Sexually Transmitted Disorder (STD): 
Dealing with this subject in dermatology because of patient with venereal diseases might present initially to dermatological clinics. Veneral it means God of Venous (God of Love). 1st venereology includes: syphilis, gonorrhea, chancroid. Then many diseases were added to this branch which not resulted from sexual contact way. Still many other diseases added to this branch of medicine affecting genital and urinary organs whether sexually transmitted or not so called Genitourinary medicine which deal with:

These disorders include:
* Sexually transmitted diseases (STD).
* Sexual medicine.
* Skin diseases in genital area.
* Diseases of bladder and vagina (Vaginal problems, cervicitis, chancre (syphilitic ulcer) problems.
* Prostate diseases.
* Disease of anus and anal canal.
* General testicular problems.
* Erectile dysfunctions, Sterility & infertility.

Causative organisms that are responsible for STD:
1- Spirochetes (Bacterial):
Mainly Treponema Palladium which cause ordinary syphilis and endemic syphilis (bejil). Other bacteria:
Sexually Transmitted diseases

**a-** Niesseria Gonorrhoeae = gonorrhea.

**b-** Haemophilus Ducrey's = chancroid.

**c-** Donovania granulomatis = granuloma inguinale.

**d-** Chlamydia Trachomatis = causes LGV (lymph granuloma venelem), NSU (non specific urethritis) & Conjunctivites (trachoma).

**e-** Mycoplasma Hominis = post partum fever.

**f-** Ureaplasma Urealiticum = non-gonococcal urethritis.

**g-** Mycoplasma Genitalium = non-gonococcal urethritis.

**h-** Gardenella Vaginalis = Vaginosis.

* Shigella Species = shigellosis in homosexual individual.
* Campylobacter species = enteritis & colitis in MSM.
* Helicobacter = proctocolitis.

**Note:** (MSM) = Men-Sexual-Men causing diseases in rectum and anus.

**2- Viruses:**
* HIV = AIDS.
* Herpes Simplex Virus (HVS) = Herpes Simplex facials, Herpes Simplex Genitalis.
* Human Papilloma Virus (HPV) = Venereal viral warts, laryngeal papilloma, CA cervix, vaginal, vulvalar carcinoma.
* Hepatitis A, B & C Virus > acute, chronic active hepatitis in MSM.
* Cytomegalovirus (CMV) = infectious mononucleosis.
* Pox Virus = Molluscum Contagiosum

* Human T-cell Lymphotrophic Virus = Human T-cell Leukemia 1&2.
* Human Herpes = Kaposi's sarcoma.

* Body Cavity Lymphoma (castelean disease), Multiple Myloma.

**3- Protozoa:**
* Trichomonas Vaginalis = vaginal trichomoniasis, non-gonococcal urethritis (NSU).
* Entamoeba Histolytica = amoebiasis in MSM.
* Giardia Lamblia = giardiasis in MSM.
4- **Fungi:**
   * Candida Albicans = thrush especially vaginal or oral.

5- **Parasites:**
   * phthirus Pubis = pediculosis pubis.
   * Sarcotopes Scabie = Scabies.

**The Clinical Presentation of patient with STD:**
It could be localized or generalized.

**A- Localized Manifestations:**

1- **Pruritis:**
   - Many genital diseases whether STD or not can causes itching and it's itching either localized to genital area or generalized in additional to involvement of genital area).

**Causes of itching:**

a- **Scabies:**
   * It usually STD but when it is epidemic it is mostly not STD.
   * Caused by direct contact.
   * The patient had itching mainly at night (nocturnal itching) and it is generalized.
   * Any patient presented with itching we must exclude scabies first before continuation of diagnosis.

b- **Pediculosis Pubis:**
   * Mostly STD.
   * Itching mainly in genital area.
   * Caused by direct contact to infected person.
   * Dx. by Rash: black spot which is (Nits) on hairy area of the pubis which represent (Lice) which firmly attached to the skin and we may see blood spots on inner clothes which is blood in feces of lice.

c- **Trichomonitis Vaginalis:**
   * Disease of females mainly.
   * Presented with very severe genital itching with profuse watery discharge.
   * Males act only as carriers.
d- **Candida Albicans:**
* Commonest cause of itching and vaginal discharge.
* In males (thrush of penis) which causes urethritis and only thrush in adjacent area.
* In females causes severe itching and white thick discharge from vagina.
* Normally Candida Albicans is in the lower third of vagina but more in immune suppressive patients (e.g. DM, steroids user).

e- **Other Medical Problems Causes Itching:**
* Contact Dermatitis of genital area.
* Lichen Planus.
* Psychogenic itching in female= vulva while in male= scrotum.
* Psoriasis in both sexes.

