine bleeding
- Polycystic ovarian syndrome (PCOS)
- Hypothyroidism.

III. Systemic diseases

- Blood disorders** (haematological)—purpura, leukaemia, some cases of moderate anaemia.
- General disease**
 - Chronic hypertension
 - Heart disease with chronic congestive failure
 - Chronic nephritis
 - Under nutrition
 - Emotional disturbances like mental anxiety, sorrow, sexual excesses, etc.

IV. Drugs—prolonged taking of aspirin

5. DYSFUNCTIONAL UTERINE BLEEDING (DUB)

Definition

This is excessive menses more than 80 ml where no organic cause (systemic, haematological or pelvic) can be detected. The nature of bleeding is one of menorrhagia, polymenorrhoea, metrorrhagia and continuous bleeding preceded by amenorrhoea (metropathic bleeding).

Incidence

Dysfunctional uterine haemorrhage constitutes about 15–20 percent of all gynaecological admissions in an institution.

Aetiology

Dysfunctional uterine bleeding is due to

- Anovulation (85%) particularly during adolescent and premenopause, anovulatory DUB is painless.
- Mental anxiety

Histology

Endometrial pattern in DUB shows:

1. Proliferative endometrium in secretory phase (anovulation)
2. Secretory endometrium (ovulatory)
3. Endometrial hyperplasia and adenomatous hyperplasia, cystic glandular hyperplasia (metropathia) due to chronic anovulation.

METROPATHIA HAEMORRHAGIA (SCHRODER DISEASE)

Bleeding is painless. This is commonly seen in premenopause and adolescence. Chronic anovulation and prolonged oestrogen effect causes cystic glandular hyperplasia in endometrium and myohyperplasia in uterus.

Pathology of metropathia

1. The ovary, either one or both ovaries are more or less enlarged and contain unruptured cystic follicles with absence of active corpus luteum.
2. The uterus. This becomes uniformly but mildly enlarged due to myohyperplasia.





Contents

Preface
History

v
xi–xvi

1. Female Reproductive System 1

Outline 1
Introduction 1
The vulva 1
The vagina 2
The uterus 4
Uterine malformations 5
Ovaries 6
The fallopian tubes 6
Perineum 6
Pelvic floor 7
Nerve supply 9
Pelvic floor during pregnancy
and parturition 9
Breasts 9

2. Fundamentals of Reproduction 11

Outline 11
Menstrual cycle 11
 Normal menstrual cycle 11
 Ovarian cycle 12
 Menstrual cycle 14
 Human oogenesis 15
 Ovulation 16
Fertilization 17
Development of placenta 19
 Decidua 19
 Formation of chorionic villi 20
 Further development of the placenta 23
 Placental membrane 24
 The placenta and fetal membranes 24
 The placenta at term 24
 Separation 25
 The fetal membranes 26
 Amniotic fluid 27
 Abnormalities in volume 29

Menstrual disorders 31
 1. Amenorrhoea 31
Diagnosis and investigation 32
 Primary amenorrhoea 32
 Secondary amenorrhoea 32
 Specific treatment 32
 2. Dysmenorrhoea 33
 Clinical features of primary
 dysmenorrhoea 33
 Secondary dysmenorrhoea 34
Heavy menstruation and abnormal uterine
haemorrhage 35
 3. Metrorrhagia 35
 4. Menorrhagia 36
 5. Dysfunctional uterine bleeding
 (DUB) 36
 Metropathia haemorrhagia
 (Schroder disease) 36

3. The Fetus 40

Outline 40
Fetal circulation 40
Changes of the fetal circulation at birth 41
Fetal development 42

4. Pregnancy 45

Outline 45
Physiological changes during pregnancy 45
 Genital organs 45
 Uterus 45
 Cervix 48
 Other organs 49
 Breasts 49
 Cutaneous changes 50
 Weight gain and water metabolism 50
 Haematological changes 51
 Heart and circulation 52



