

Male reproductive system

Testis

- Primordial germ cells- wall of yolk sac
- Germinal epithelium of Genital ridge – intermediate mesoderm
- Seminiferous tubules –
 - i) Sperm forming cells- primordial germ cells
 - ii) Supporting cells (of Sertoli)-germinal epithelium
- Interstitial cells of Leydig - surrounding mesenchyme
- Tunica albuginia fibrous tissue (mesodermal)

Male reproductive system

- Epididymis
- Ductus deferens
- Seminal vesicles
- Ejaculatory ducts
- Prostate

Mesonephric
duct

Female reproductive system

Ovary

Develops from **germinal epithelium of gonadal ridge** (**intermediate mesoderm**)

Primordial germ cell from yolk sac

Follicular cells (sex cords) from surrounding mesoderm

Interstitial gland cells from mesenchyme

Female reproductive system

Fallopian tubes

- Cranial vertical (unfused) part of **paramesonephric ducts**

Uterus

- Epithelium – Middle horizontal and caudal vertical (fused) parts of **paramesonephric ducts**
(utero vaginal canal)
- Myometrium – surrounding **mesoderm**

Vagina

- Upper part from caudal part of **uterovaginal canal**
(mesoderm)
- Lower part from sino-vaginal bulbs (**endoderm**)

Remnants of ducts (Vestigial organs)

Mesonephric duct

- *Males:*
 - Appendix of epididymis
 - Superior aberrant ductules
 - Inferior aberrant ductules
 - Paradidymis
- *Females:*
 - Epoophoron
 - Gartner's duct
 - Paraoophoron

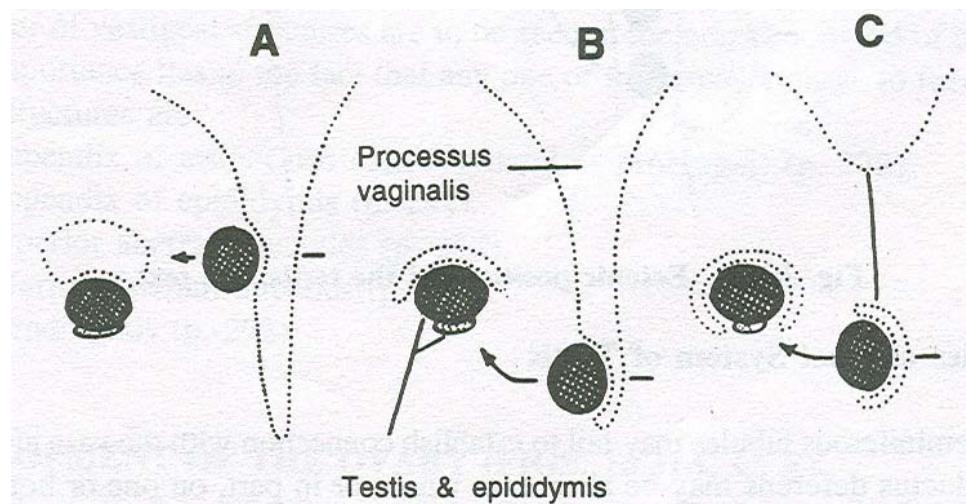
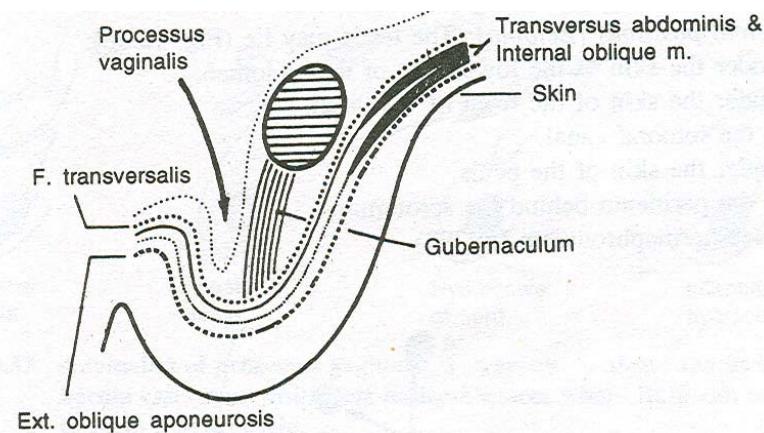
Paramesonephric duct