2- **Ulcer on Genitalia:**
It is either in external or internal locations of genital organs.
* **Syphilis (primary chancre):** it is a rare disease but in Iraq relatively common, presented by single painless not tender, indurated button like, could be multiple, usually didn't bleed when squeezing, self limited, not recurrent.
* **Chancroid:** painful, soft (soft chancre), usually bleed on touching or squeezing, not indurated, multiple might recurrent.
* **Herpes:** It is chronic dormant infection and difficult to eradicated. It is commonest cause of genital ulcer all over the world (common in patients with AIDS).
The patient presented with grouped vesicles that rupture easily to form superficial ulcer for 7-14 days, then heal spontaneously & recur again.
Commonly affect the shaft of penis, around vulva, around anus, vaginal, intravaginal urethra, and intraurethral.
It's usually secondary infection to involvement of trigeminal ganglia once the patient get stress or other infections ,fatigues the microorganism transmit along the nerve roots to reach the
genital area and causes ulcer, so it's recurrent opposite to chancroid and primary chancre (syphilis).

There is no cure, but we can induce recovery (usually ended with recurrence).

In females during delivery might infect baby and causes encephalitis that's why cesarean section in patient with HSV on genitalia to avoid fetal infections.

It could be type 1 or.

* **Herpes Simplex Genitalis** (type 2).

* **Herpes Simplex Hominis**:
  - Type 1 (labialis) on the lips.
  - Type 2 (genatalis) on genetalia.
  - Type 1&2 present as group of small blisters & superficial ulcers, presented on shaft of

* **Lymphogranuloma Venerium**: not common in Iraq. the patient presented with transient, small grouped vesicles similar to HSV but healed within 2-3days and most of the patients not presented to us with this problem but usually after months – years had secondary or tertiary problems. After weeks they may had enlargement of inguinal lymph nodes (Groove sign's)(bubo formation)(1st stage) then after months the patient had anal or genital conditions like fibrosis. So, primary presentation is rare.

* **Differential diagnosis of Genital Ulcer**:
  1- **Rechet's Disease**: it is disease of male (Recurrent oral and painless genital ulcer with other features like: recurrent DVT, recurrent erythema nodosum, recurrent iritis, boil orchitis…etc).
  2- **Trauma**: (Zip-fasting trauma) produce an ulcer similar to chancre.

*****Any ulcer in genital area syphilis should be excluded.

3- **Mass on Genitalia or called papulonodular lesions**:
   * Venereal warts: caused by human papilloma virus, called also (Condylomata Acuminata).
Usually STD, involve males and females, shaft of penis, around vulva, around anus, vaginal, intra-vaginal urethra, and intra-urethral.

Pigmented or may be grayish- whitish in color covered with projections resembling cauliflower.

* **Syphilitic Condylomata Lata:** it occur the secondary stage of syphilis as secondary rash appear in the moist, worm area. The mass are pale flat anemic smooth papules, if we take smear or biopsy we see a lot of spirochetes inside Condylomata Lata. Disappear when left without treatment or when pass 3rd stage.

* **Molluscum Contagiosum:** It is STD in adults while commonly seen on the face or neck of children (not STD). Patient presented with shiny, grayish or whitish, pear-like, umbilicated papule (depression in the center), caused by a pox virus. When puncture it the cheesy material will come out which is virus particle.

* **Other causes:** Lichen Planus, Psoriasis, Tumors and Cysts.

**4- Discharge:**

* **Physiological:** (saliva of sex) which is clear and not sticky.