Metabolic changes	52
Systemic changes	53
Diagnosis of pregnancy	54
First trimester (first 12 weeks)	54
Second trimester (13–28 weeks)	57
Abdominal examination	57
Last trimester (29–40 weeks)	58
Chronological appearance of specific symptoms and signs of pregnancy	60
Procedure at the first visit	61
History taking	61
Examination	63
Heart, lungs, liver and spleen	64
Procedure at the subsequent visits	65
Examination	65
Antenatal advice	65
Minor ailments in pregnancy	68
Nausea	68
Fatigue	68
Upper backache (nonpathological)	69
Leukorrhoea	69
Urinary frequency (nonpathological)	69
Heartburn	69
Flatulence	70
Constipation	70
Haemorrhoids	70
Leg cramps	71
Dependent oedema	71
Varicosities	71
Dyspareunia	72
Nocturia	72
Insomnia	72
Low back pain (nonpathological)	72
Nonpathological hyperventilation and shortness of breath	73
Tingling and numbness of fingers	74
Supine hypotensive syndrome	74
Fetus in utero	74
Denominator	76
Methods of obstetrical examination	76
Planned parenthood	79
Antenatal exercise	83
Exercises for muscle strengthening and relaxation	83
Do's and don'ts	84
Fetal well-being assessment	85
Prenatal fetal assessment	85
Fetal assessment during labour	85
Tests to assess fetal well-being	86

5. Fetal Skull and Maternal Pelvis 87

Outline	87
Fetal skull	87
Areas of skull	87

Sutures	87
Fontanelles	87
Anterior fontanelle	88
Posterior fontanelle	89
Sagittal fontanelle	89
Diameters of skull	89
Circumferences	90
Maternal pelvis	90
Functions	90
The normal female pelvis	91
Pelvic bones	91
Pelvic ligaments	92
The true pelvis	92
The four types of pelvis	95

6. Normal Labour 97

Outline	97
Causes of onset of labour	97
Prelabour (Syn: premonitory stage)	99
Stages of labour	100
Factors influencing labour	101
Major variables in the birth process	101
Pelvis	101
Passenger	101
Fetopelvic relationship	101
Powers: uterine contractions	102
Assessment of labour contractions	102
Events in first stage of labour	103
Uterine action	103
Mechanical factors	106
Events in second stage of labour	106
Mechanism of normal labour	108
Main movements	108
Events in third stage of labour	110
Management of normal labour	112
Antiseptics and asepsis	112
Vaginal examination in labour	113
Preliminaries	113
Indications of vaginal examination	113
Management of the first stage	114
Principles	114
Preliminaries	114
Actual management	114
Evidences of foetal distress	115
Management of the second stage	115
Immediate care of the newborn	118
Management of the third stage	120
Signs	120
Partograph	123

7. Normal Puerperium 127

Outline	127
Involution of the uterus	127





Anatomical consideration	127
Involution of other pelvic structures	128
Vagina	128
Lochia	129
General physiological changes	130
Lactation	131
Physiology of lactation	131
Management of normal puerperium	133
Management of ailments	137
Postpartum exercise	137

8. Obstetric Disorders in Pregnancy 139

Outline	139
Abortion	139
Spontaneous abortion (miscarriage)	139
Classification of varieties	139
Ovo-fetal factors	139
Maternal factors (15%)	139
Threatened abortion	141
Inevitable abortion	143
Complete abortion	144
Incomplete abortion	144
Missed abortion (silent miscarriage)	145
Carneous mole (Syn: blood mole, fleshy mole or tuberous mole)	145
Septic abortion	146
Management	148
Medical termination of pregnancy (MTP)	151
Ectopic pregnancy	152
Tubal pregnancy	152
Morbid anatomy	154
Mode of termination	154
Acute ectopic	156
Unruptured tubes ectopic	157
Chronic or old ectopic	157
Diagnosis of ectopic pregnancy	158
Subacute (chronic) ectopic	158
Interstitial pregnancy	159
Management of ectopic pregnancy	160
Acute	160
Chronic ectopic	160
Unruptured tubal pregnancy	161
Prognosis of tubal pregnancy	162
Gestational trophoblastic diseases (GTDs)	162
Hydatidiform mole (Syn: vesicular mole)	163
Naked eye appearance	164
Microscopic appearance	164
Ovarian changes	164
Complications	166
Supportive therapy	168
Antepartum haemorrhage	170

