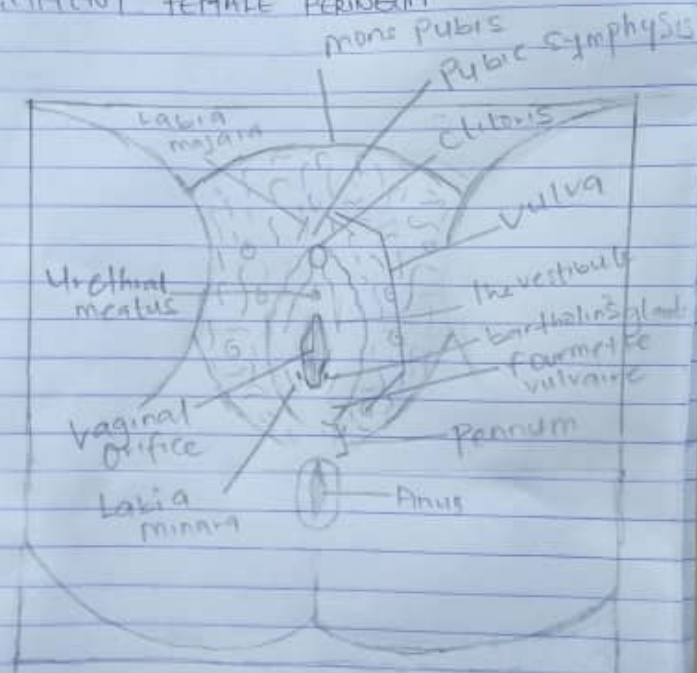


19/10/2014

ANATOMY 200 L

ANA 212: Pelvic and Perineum

ASSIGNMENT: FEMALE PERINEUM



THE FEMALE EXTERNAL GENITALIA

The external genital organs include the mons pubis, labia majora, labia minora, Bartholin glands, and clitoris. The area containing these organs is called the vulva.

The female external genitalia is fascinating due to the fact it is made up of both urinary tract and reproductive structures. These structures collectively fall under the term vulva. The depiction of vulva

is covering or wrapping. From the exterior observation of the female external genitalia, it does appear to be covered or wrapped by skin folds. These skin folds are called Labia majora and Labia minora. Both are part of the vulva.

Structure and function of the external genitalia. Vulva is the global term that describes all of the structures that make the female external genitalia. The vulva is made up of components which are:

Mons Pubis: It is a tissue made up of fat located directly anterior to the pubic bones. The mound of tissue is prominent in females and is usually covered in pubic hair. It functions as a source of cushioning during sexual intercourse. It contains sebaceous glands that secrete pheromones to induce sexual attraction.

Labia Majora: It is known as the larger lips. It is a prominent pair of cutaneous skin folds that will form the lateral longitudinal borders of the labial clefts. It forms the folds that covers the labia minora, clitoris, vulva vestibule, vestibular bulb, Bartholin's glands, Skene's glands, urethra, and the vaginal opening. The outer part of the labia majora folds come together to form the anterior labial commissure directly beneath the mons pubis.

Labia Minora: It is known as the smaller lips. They are a pair of small cutaneous folds that begin at the clitoris and extend downward. The anterior fold of the labia minora encircle the clitoris forming the clitoral hood and the frenulum of the clitoris. The labia minora encircle the vulva vestibule and terminating between the labia majora and the vulva vestibule.

Clitoris: The clitoris is a sex organ in females that functions as a sensory organ. The clitoris can be divided into the glans clitoris and the body of the clitoris. The underlying tissue that makes the clitoris is the corpus cavernosum. The corpus cavernosum is a type of erectile tissue that merges together and protrudes to the exterior of the ducts as the glans clitoris. It is highly innervated by nerves and perfused by many blood vessels. It is estimated that glans clitoris is innervated by roughly 800,000 nerve endings. It becomes erect and engorged with blood during sexual arousal and stimulation.

Vestibular bulbs: They are structures formed from corpus spongiosum tissue. This is a type of erectile tissue that closely relate to the clitoris. The vestibular bulbs of erectile tissue that starts close to the inferior side of the body of the clitoris. It extends towards the urethra and vagina on the medial edge of the crus of the clitoris.