- *Males:*
 - Appendix of testis
 - Prostatic utricle

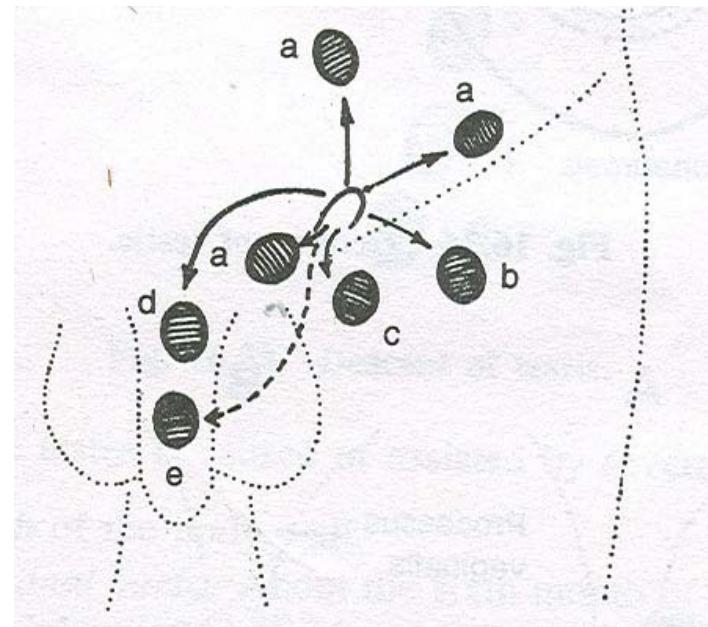
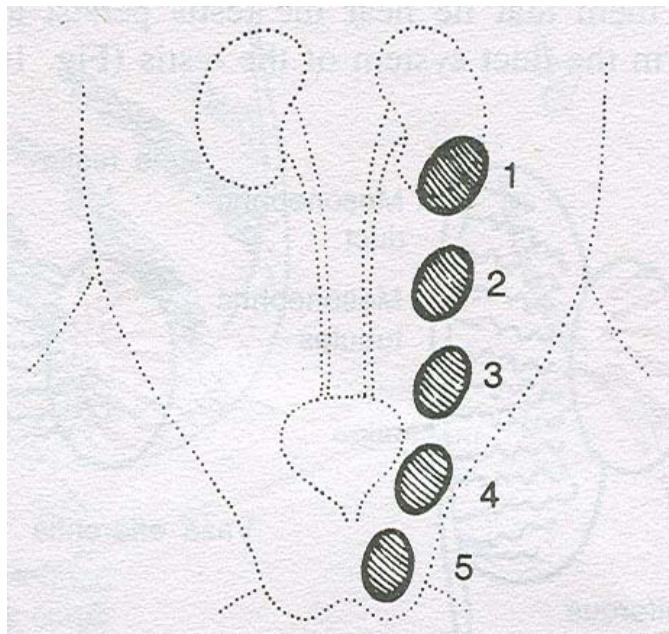
Descent of testis

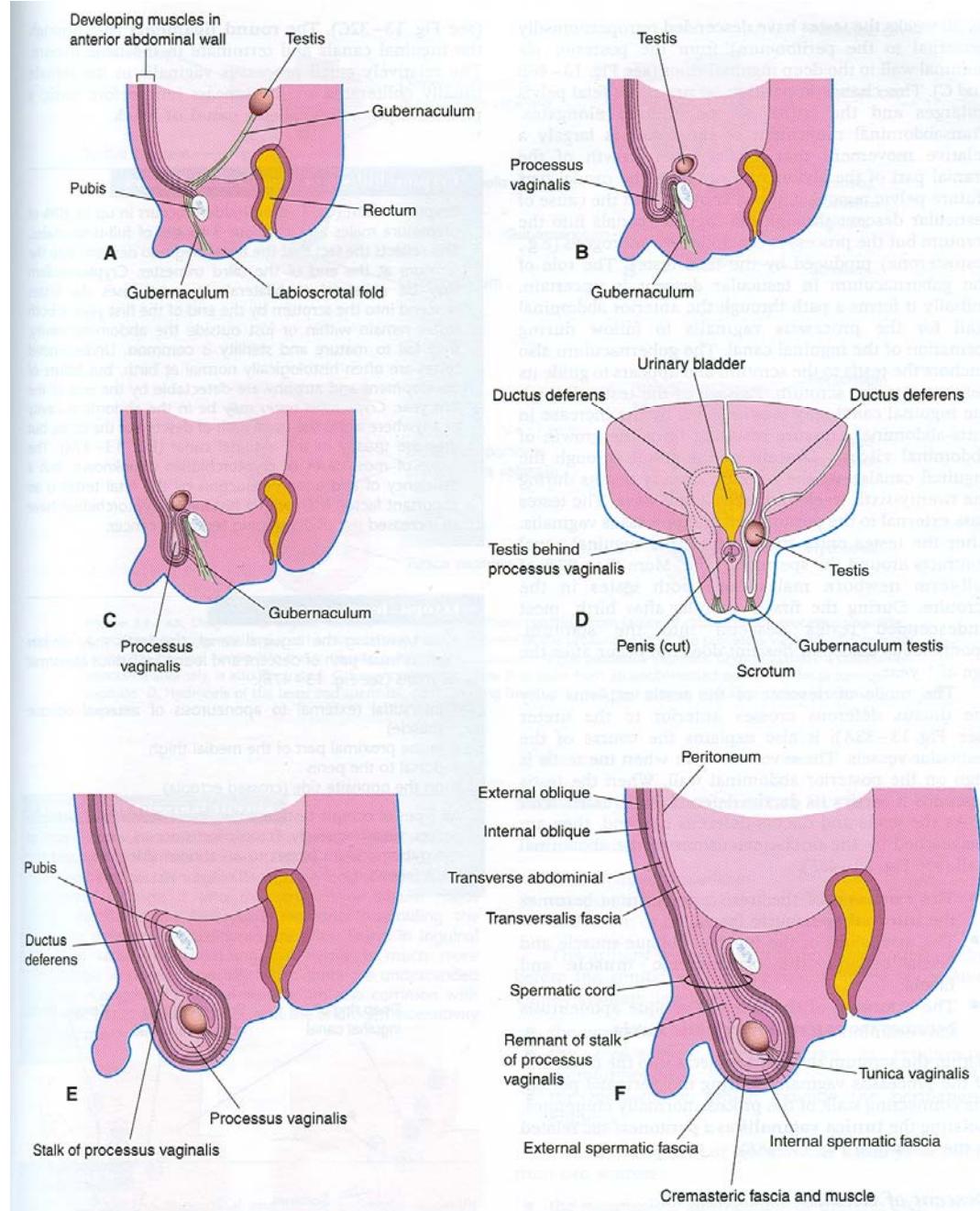
Caused by:

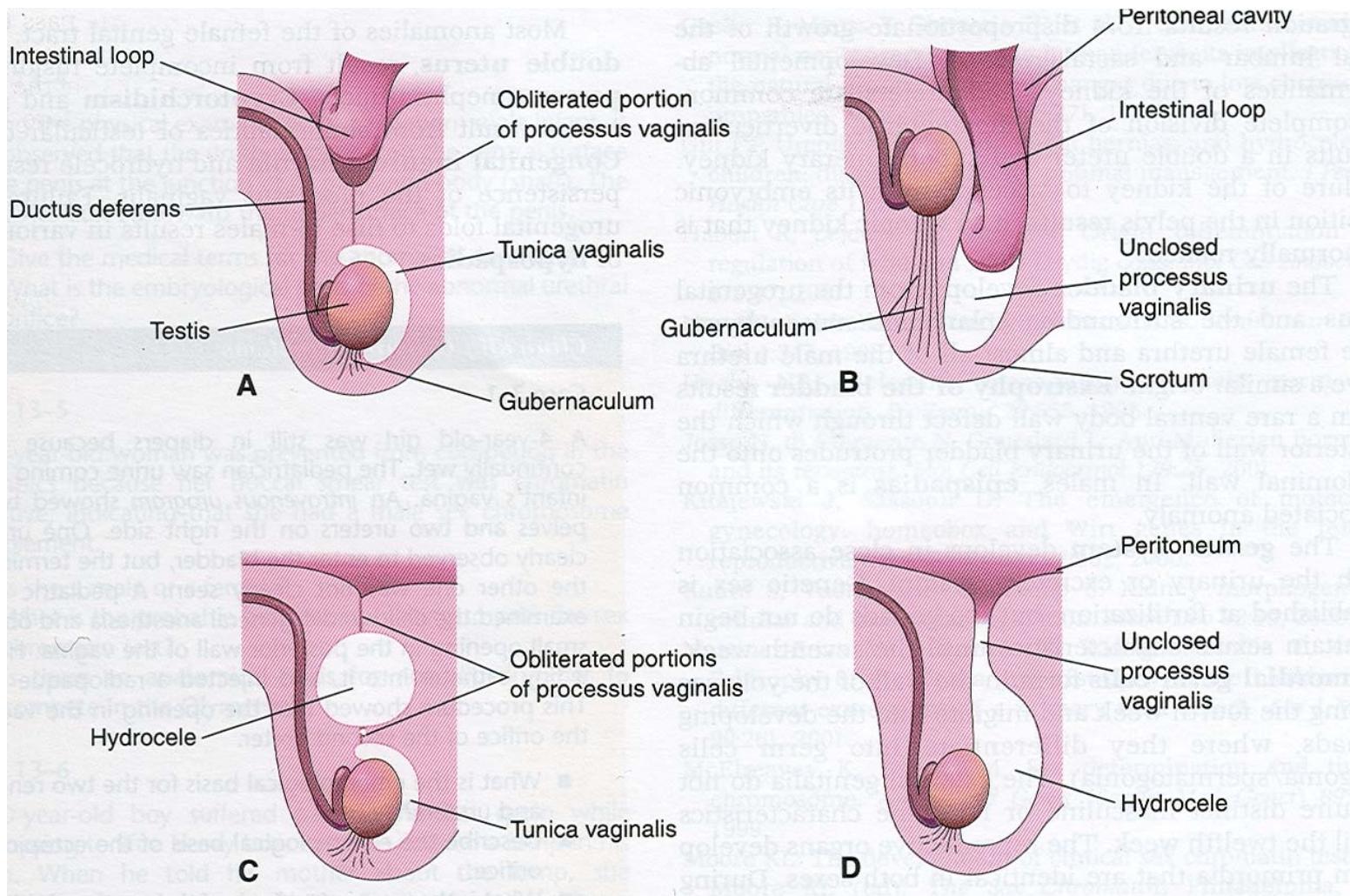
1. Differential growth of body wall
2. Formation of inguinal bursa
3. Gubernaculum
4. Processus vaginalis
5. Hormones