Placenta praevia	170
Confirmation of diagnosis	172
Placentography	172
Complications	173
Prognosis	173
Management	174
Abruptio placentae	175
Multiple pregnancy	180
Twins	180
Sex	182
Diagnosis	184
Fetal	186
Twin transfusion syndrome	186
Antenatal management	186
Management during labour	187
Polyhydramnios (Syn: hydramnios)	188
Chronic polyhydramnios	189
Abdominal examination	190
Management	191
Acute polyhydramnios	192
Oligohydramnios (Syn: oligoamnios)	194
Postmaturity (Syn: post-term pregnancy)	195
Dangers	196
Management	197
Intrauterine fetal death	198
Management	201
Stillbirth	201
Abnormalities of placenta and cord	202
Large placenta (more than 500 gm)	202
Placenta succenturiata	202
Placenta extrachorialis	203
Placenta membranacea	203
Placenta accreta and increta	204
Cord abnormalities	204

9. Medical and Surgical Disorders in Pregnancy 206

Outline	206
Hypertensive disorders in pregnancy	206
Pregnancy induced hypertension (PIH)	206
Pre-eclampsia	206
Pathophysiology	209
Clinical types	210
Clinical features	210
Prognosis	213
Prediction and prevention	213
Management	213
Caesarean section	217
Eclampsia	217
Clinical features	218
Prognosis	219
Management	219
Anemia in pregnancy	221





- Iron deficiency anaemia 223
- Specific therapy 224
- Oral route 224
- Parenteral therapy 224
- Blood transfusion 226
- Puerperium 226
- Haemorrhagic anaemia 226
- Sickle cell haemoglobinopathies 227
- Thalassaemia in pregnancy 227
- Heart disease in pregnancy 228
 - Management 229
 - Varicose veins in pregnancy 231
- Diabetes mellitus In pregnancy 231
 - Pregnancy and diabetes 231
 - Gestational diabetes mellitus 232
 - Management 232
 - Obstetric management 232
 - Overt diabetes 233
 - Effects of diabetes on pregnancy 233
- Hyperemesis gravidarum 238
 - Theories 238
- Rh incompatibility 241
 - Manifestations of the haemolytic disease 241
 - Icterus gravis neonatorum 241
 - Congenital anaemia of the newborn 242
 - To prevent or minimise fetomaternal bleed 244
- Infections in pregnancy 244
 - Toxoplasmosis 244
 - Parasitologic considerations 244
 - Incidence during pregnancy 244
 - Risk factors 244
 - Transmission cycle 245
 - Diagnosis and treatment 245
 - Rubella 246
 - Incidence and effects during pregnancy 246
 - Diagnosis and treatment 247
 - Cytomegalovirus (CMV) infection 247
 - Pregnancy and CMV infection 247
 - Fetal and neonatal infections 247
 - Diagnosis and treatment 247
 - Herpes simplex virus infection 248
 - Effect on pregnancy 248
- Syphilis 248
 - Effects on pregnancy 249
 - Treatment 249
 - Human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS) 250
 - Management 251
 - Nursing management 253

- Parasitic and protozoal infestations in pregnancy 253
- Assessment and screening of high-risk pregnancy 253
- Risk approach of obstetric nursing care 253
- Management 255
- Initial screening 260

10. Malpositions and Malpresentations

263

- Outline 263
- Occipitoposterior position 263
- Diagnosis 264
 - Abdominal examination 264
 - Vaginal examination 264
 - Management of labour 268
 - Complications associated with occipitoposterior positions 269
- Breech presentation 271
 - Varieties 271
 - Mechanism of left sacroanterior position 272
 - Prognosis 275
 - Antenatal management 275
 - Management of vaginal breech delivery 277
 - Assisted breech delivery 278
 - Management of complicated breech delivery 280
 - Arrest of the aftercoming head 282
- Face Presentation 282
 - Mechanism of a left mentoanterior position 283
 - Right mentoanterior (RMA), left mentoposterior (RMP OR LMP) 284
 - Abdominal findings 285
 - Vaginal examination 285
 - Prognosis 286
 - Management of labour 287
- Brow Presentation 287
 - Mechanism of labour 288
 - Management 288
- Transverse lie 289
 - Diagnosis 289
 - Clinical course of labour 290
 - Unfavourable events (most common) 291
 - Favourable events (very rare) 291
 - Management 292
 - Patient seen in labour 293
- Unstable lie 293
 - Management 293
 - Formulation of the line of treatment 293





