

# Collection of Specimen

## → Specimen:

- A small quantity of anything, which represents all the characteristics of the remaining thing, is called a specimen
- collection of specimen in a proper way is essential to get the desirable results

## → Principles of collection of Specimens:

- All the samples must be labelled with patient's name, date & time of collection.
- The specimen should be obtained before any drug therapy
- use aseptic technique of collection to minimise the contamination
- collect specimen from anatomic sites to yield most pathogens
- Tissue or fluid submitted for culture are always given preference.

## ⇒ Methods of Specimen collection:

### 1) Collection of Blood in laboratory:

- Blood specimen is usually taken by doctor, nurse or technician for various purposes.
- Articles require :-
  - 70% alcohol
  - cotton swab
  - syringe
  - Needle

## → Method of collection:

- Clean the skin over the venipuncture site in circle with 70% alcohol
- Apply 2% iodine solution to clean the area, allow it to remain on skin for at least 1 min
- Insert the needle into vein & withdraw blood
- Clean the site again with 70% alcohol
- Now introduce the blood collected into special blood bottles
- Anti-coagulants should be used

## 2) Preparation of blood smear:

- Blood smears are made of routine differential leukocyte count (DLC), observation of malarial parasite etc
- Articles :- spirit
  - Sterilized 20ml syringe
  - cotton swabs

## → Procedure:

- Disinfect the middle finger with 70% alcohol
- Keep the finger in downward position & touch on end of a clean slide to drop of blood
- Place the slide on table with drop of blood facing upward
- To another fresh clean slide, place it against the drop of blood & allow the blood to spread along the edge of slide
- Hold the spreader slide at greater angle
- Move the spreader shoe towards opposite end of the first slide to form a thin smear.

### 30) Collection of sputum specimen:

Articles required include sterilized, wide-mouthed screw-capped bottle or sterilized petridish or cup

It should be noted that saliva in mouth is not sputum.

A true sputum contains 10 squamous epithelial cells.

Normal sputum is watery, colorless, & odorless but with infection color may change in greenish to rusty. The pus makes it opaque & smelling

#### → Method of collection:

- Patient must be asked to cough deep down in chest early in morning.
- Aerosol technique is used to collect the sputum
- Sputum should be collected in sterile screw capped bottle.
- Another common method in children is swabbing.
- Label the specimen.

### 4) Collection of Urine specimen:

• Urine discharged early in the morning shows useful results for diagnosis of UTI

• Articles required include sterilized wide-mouthed screw capped bottle

#### → Method of collection:

- Explain the procedure to patient in detail
- Clean catch or midstream clean catch urine is desirable
- Keep the container at correct position for midstream
- urine from women should not be colled during menstrual period.

- cover the container to protect it from contamination

- label it neatly

5) collection of stool specimen:

- id freshly discharged stool is good specimen for diagnosis of intestinal infections

- It should not to be mixed urine

- swabs are taken usually after ejection of stool

→ Articles: - Mouthed bottle

- swab

- clean stick

- disposal card boxes.

→ Method of collection:

- Explain the procedure to patient

- Ask the patient to pass the stools on clean place

- small quantity of stool (500mg) is placed in container

- Rectal swabs are taken when fresh stools cannot be obtained

- The specimen is covered & labelled.

⇒ Safe Disposal of Body Discharges:

Body discharges may contain highly infectious eg: HIV etc. They must be disposed off safely so that they not spread diseases.

⇒ Universal Precautions for Handling of specimens:

use leak proof for carrying blood & other body fluid specimens

Specimen of patients suffering from highly infectious diseases should be taken using precautions

Handle the blood & other suffering from highly infectious diseases should be taken

Never suck the pipette by using your mouth

use biological safety rules, while working in laboratory

wash your hands thoroughly after work.

→ Procedure for safe disposal of Body Discharges:

Faeces & urine should be collected in impervious pot & disinfected by adding an equal volume of 8% bleaching solution

If above mentioned disinfectants are not available, an equal amount of quick lime mixed & left for 2 hours.

- Sputum:

The small amount of sputum is collected in gauze & destroyed by burning

If amount of sputum in large quantity, it may be disinfected the by the boiling or autoclaving.

3) Disinfection of linen:

- Linen such as bed sheets & other clothing soiled with infected for 20-30 mins

- Different color bags should be used collection of various types of waste materials.

Black bag : To collect non-infectious waste material

Yellow & red bag : To collect infectious or contaminated waste material

- Blue & white bags : To collect sharp articles