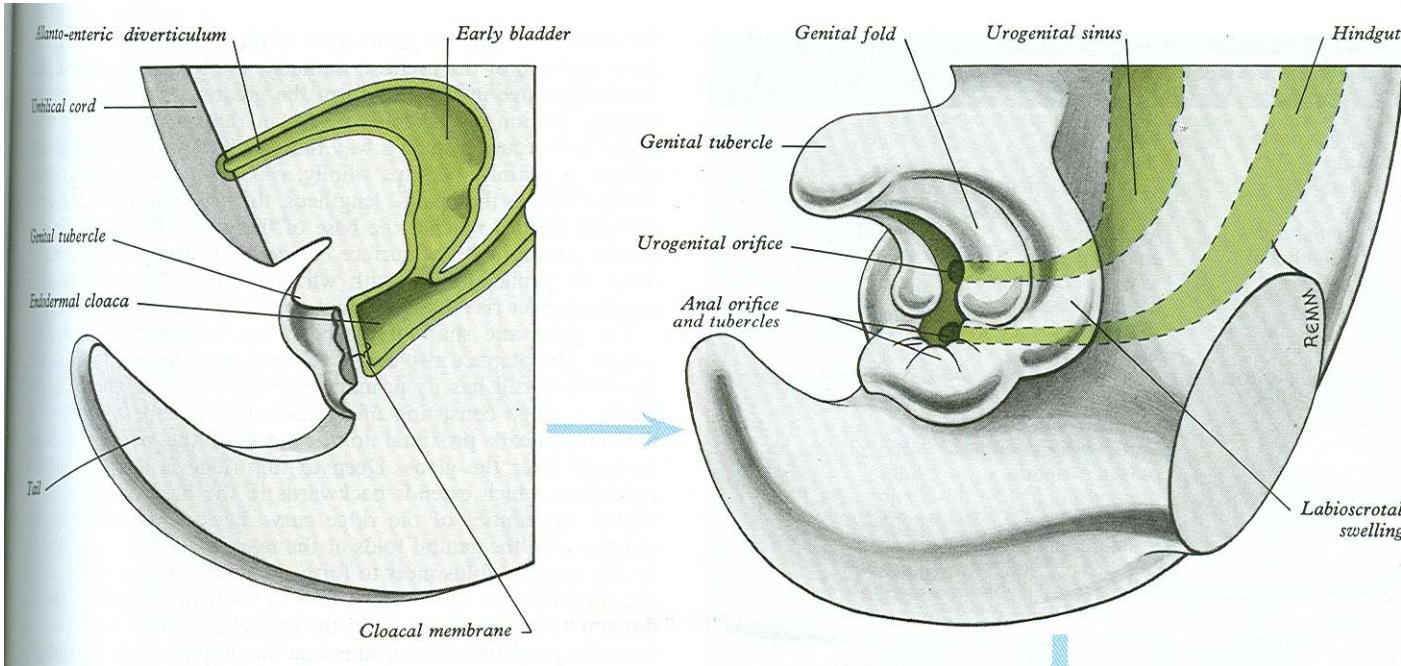


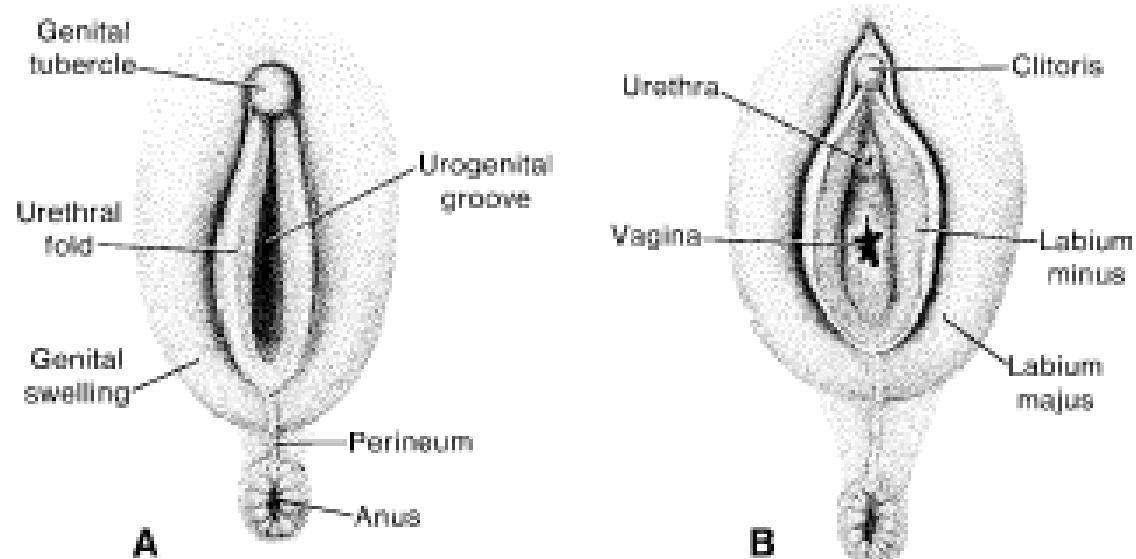
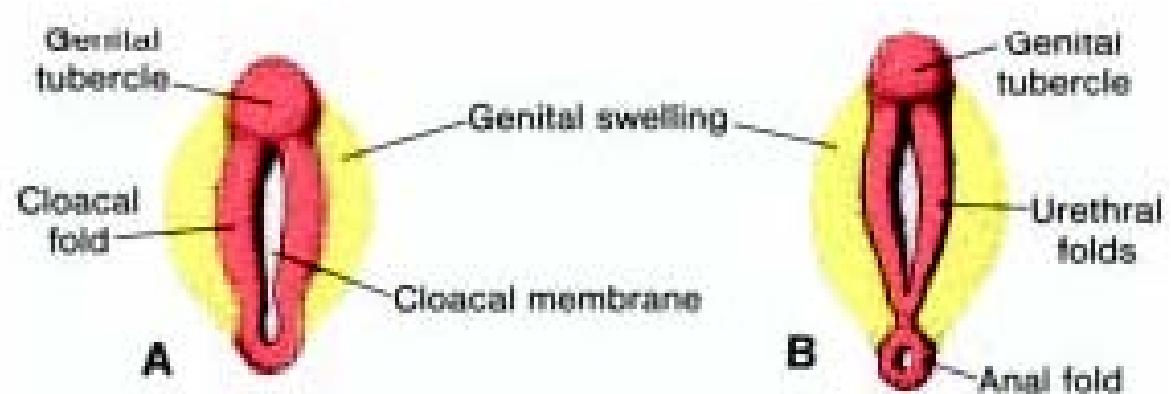
Ectopic testis