- Compound presentation (Syn: complex presentation) 294
- Shoulder dystocia 294
 - Management 295
 - Manipulative procedures 296
 - Outcomes following shoulder dystocia 298
- Cord prolapse 298
- Prognosis 299

11. Abnormal Labour

301

- Outline 301
- Preterm labour (Syn: premature labour) 301
 - Management 302
 - Prevention 302
 - To arrest preterm labour 302
 - Management of preterm labour 303
- Preterm rupture of the membranes (PROM) 304
 - Management 305
- Obstructed labour 306
- Induction of labour 307
 - Preinduction scoring 308
 - Methods of induction 309
 - Medical Induction 309
 - Surgical Induction 309
 - Low rupture of the membrane (LRM) 310
 - Procedures 310
 - High rupture of the membranes (HRM) 310
 - Stripping the membranes 311
 - Combined method 311
- Prolonged labour 311
- Abnormal uterine action 314
 - Uterine inertia (hypotonic activity) 315
 - Effects on the mother and fetus 315
 - Incoordinate uterine action 315
 - Constriction ring 315
 - General tonic contraction (Syn: uterine tetany) 316
 - Precipitate labour 316
 - Tonic uterine contraction and retraction 317
- Amniotic fluid embolism (AFE) 318
 - What causes AFE? 318
- Blood coagulation disorders 320
 - Disorders of blood coagulation and fibrinolysis in obstetrics 320
 - Fibrinolysis 321
 - Effect of pregnancy on blood coagulation and fibrinolysis systems 321
 - etiology 322
 - Tests for coagulation failure 323
 - Treatment 323

- Idiopathic thrombocytopenic purpura in pregnancy 323
- Foetal distress 324
 - Diagnosis 324
- Shock in obstetrics 325
 - Primary or initial shock 325
 - Secondary or true shock 325
 - Compensated (reversible) shock 326
 - Progressive decompensated shock 326
 - Decompensated (irreversible) shock 327
 - General changes in shock (with special reference to hypovolaemic shock) 327
- Haemorrhagic shock 328
- Endotoxic shock 330
- Neurogenic shock 332
- Contracted pelvis 333
 - Rachitic flat pelvis 333
 - Osteomalacic pelvis 333
 - Asymmetrical or obliquely contracted pelvis 333
- Mechanism of labour in contracted pelvis with vertex presentation 334
 - Flat pelvis 334
 - Diagnosis of contracted pelvis 335
 - Disproportion 336
 - Effects of contracted pelvis on pregnancy and labour 337
 - Management of contracted pelvis (inlet contraction) 338
 - Trial labour 338
- Rupture of the uterus 339
 - Spontaneous 339
 - Scar rupture 339
 - Iatrogenic or traumatic 340
 - Prophylaxis 342
 - Laparotomy 342
- Cervical dystocia 342
- Disseminated intravascular coagulation (DIC) in obstetrics 343
 - Definition of DIC (minimal acceptable criteria) 343
 - Chronic DIC 344
 - Acute DIC 344
- HELLP syndrome 346
- Postpartum haemorrhage 347
- Predisposing factors 348
- Placenta accreta 353
 - Clinical picture 354
 - Velamentous insertion of the umbilical cord 356

12. Obstetric Interventions and Operations

357

- Outline 357
- Dilatation and evacuation 357





- One stage operation 357
- Two stage operation 358
- Dangers of D and E operation 359
- Hysterotomy 360
- Version 361
 - External cephalic version 361
 - Actual steps 362
 - Internal version 363
- Episiotomy 363
 - Steps of mediolateral episiotomy 364
 - Postoperative care 365
- Forceps 365
 - Long curved obstetric forceps 366
 - Short curved obstetric forceps 367
 - Kielland's forceps 367
- Ventouse 369
- Caesarean section 371
 - Lower segment caesarean section (LSCS) 373
 - Aftercare 374
 - Classical caesarean section 375
 - Maternal and perinatal mortality 376
 - Symphysiotomy 378
- Destructive operations 378
 - Craniotomy 378
 - Procedures 378
 - Actual steps 378
 - Decapitation 379
 - Procedures 379
 - Actual steps 379
 - Evisceration 380
 - Cleidotomy 380

