Pelvis

Pelvic Viscera and Perineum of Female
Midsagittal Section

Pelvic Viscera and Perineum of Male
Paramedian Sagittal Section
Pelvic Contents of Female
Superior View

Pelvic Contents of Male
Superior View
Pelvis

- Bones
- Ligaments
- Muscles
Bony Pelvis

Components
4 bones
• 2 hip bone
• 1 sacrum
• 1 coccyx

4 joints
• 2 sacro-iliac (Plane Synovial)
• Symphysis pubis (Sec. Cart.)
• Sacro-coccygeal (Sec. Cart.)
Walls of Pelvis

Bones and Ligaments of Pelvis
Anterior View

Bones and Ligaments of Pelvis
Posterior View
Gateway of Pelvis

4 gateways – besides pelvic outlet
1. Below Inguinal Ligament
2. Obturator foramen
3. Greater sciatic Foramen
4. Lesser sciatic foramen
Anatomical Position

- Both ASIS & upper end of symphysis pubis should lie in same coronal plane
- Pelvic surface of body of pubis directed more upward than backward
- Sacral canal facing upward
Anatomical Position

- Tip of coccyx should correspond with upper margin of symphysis pubis
- Pelvic surface of sacro-cccygeal curve faces more downward than backward
Anatomical Position

• Angle of pelvic inlet – 50 – 60° with horizontal
• Angle of pelvic outlet – 15° with horizontal
Pelvic inlet

Plane of pelvic inlet
Pelvic Brim
Superior pelvic Aperture
Slopes obliquely
downward & forward
  • Sacral promontary
  • upper margin of symphysis pubis
Pelvic Brim

Components

• Sacral Promontory
• Ala of Sacrum (ant. Margin)
• Lineae terminalis
  ➢ Arcuate line (ilium)
  ➢ Iliopubic eminence
  ➢ Pecten pubis
  ➢ Pubic crest
Bony Pelvis

Superior pelvic aperture
Divides into

- Upper wider greater part (false pelvis)
- Lower narrower part (Lesser or true pelvis)
Greater Pelvis

- Upper wider part (false pelvis)
- Lie above & in front of pelvic inlet
- No bony walls anteriorly
- (belong to abdomen proper)

Contribution
- Iliac fossa of hip bone
- Ala of sacrum

In females
- Iliac blades are more vertical
- Ant. Sup iliac spine are projected outward
Lesser or true Pelvis

Features

• Pelvic Inlet
• Pelvic Cavity
• Pelvic Outlet

Each can be measured by three dimensions

• Antero - posterior
• Transverse diameter
• Oblique diameter
Shape - Inlet

- Heart shaped in males (widest towards back)
- Transversely oval in females
- At birth pelvis of both sexes is ovoid
Classification of Pelvis

• Acc. to shape of inlet – conventional method used by Obstetrician

• Acc. To measurements of inlet – method used by Anthropologists
Classification of Pelvis

Acc. to shape

- **Gynaecoid** - Rounded shape, Tr dia widest
- **Android** – heart shaped, inlet more wide in Post. segment
- **Anthropoid** – Oval, AP dia. More than Tr. Dia
- **Platypaloid** – Flat pelvis, Tr. Dia disproportionately wider than AP dia.

- **Anthropoid** & **Android** common in males
- **Android** & **Gynaecoid** common in females
- **Platypelloid** - rare
Classification of Pelvis

Anteropost. Dia / Tr. Dia. X 100

- **Pletypellic** (transversely flat) - pletypelloid
- **Mesatipellic** (intermediate) - Gynaecoid
- **Dolichopellic** (antero-posteriorly long) – Anthropoid
- **Brachypellic** – Android
Pelvic inlet

- **Antero-post. Diameter** (Anatomical conjugate)
- Middle of sacral promontary – upper margin of symphysis pubis
- **Males** - 10 cm
- **Females** – 10.5 – 11 cms
Pelvic inlet

Transverse diameter
- Widest measurement across inlet
- Males – 12.5 cms
- Females – 13 cms
Pelvic inlet

Oblique diameter

- Sacro-iliac joint of one side to ilio-pubic eminence of other
  - Males – 11 cms
  - Females – 12.5 cms
• True Conjugate
• Obstetrical conjugate
• Diagonal conjugate
• External conjugate
Pelvic cavity Dimensions

- **Antero-post.** - middle of back of symphysis pubis – centre of pelvic surface of S3
- Female – 13 cms
- **Oblique diameter** - lower end of sacro-iliac joint to centre of obturator membrane – 13.1 cms
- **Transverse diameter** – widest transverse distance – 12.5 cms
Pelvic outlet

- Inferior pelvic aperture
- Diamond shaped

Boundaries

Front- lower margin of symphysis pubis

Behind – tip of coccyx

Antero-laterally- conjoint ischio-pubic rami

Laterally – ischial tuberosities

Postero- laterally – sacrotuberous ligament
Pelvic outlet dimensions

- AP – lower border of symphysis pubis – tip of coccyx
  - Male: 8 cms
  - Females: 12.5 cms
- Oblique dia.– junction of ischio-pubic ramus of one side to middle of sacro-tuberous ligament
  - Males: 10 cms
  - Females: 11.8 cms
- Transverse Dia. – distance b/w medial surface of two ends of ischial tuberosities
  - Males: 8.5 cms
  - Female: 11.8 cms
Female Pelvis

- Wider, Shorter, Shallower
- For accommodation of foetal head & parturation
- Tr. Dia of inlet, Oblique dia of cavity & Ap dia of outlet are maximum
Sexual Difference

Male Pelvis
Measurements - Anterior View

Female Pelvis
Measurements - Anterior View
Sexual Differences

FEMALE
- Pelvic Inlet
- Pelvic Outlet
- Pelvic Cavity
- Pubic Arch

MALE
Contents of Pelvic Cavity

Pelvic Viscera and Perineum of Female
Midsagittal Section

Pelvic Viscera and Perineum of Male
Midsagittal Section
Axis of pelvic Cavity

Promontory

Inlet

Axis of inlet

Axis of outlet

Symphysis pubis

Outlet

50-60°

Horizontal plane

15°

90°

170°