Clinical Pelvimetry

Naval Hospital Camp Pendleton

Bony Anatomy

- Innominate bones (2)
  - Ilium - posterior and upper
    - SI joints, Sacrosciatic notch
  - Ischium - medial and lower
    - sidewalls, spines, tuberosities
  - Pubis - anterior
    - pubic arch, symphysis pubis

Bony Anatomy

- Sacrum - posterior pelvis
  - fusion of 5 vertebrae
  - sacral promontory, sacrosciatic notch, sacrosciatic ligaments
- Coccyx - fusion of 3 to 5 vertebrae
  - usually mobile

True Pelvis

- Superior borders are sacral promontory, linea terminalis, upper pubic bones
- Inferior borders are inferior ischial tuberosities and tip of coccyx
- Posterior borders are anterior sacrum and coccyx

Bony Anatomy

- Anterior borders are posterior symphysis, pubic bones, and ascending rami
- Lateral borders are inner ischial bones and sacrosciatic notch

Plane of pelvic inlet

- AP diameters are of significance
- Obstetric conjugate is smallest AP diameter, minimum adequate measurement = 10cm
- Diagonal conjugate is only clinically measurable AP diameter; subtract 1.5cm to get Obstetric conjugate

Midplane of pelvis

- Plane of least dimensions in pelvis
- Interspinous (bispinous) diameter is important transverse measure, minimum adequate = 10cm
- a contracted midplane may mean a contracted outlet
- not clinically measurable but can estimate by other features

Pelvic outlet

- Plane of outlet - transverse diameter between inner aspect of lowest portion of ischial tuberosities should measure 10cm
- AP diameter from inferior symphysis to sacral tip should be 11.5cm

Other Pelvic Anatomy

- Inclination of symphysis
- Angle of pubic arch
- Forepelvis
- Angle of sidewalls
- Sacrosciatic notch

Pelvic Types

- Often mixed rather than pure
- Outlet characteristics determine features
- Based on Caldwell/Moloy classification

Gynecoid Pelvis

- Incidence 50%, good prognosis, round inlet (female)
- OA delivery common
- Roomy posterior, rounded forepelvis, deeply curved sacrum, parallel sidewalls, wide sacrosciatic notch, non-prominent spines

Anthropoid Pelvis

- Incidence 25%, oval inlet, good prognosis (ape-like)
- Often OP delivery
- Sacrum inclined backward and long/narrow, straight sidewalls, variable spines, wide sacrosciatic notch, normal or slightly narrow pubic arch

Android Pelvis

- Incidence 20%, heart shaped inlet, poor prognosis (male)
- deep transverse or OP arrest common
- flat, long, narrow, heavy, forward-inclined sacrum; convergent sidewalls, prominent spines, narrow sacrosciatic notch, narrow pubic arch

Platypelloid Pelvis

- Incidence 5%, transverse oval inlet, poor prognosis
- Often delay at inlet with arrest in active phase
- wide, deeply curved sacrum; parallel sidewalls, variable spines, short sacrosciatic notch, very wide pubic arch

Documentation

- Use SF 533 (reverse)
- Pubic arch, bispinous (BI) diameter, fore pelvis, spines, sacrosciatic notch, sidewalls, diagonal conjugate, sacrum, coccyx, posterior saggital

X-ray Pelvimetry

- Not frequently used, but plays a role in management of some patients (i.e., breech)
- Risk of child malignancy 1/5000 exposed infants (but less than PNM in CPD cases)
- Results often not used to guide clinical management
- CT reduces fetal rad exposure