**We have 3 types of discharge:**

* **Urethral discharge:** mainly male (not female because female has short urethra).
  - Gonococcal Gonorrhea (GC).
  - Non-specific Urethritis (NSU).
  - (E-Coli may cause gonorrhea picture so culture is the solution).

-it can be differentiated from physiological discharge especially in male which is mucous (clear mucous) similar to saliva so called saliva of sex. In female such discharge with the same circumstances called leucorrhea.
* **Vaginal discharge:** in female especially
  - Candidiasis (little discharge). Candida is a normal flora of the lower 3\textsuperscript{rd} of vagina so any change lead to pathological condition =vaginal discharge which presented as itching, burning sensation and thrush.
  - Trichomonitis (tremendous discharge) in female white discharge while in male is carrier.
* **Rectal discharge:** (MSM) burning, itching, tenismus, and discharge dysentery-like picture (diarrhea). As in gonorrhea and NSU, intra-rectal chancre, chancroid
  * **Oral discharge:** in pharyngitis or tonsillitis with GC.

**B- Systemic Manifestations:**
Some diseases not present as genital manifestations but presented by systemic manifestations. Like:
1- **Secondary rash of syphilis:** common in females because readily women presented with chancre (hidden in cervix) so didn't noticed until she developed 2ndry rash appear, while in male the chancre is seen.
2- **Jaundice (Hepatitis Virus):** generalized itching of the skin and yellowish discoloration as in hepatitis B virus transmitted among MSM.
3- Intestinal worm (nematode) could be transmitted by **MSM.**
4- **AIDS:**
  * 1\textsuperscript{st} found could be in lung as Pneumonia (Pneumocystic Carini) or generalized rash, diarrhea, encephalitis or tumor of the skin (Kaposi’s sarcoma).
  * In Iraq: Kaposi sarcoma common among elderly people with (Renal failure, DM, lymphoma, patients taking cytotoxic drugs or steroid for long time, Immuncomprommized).
4- **Disseminated Gonorrhea:** sign and symptoms of septicemia as arthritis (septic arthritis) and rash as small hemorrhagic pustule and papule.
5- **Reiter's Disease:** disease with NSU. The patient presented with arthritis, urethritis (urethral discharge), eye problems (conjunctivitis) and GIT problems, genital ulceration with ankylosing spondylitis.

* **Urethritis:** could be gonococcal urethritis present with profuse urethral discharge after short IP or Non-Gonococcal Urethritis (NGU).

**Causes of Non-Gonococcal Urethritis (NSU):**

1- **Bacterial:**
   * Chlamydia trachomitis (50%) other are: E.Coli, Klebsiella, proteus, hemophilus vaginalis, mycoplasma. It is important to know the cause of urethritis by using culture of discharge to prove that is GC or not.

2- **Protozoal:**
   * Trichomonitis characterized by urethral discharge. It present in 5-10% of cases in male with long incubation period + mucoid discharge.

3- **Viral:**
   * Herpes Simplex causes
   * Viral warts.
   Both locations were intraurethral.

4- **Fungal:**
   * Candidiasis in male may cause discharge

5- **Chemical:**
   Common in obsessive persons who clean all body parts with irritant detergents as detol.

6- **Stricture:** very rare cause urethritis.

7- **Food and drugs allergy:**
   * Sulpha drugs by fixed drug eruption intraurethral.

8- **Normal physiological discharge.**

9- **Idiopathic:**
   * 50% of Non-Gonococcal Urethritis also called (true non-specific urethritis) and it is without obvious causes (30-40%).

**Post-Gonococcal Urethritis:** or called double infections.
In this case the patient had gonococcal infection which appears after 2-3 days then treated with antibiotics. After few weeks came complaining
from sign & symptoms of NS (mainly chlamydial or idiopathic) which masked by gonococcal infection, so treat from the start GC and NSU.

**In general the diagnosis of STD by the following:**
1- Hx & examination.
2- Direct stain of swab.
3- Culture and sensitivity
4- Dark field microscopic examination for *Treponema Palladium*.
5- PCR.
6- Further investigative tools accordingly if needed.