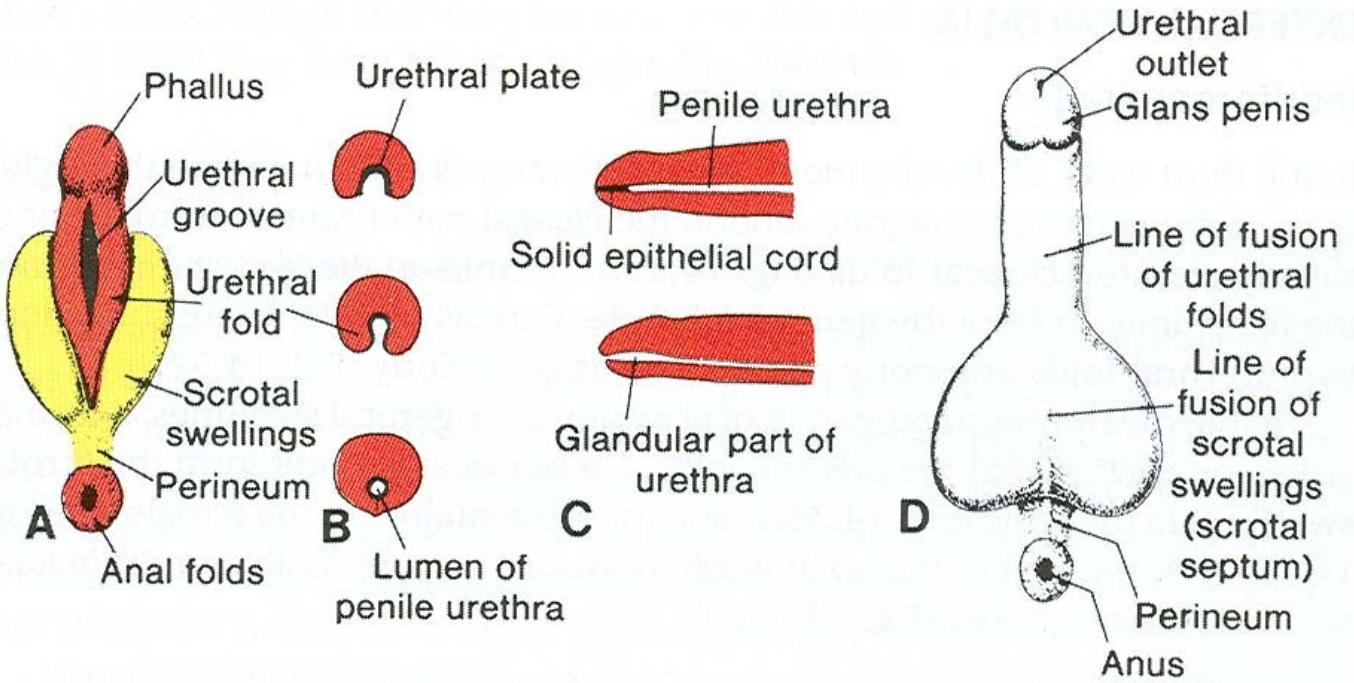


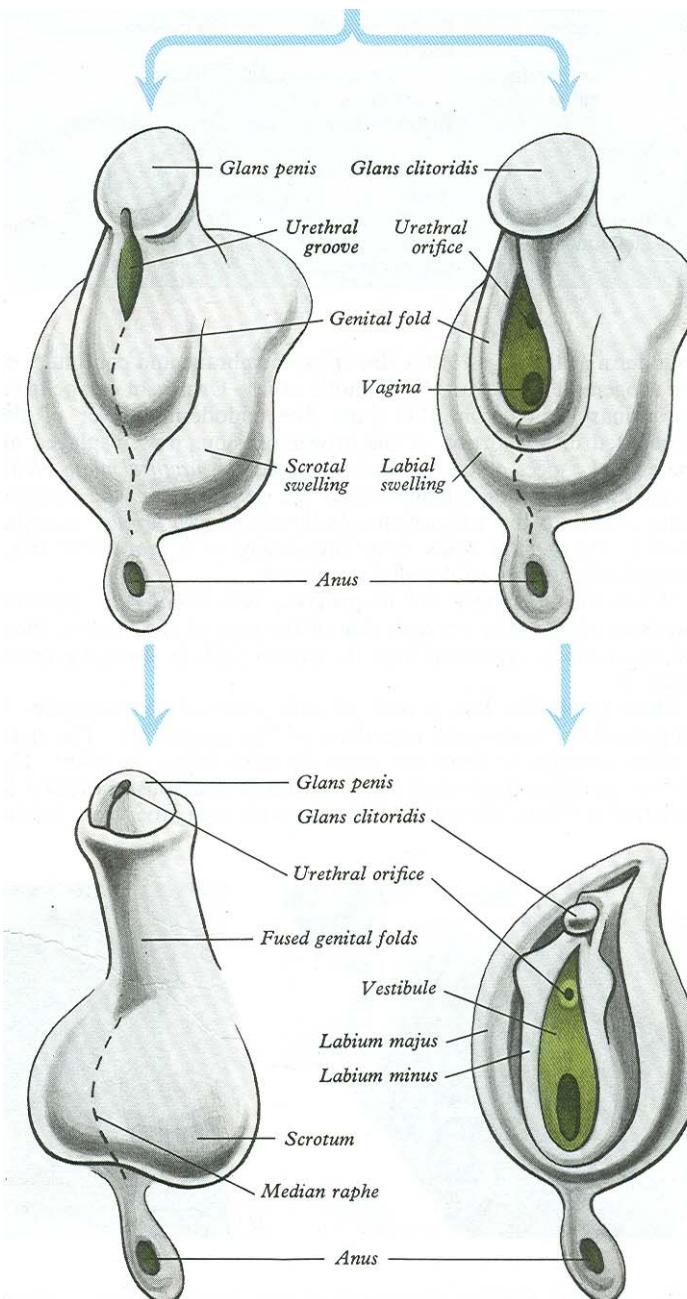


