

## 17. Differentiation of male genitalia – terminology.

*Scrotal fold anlage of scrotal sacs and scrotal septum.*

*Genital swelling anlage of the shaft of the penis.*

*Genital fold (ectoderm) anlage of the skin, of penis, coronal sulcus, glans penis.*

*Genital tubercle (mesoderm) contains, bicavernosal body, corpus spongiosum with penile urethra, dorsal plate of fossa navicularis, fossa navicularis, glans penis.*

*Urogenital fold, elliptical fold, also termed vestibular fold or urethral fold.*

*Urogenital fold, elliptical fold, united by posterior commissure, and anterior commissure.*

*Urogenital fold: posterior commissure destined to, posterior end of scrotal raphe.*

anterior commissure destined to, dorsal commissure of labia of glans penis.

*Urogenital fold: perineal part, attached to ventral borders of scrotal fold.*

*Urogenital fold: phallic part, attached to ventral U-shaped border of genital fold.*

*Urogenital fold surrounds the urogenital groove and urogenital membrane.*

*Urogenital fold, joined posteriorly at the posterior commissure (future posterior end of the scrotal raphe).*

*Urogenital groove, also called vestibular groove or urethral groove.*

*Urogenital groove, elliptical depression surrounded by urogenital fold.*

*Urogenital groove extends on ventral aspect of the genital swelling.*

*Urogenital groove roof, formed by outer layer of urogenital membrane.*

*Urogenital groove: perineal part, anlage of bulbar urethra.*

*Urogenital groove: phallic part, anlage of penile urethra, fossa navicularis.*

*Urogenital membrane, elliptical membrane, surrounded by urogenital fold.*

*Urogenital membrane separates definitive urogenital sinus (UGS), from outlet of UGS.*

*Urogenital membrane: inner layer (endoderm), floor of definitive urogenital sinus/vestibule.*

outer layer (ectoderm), roof of urogenital groove.

*Urogenital membrane degenerates, establishing continuity of definitive UGS, and outlet of UGS.*

*Urogenital fold: fused parts*

*Urogenital fold: perineal part, between scrotal folds, destined to form scrotal raphe.*

*Urogenital fold: phallic part, destined to form penile raphe, preputial raphe, frenulum, most of navicular raphe.*

*Urogenital fold: unfused parts*

*Urogenital fold: phallic part, distal end of navicular raphe,*

*Urogenital fold: glans penis part, labia, and dorsal commissure of labia, of glans penis.*

*Corpus spongiosum: perineal segment, corpus spongiosum of the bulbar vestibule/urethra*

phallic segment, corpus spongiosum of the penile urethra, dorsal plate of the fossa navicularis.

*Perineal (bulbar) segment of corpus spongiosum:*

*Origin:* vestibular bulbs, lateral to the bulbar vestibule/urethra. The vestibular bulbs, unite behind the bulbar urethra, and fuse ventrally and dorsally, around the bulbar vestibule/urethra to form the *perineal or bulbar segment* of the corpus spongiosum.

Expanded posterior ends, which form the bulbs or hemispheres of bulbar urethral segment of corpus spongiosum, are joined behind bulbar urethra.

The *bulbourethral (Cowper's) glands*, embedded in the bulbs, lie below the posterior end of the bulbar urethra. The ducts, about 2cm in length, run along the floor of the bulbar urethra, to their openings on either side of the midline.

*Phallic segments of corpus spongiosum:*

a) *penile urethral segment of corpus spongiosum*, continuation of bulbar segment of corpus spongiosum. encloses the penile urethra.

b) *dorsal plate of fossa navicularis*, derived from roof of penile segment of corpus spongiosum.

*Dorsal plate of fossa navicularis:*

The dorsal plate of fossa navicularis, a continuation of the roof of the penile segment of corpus spongiosum, is adherent to the (mucosal) roof of fossa navicularis.

*Origin of glans penis:* Dorsal plate of fossa navicularis.

The dorsal plate of fossa navicularis, is a continuation of the roof (spongy cavernous tissue) of the corpus spongiosum. The dorsal plate generates spongy tissue of the glans penis.

- distal end (dorsal aspect), generates cap of glans penis.

- lateral borders (dorsal aspect), generate roof of glans penis.

- lateral borders (ventral aspect), generates wings of glans penis.

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