Vulva vestibule: It is the area between the labia minora. This is a smooth surface that begins superiorly just below the clitoris and ends inferiorly at the posterior commissure of the labia minora. It contains the opening to the urethra and the vaginal opening. There is a demarcation between the vulva vestibule and the labia minora called Hart's line. Hart's line identifies the change from the vulva vestibule to the labia minora. This change of skin appearance is visible by the smoother transitional skin appearance of the vulva vestibule to the wrinkled appearance of the labia minora.

Bartholin's Glands: Also known as the greater vestibular glands (homologous to the bulbourethral glands in males) are two pea-sized glands located slightly lateral and posterior to the vaginal opening.

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These two glands function to secrete a mucus-like substance into the vaginal opening and within the borders of the labia minora to decrease friction during intercourse and as a moisturizer for the vulva.

Skene's Glands: Also known as the lesser vestibular glands are two glands located on either side of the urethra, believed to secrete a substance to lubricate the urethra opening. The substance is believed to act as an antimicrobial used to prevent urinary tract infections.

Urethra: is an extension of a tube from the bladder to the outside of the body. Its purpose is for excretion of urine. It opens within the vulva vestibule located inferior to the clitoris but superior to the vaginal opening.

Vagina: is an elastic, muscular tube connected to the cervix proximally and extends to the external surface through the vulva vestibule. The distal opening of the vagina is usually partially covered by a membrane called the hymen. The vaginal opening is located posterior to the urethra opening. Its function is for sexual intercourse and child birth. It acts as a reservoir for semen to collect sperm before the sperm ascending into the cervix to travel towards the uterus and fallopian tubes. It collects semen during intercourse. The vagina also acts as outflow tract for menses.

BLOOD SUPPLY.

Vasculature of the external female genitalia is primarily supplied by the internal pudendal arteries, which are branches of the anterior division of the internal iliac artery.

LYMPHATIC DRAINAGE.

Lymphatic drainage of the external genitalia is via the

Superficial and deep inguinal lymph nodes. Lymph from the clitoris, vestibular bulb and anterior labia majora can alternatively drain into the internal lymph nodes.

INNervation

The vulva is innervated from a variety of sources. The clitoris and anterior labia is innervated via the anterior tibial nerves, which derive from the lumbar plexus. The posterior aspect of the vulva is innervated via the pudendal nerves and its branches (posterior lateral nerve) together with branches from the posterior cutaneous nerve of the thigh. Sensible innervation to the clitoris is provided by the dorsal nerve of the clitoris.

Muscles: many muscles act on the external female genitalia either by forming and supporting the perineum or the pelvic floor.

- 1) Bulbospongiosus muscle - (2) Sphincter urethrae muscle
- 3) Deep transverse perineal muscle (4) Superficial transverse perineal muscle
- Levator ani muscle.

- 1) Iliocostalis muscle (ii) pubococcygeus muscle
- iii) Puborectalis muscle (iv) pubovaginalis muscle
- v) coccygeus muscle

Perineal body

External anal sphincter

External ~~anal~~ ^{urethral} sphincter.

Clinical Significance

Urinary Tract: Foley Catheter, a procedure that is routinely done - the catheterization of the female urethra. This procedure involves the introduction of the flexible tube into the urethra and securing it in place with a saline-filled balloon. It is done to assist excretion of urine from the bladder. It is a procedure used to collect urine for the analysis of other pathologies.

Urinary Tract Infection: is a common pathology that involves the urethra. In UTI, this condition commonly affects female due to the urethra are shorter than male's urethra, this allows the bacteria to ascend the urethra more readily and the anatomical location of the urethra, vagina and anus allows for cross-contamination between the vaginal and anal bacteria into the urethra. The patient classically complains of dysuria, increased urination, foul-smelling urination and cloudy urine.

Sexually Transmitted Infections like

Herpes simplex virus - Infection of the genital region which may manifest as a rash or ulcer-like lesion

Chlamydia trachomatis - Infection with chlamydia is a common STI. It is asymptomatic in most individuals, but some may present with cervicitis, urethritis and vaginal discharge