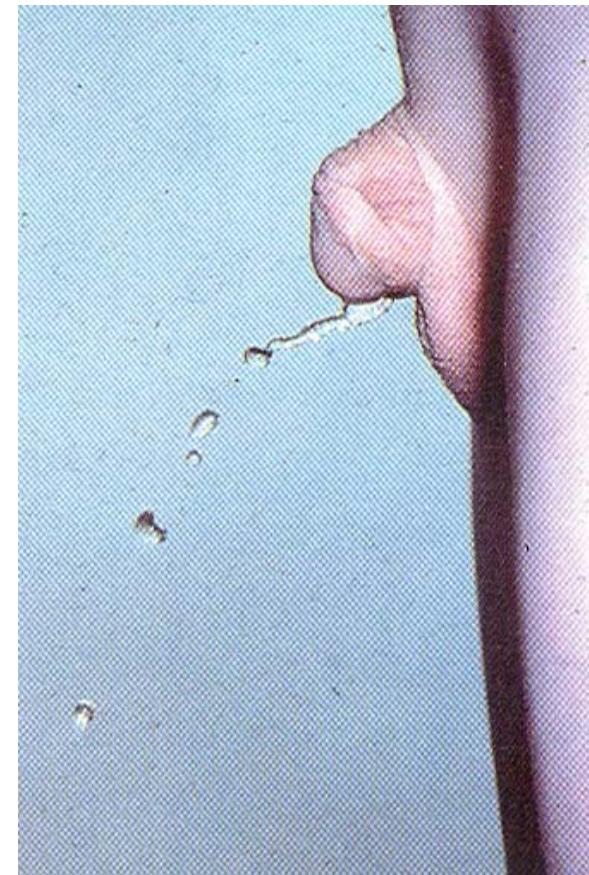
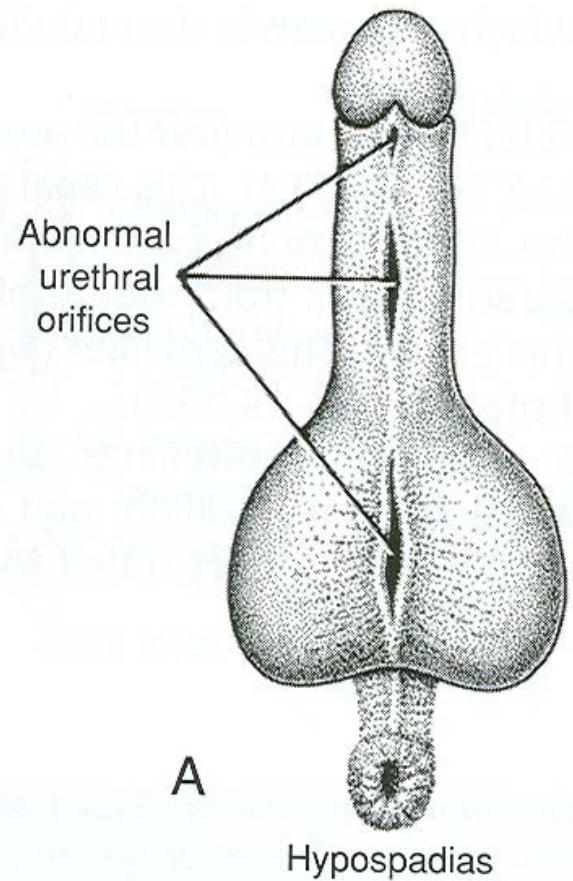