13. Abnormal Puerperium 382

- Outline 382
- Puerperal pyrexia 382
 - Definition 382
 - Puerperal sepsis (Syn: puerperal infection) 382
 - Local infection 383
 - Uterine infection 383
 - Spreading infection 383
 - Investigation of puerperal pyrexia 383
 - Prophylaxis 384
 - Treatment 385
 - Subinvolution 385
- Urinary complications in puerperium 386
- Breast complications 387
 - Breast engorgement 387
 - Cracked and retracted nipple 387
 - Acute mastitis 388
 - Breast abscess 389
 - Failing lactation 389
- Puerperal venous thrombosis and pulmonary embolism 389

- Superficial vein thrombosis 390
- Deep vein thrombosis 390
- Nonsuppurative thrombophlebitis 391
- Suppurative thrombophlebitis 391
- Pulmonary embolism 392
- Psychiatric illness in pregnancy 392
 1. Postnatal 'blues' 392
 2. Postnatal depression 393
 3. Severe depressive illness 394
 4. Puerperal psychosis 395

14. The Newborn Infant 397

- Outline 397
- Care and examination of the newborn 397
 - General appearance 397
 - Assessment of physical characteristics 398
- Minor ailments of newborn 401
- Preterm baby 402
 - Definition 402
 - Incidence 402
 - Features of preterm baby 402
 - Care of the preterm neonate 404
 - Kangaroo care for preterm infants 406
- Intrauterine growth restriction (IUGR) 407
- Problems of the newborn 410
 - Asphyxia neonatorum 410
 - Birth trauma 411
 - Degrees of asphyxia 411
 - External cardiac massage 414
 - Birth injuries 414
 - Injuries of head 414
 - Cephalhaematoma 414
 - Subaponeurotic haemorrhage 415
 - Scalp injuries 416
 - Fracture skull 416
 - Intracranial haemorrhage 416
 - Traumatic 416
 - Anoxic 416
 - Other injuries 417
 - Antenatal period 419
 - Normal delivery 419
 - Jaundice in newborn 420
 - Physiological jaundice in newborn and jaundice in prematurity 421
 - Hyperbilirubinaemia 421
 - Hydrops foetalis is oedematous stillborn baby 422
 - Alimentary disorders 422
 - Persistent mild diarrhoea 424
 - Vomiting 424
 - Convulsions (seizure) in newborn 424
 - Haemorrhagic disease in newborn 425





15. Pharmacology and Child Birth

427

- Outline 427
- Analgesics and antispasmodics in pregnancy and labour 427
 - General aches, pain and discomfort 427
 - Analgesics for pain relief during labour 428
- Drugs used in pregnancy, labour and puerperium 428
- Antiemetics in pregnancy 428
- Steroids during pregnancy 428
- Systemic steroids in clinical use 429
- Drugs in asthma (during pregnancy) 429
- Diuretics 431
- Anticonvulsants 432
- Tocolytics in obstetrics for the next 12 to 48 hours, at the end of which the therapy can be switched over to oral medication 432
- Oxytocics in obstetrics 433
- Oxytocin 434
- Controlled intravenous infusion 435
- Intramuscular 437
- Oxytocin challenge test (OCT) 438
- Oxytocin sensitivity test (OST) 438
- Ergot derivatives 439
- Prostaglandins (PGs) 440
- Oxytocic effect 440

16. Home Birth

443

- Legal issues 443
- Advantages of home based antenatal care 444
- Preparation for birth 444
- Management of labour 445
- Preparation before confinement for baby and mother 445
- Requirements of baby 445
- Preparation for confinement 445
- Preparation and procedures for home birth 446
- Postnatal visit 447

17. Complimentary and Alternative Therapies

449

- Complementary and alternative therapies 449
 - Historical context of complementary and alternative therapies 449
 - Nursing acceptance of complementary and alternative therapies modalities 450

- Selected complementary and alternative therapies 450
- Acupressure 450
- Acupuncture 451
- Aromatherapy 452
- Biofeedback 452
- Hypnosis 453
- Transcutaneous electrical nerve stimulation (TENS) 454
- Visualization and guided imagery 455
- Expressive therapy/Sound therapy 456
- Hydrotherapy 456
- Homeopathy 457
- Massage/Touch therapy 457
- Reflexology 458
- Yoga 459

