DEVELOPMENT OF THE GENITAL SYSTEM 2



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DEVELOPMENT OF MESONEPHRIC TUBULES & DUCTS

IN MALES

*‡***- The m<u>esonephric tubules</u>**

degenerate except middle ones that related to testis to form efferent ductules*

Sperms 11/2

that connect rete testis with mesonephric duct.

- تكمل حسار بروج ال The mesonephric duct sperm المنام -Immediately below the entrance of efferent ductules

the mesonephric duct gives

≁- epididymis.

2-vas deferens. 3-seminal vesicle *A*- ejaculatory duct.



Undifferentiated

DEVELOPMENT OF MESONEPHRIC TUBULES & DUCTS

IN FEMALES

1- The mesonephric tubule (degenrale)
-the most cephalic group of mesonephric tubules degenerate
leaving a vestigial structure, the epoophoron
-while the caudal ones degenerate
leaving the paroophron
2- The mesonephric duct

degenerates, leaving only its most cephalic part, the duct of epoophoron -its most caudal part, the Gartner duct.

+ or duct of paroophron.

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DEVELOPMENT OF PARAMESONEPHRIC DUCT

FATE

In male :



degenerate except cranial end that form *appendix of testis
*prostatic utricle (by caudod end)
In female:
develop into the main genital ducts
-uterine tubes ①
-uterus ②

-upper 3/4 of vagina 🕥



DEVELOPMENT OF UTERUS

-DEVELOPMENTAL SOURCE: mullerian ducts (mesodermal)

DEVELOPMENT

- Cranial vertical parts of ducts gives the <u>uterine tubes</u> that open in intraembnyonic coelom
- Middle horizontal parts of ducts الحي fuse together & septum in () disappear giving th<u>e fundus</u> مترور المحوا
- Caudal vertical parts of ducts fuse together & septum in () disappear giving uterovaginal canal giving body & cervix of uterus(and most of vagina)] upper 3/4 fr



Ovary

Uterus

Vagina Urethra Hymen Vestibule

Urinary bladder (moved aside)

DEVELOPMENT OF UTERUS

-CONGENITAL ANOMALIES -

duplication of uterus: due to lack of fusion of Mullerian ducts in a local area or completely 4-uterus didelphys: Thin air ? double uterus, double cervix, double vagina 2-uterus bicornis bicollis: 22241 double uterus, double cervix, one vagina 3-uterus bicornis unicollis(bicornate uterus): double uterus with one cervix, one regina



A-septate uterus(bipartite uterus): with incomplete septum inside it]
5-uterus unicornis : uterus with one normal horn and the other is rudimentary others:

ال المساجع من لذلك صبحر عقم) DEVELOPMENT OF VAGINA **DEVELOPMENTAL SOURCES** upper 3/4: from uterovaginal canal (mesodermal) lower 1/4: from definitive urogenital sinus (endodermal) the lower 1/4 of vagina is separated from upper 3/4 [from uterovaginal canal] by thin membrane, the hymen that acquire - (319 عن 14) - - عنداء اللجارة هو الي للخص (14 عن 214) an opening in perinatal period for passage of future menstruation **CONGENITAL ANOMALIES:** *-Atresia of vagina Uterus Uterine tube Cervix Caudal tip of 2-Imperforate hymen (cryptmenorrhea) paramesonephric Uterine septum Fornix Vagina - hymen IL - alis Caudal tip of _____ paramesonephric duct وقت الروpuberity مع اول cycle Urogenital sinus ط بحبير paileding . وفضل يتراكم الدم تيراكم حتى المحلة ي Uterus Uterine cana Urinary bladder Cervix Fornia الكيس وفركها prognant وهالكس militaria ((ancecous) رحله عملية بـ -- >ريزار ٢٠

Sinovaginal bulbs

Vaginal plate

Clitoris

Urethra

Hymen

CCF 2013

Phallus

Sýmohysia

DEVELOPMENT OF EXTERNAL GENITALIA



DEVELOPMENT OF EXTERNAL GENITALIA

male

DEVELOPMENT

- **DIFFERENT STAGE:**
- in male: by androgens from testis
- genital tubercle & genital folds form
- phallus then penis containing penile urethra
- genital (scrotal) swellings: they arise in inguinal region,
- then move caudally forming the scrotum.
- They are separated by scrotal septum 2 teshis
- in female: by estrogen
- genital tubercle slightly elongate forming clitoris
- genital folds not fuse as in male but form labia minora
- genital swellings enlarge greatly forming labia majora



DEVELOPMENT OF EXTERNAL GENITALIA CONGENITAL ANOMALIES

IN MALE

¥- micro penis: due to low androgens level

2- bifid or double penis: due to row diterogenis rever
 2- bifid or double penis: due to splitting of genital tubercle
 3- male pseudo hermaphrodite:

R R

Internal genitalia are testes

& ext. genitalia look like female

as scrotal swelling don't fuse

- الفلفة ext. genitation لكن من جوا عشره itestic وقق العلوفي العو ذكر صريح .

DEVELOPMENT OF EXTERNAL GENITALIA **CONGENITAL ANOMALIES**

- NFEMALE ملا حطير منختف منختف منختف منختف ₹- absent clitoris: due to low estrogen level
- 2- bifid clitoris: [due to splitting of genital tubercle]
- *3* female pseudo hermaphroidte:

Internal genitalia are ovaries & ext. genitalia look like male as clitoris is

- very large as <u>penis</u> or may <u>be almost</u>
- male genitalia
- 4-imperforate hymen or widely

perforated elastic hymen

- لنث بس الدعفاء التنا سلبة الخامجين تجت دلر ومن حوا youory وانثم سبب زارة ال androgen .