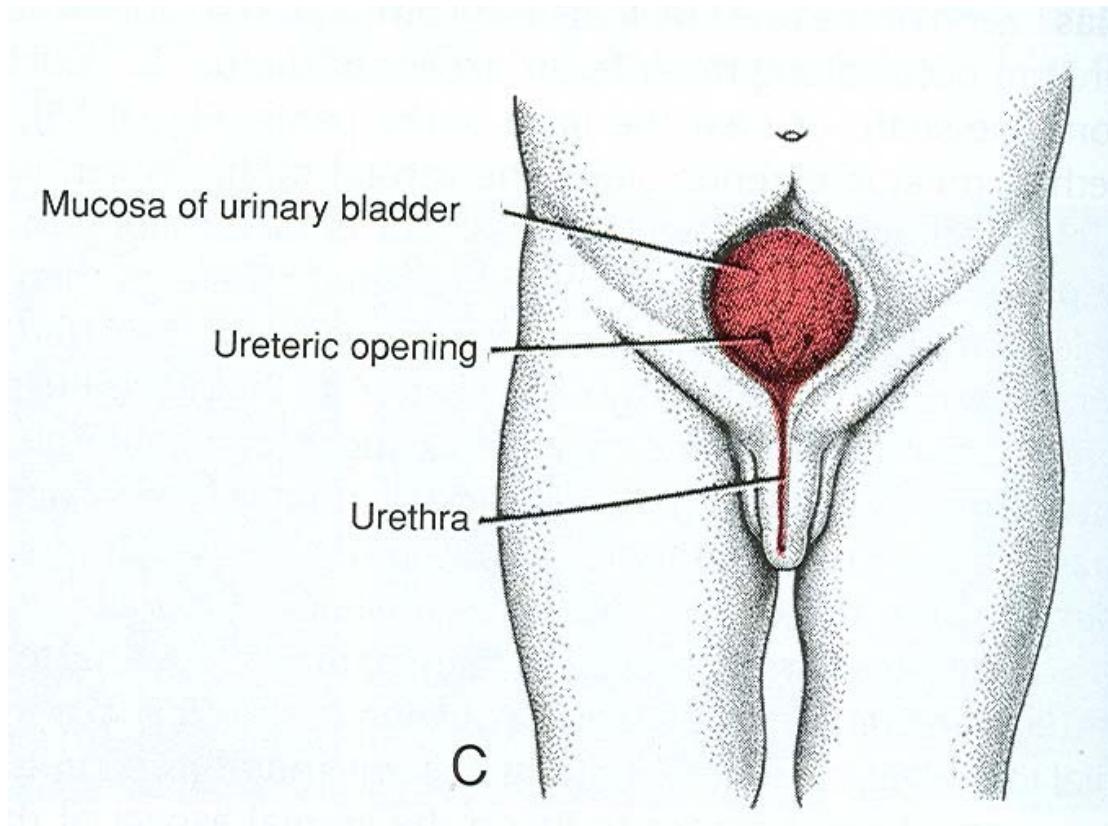








Hypospadias



Ectopia vesicae with epispadias

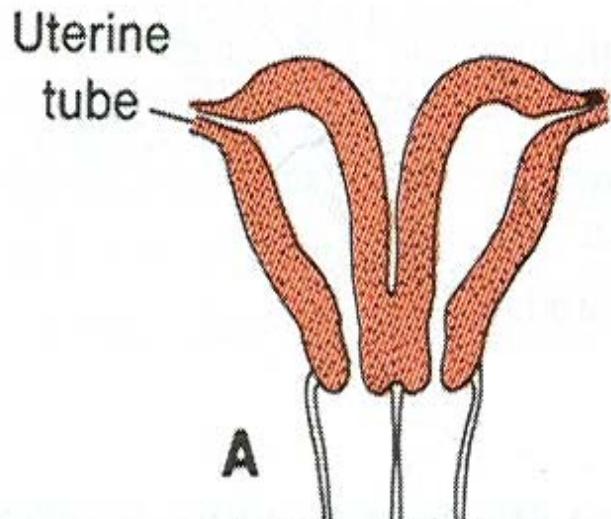


Cryptorchidism (undescended testes)

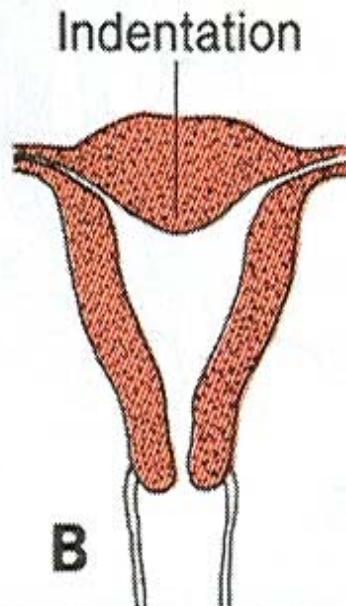
Congenital Anomalies

Male genital system

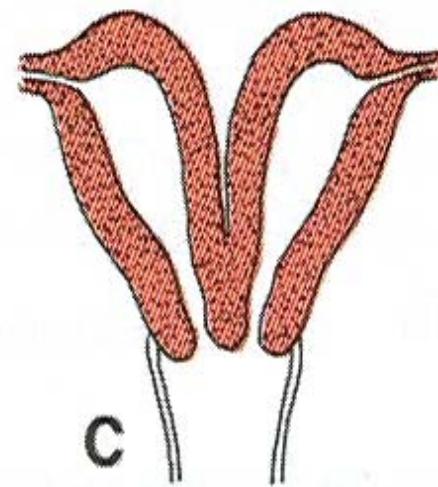
- **Hypospadias**
- **Epispadias**
- **Phimosis**
- **Cryptorchidism (undescended testis)**
- **Ectopic testis**
- **Persistent processus vaginalis (cong. inguinal hernia)**
- **Hydrocoele**
- **Absent scrotum**