18. Contraception

460

- Contraceptive methods 460
 - Physical methods 460
 - Chemical methods 461
 - Intrauterine devices (IUD) 461
 - Description of the devices 461
 - Multiload Cu 250 464
 - Hormonal Steroidal contraceptives 466
 - Combined oral contraceptives (pills) 466
 - How to prescribe a pill 467
 - Indications for withdrawal 468
 - Triphasic formulations of combined oral pills 469
 - Progestin only pill (mini pill) 470
 - Emergency contraception (Syn: post-coital contraception) 470
 - Hormones 471
 - Injectable steroids 471
 - Implant 472
 - Post-conceptual methods (termination of pregnancy) 472
 - Menstrual induction 472
 - Abortion 473
 - Miscellaneous 473
 - Coitus interruptus 473
 - Safe period (rhythm method) 473
 - Natural family planning methods 474
 - Basal body temperature (BBT) method 474
 - Cervical mucus method 474
 - Breastfeeding 474
 - Terminal methods or sterilization 474
 - Vasectomy 474
 - Technique 475
 - Female sterilization 476
 - Tubectomy 476
 - Conventional (laparotomy) 476





19. Instruments in Obstetrics and Gynaecology 481

- Outline 481
- Instruments used for the examination of a gynaecological and obstetric patient 481
 - Sims double bladed posterior vaginal speculum 481
 - Cusco's bivalved self-retaining speculum 482
 - Auvard's vaginal speculum 482
 - Sim's anterior vaginal wall retractor 483
 - Teale's vulsellum 483
 - Simpson's uterine sound 484
 - Pinard's stethoscope 484
 - Bouldeloque's pelvimeter 484
- Instruments used in dilatation, curettage and evacuation operation 485
 - Hegar's dilators 485
 - Blakes' blunt and sharp uterine curette 486
 - Laminaria tent 487
 - Laminaria tent introducing forceps 487
 - Haywood Smith's ovum forceps 487
- Instruments used for destructive operations 488
 - Simpson's modification of Oldham's perforator 488
 - Drew Smythe's catheter 489
 - Flushing curette 489
 - Two-bladed Braxton-Hick's cranio clast 489
 - Willet's scalp traction forceps 489
 - Ramsbotham's decapitation saw 490
 - Blond-hiedler's decapitation saw wire with thimble 490
 - Breech hook with crochet 491
- Specialized gynaecological instruments 491
 - Uterine dressing forceps 491
 - Uterus packing forceps 491
 - Cervical punch biopsy forceps 492
 - Shirodkar's cervical encirclage needles 493
 - Green Armytage clamp 493
 - Wertheim's vaginal clamp 494
- Common surgical instruments 494
 - Kocher's haemostatic clamp 494
 - Artery forceps 494
 - Needle holder 495
 - Allis's tissue holding forceps 495
 - Lanes's tissue holding forceps 495
 - Babcock's tissue holding forceps 496
- Scissors 496
 - Episiotomy scissors 496
 - Ramplsey's sponge holding forceps 496

20. Gynaecological Disorders in Pregnancy 497

- Outline 497
- Uterine Displacements 497
- Retroversion 499
 - Retroverted gravid uterus 500
- Genital prolapse in pregnancy 502
- Uterine fibroid in pregnancy 502
- Carcinoma of cervix in pregnancy 504
- Ovarian tumours in pregnancy 504

21. Social and Preventive Obstetrics 506

- Outline 506
- Family welfare programme in India 506
 - RCH interventions 507
 - Maternal mortality and morbidity and perinatal mortality 508
 - Sudden collapse following child birth or abortion 509
 - Factors influencing maternal mortality 509
 - Maternal morbidity 510
 - Perinatal mortality 511
- Infertility and assisted reproductive technology 512
 - Diagnostic evaluation of infertility 515
 - Management of infertility 518
 - Alternatives to child birth 521
- Legal aspects in obstetrics 522
 - Current legal controversies in obstetrical nursing 523
 - The central births and death registration act, 1969 523
 - Nurse practice acts 523
 - Standard of care 524
 - Agency policies 524
- Menopause 527
 - Advantages and disadvantages of oral and transdermal route of oestrogen 531
 - Smoking 533

<i>References</i>	537
<i>Bibliography</i>	537
<i>Journals</i>	537
<i>Index</i>	539