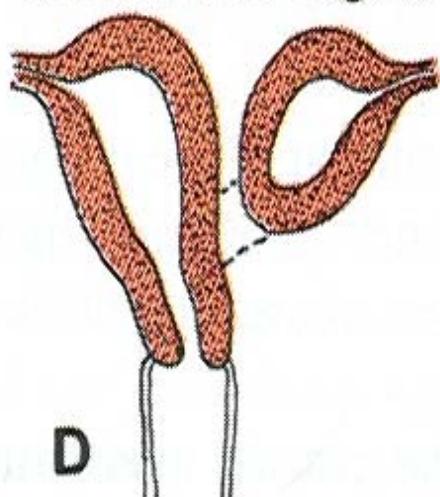
A
Uterus didelphys
with double vagina



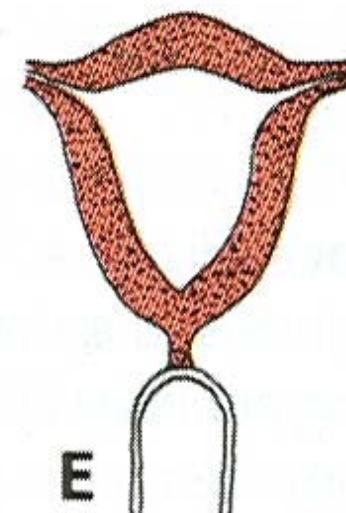
B
Uterus arcuatus



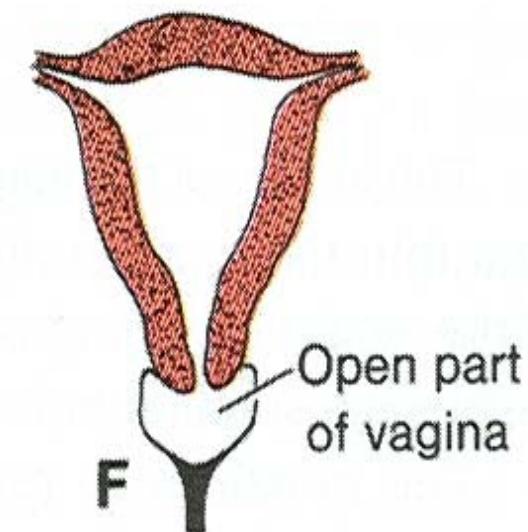
C
Uterus bicornis



D
Uterus bicornis unicollis
1 rudimentary horn



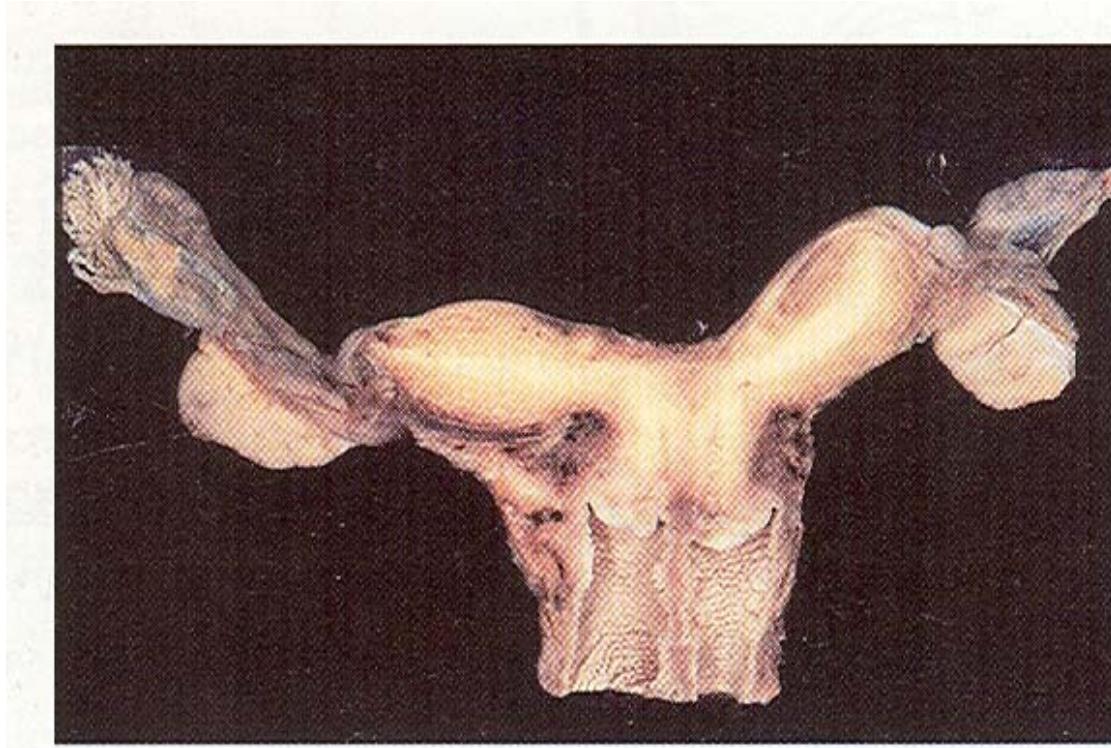
E
Atresia of cervix



F
Atresia of vagina

Indentation

Open part
of vagina



Uterus didelphys

Congenital Anomalies

Female genital system

- Uterus didelphys
- Uni/ Bicornuate uterus
- Atresia of lumen of uterus/tubes/cervix/vagina
- Arcuate uterus
- Septate uterus
- Septate vagina
- Recto-vaginal fistula

Male	Embryonic Structure	Female
Testis	Indifferent Gonads	Ovary
Gubernaculum Testis	Gubernaculum	Ovarian Ligament Round ligament of uterus
Efferent ductules -Paradidymis -App. of epididymis	Mesonephric tubules	Epoophoron Paraoophoron
Ureter, Pelvis, calyces and collecting tubules Trigone of urinary bladder Epididymis, ductus deferens, seminal vesicles, ejaculatory duct	Mesonephric duct	Ureter, Pelvis, calyces and collecting tubules Trigone of urinary bladder Gartner's Duct
Appendix of testis Prostatic utricle	Paramesonephric duct	Fallopian tubes Uterus Part of vagina

Male	Embryonic Structure	Female
Urinary bladder Urethra (Prostatic and membranous parts) Prostate gland Bulbourethral glands	Urogenital sinus	Urinary bladder Urethra Part of vagina Urethral and paraurethral glands
Penis Glans Penis Corpora cavernosa Corpus spongiosum	Phallic Part of UGS	Clitoris Bulb of vestibule
Ventral aspect of penis	Urogenital Folds	Labia Minora
Scrotum	Labio – Scrotal swellings	Labia Majora