**Parasitology Dr.Sukayna Jabbar**

**General Stool Examination (GSE)**

**Collection of samples**: If a faecal sample is not properly collected and taken care of before examination, they will be of little or no value for accurate diagnosis. This is especially true if protozoa are present. Amoebic trophozoites begin to degenerate 1-2 hours after passage, as do flagellate trophozoites. Cysts will deteriorate if the faecal specimens are left standing for many hours or overnight, especially at high temperatures. Helminth eggs and larvae are less affected by the age of the specimen than are protozoa. To ensure that good specimens are provided for examination, it is important to note the following points.

1. A clean dry container must be used for the collection of faecal samples. Urine and water will destroy trophozoites, if present, and the presence of dirt also causes identification problems.

2. Ideally the specimen should be brought to the lab as soon as it is passed, to avoid deterioration of protozoa and alterations of the morphology of protozoa and helminths.

3. The specimen container should be clearly labelled with the patients name, date, and time of passage of the specimen.

4. An amount of stool adequate for parasite examination should be collected and a repeat sample requested if too little is supplied.

5. Diarrhoeal specimens, or those containing blood and mucus, should be examined promptly on arrival in the laboratory. The specimens may contain motile amoebic or flagellate trophozoites and may round up and thus be missed if examination is delayed.

The normal stool is brown due to bile pigments, and the color of stool is affected by the type of food.

Types of stool Likely reason

Watery Diarrhea

Clay colored Obstructive jaundice or presence of barium sulfate Reddish colored Blood from lower gastrointestinal tract, beef consumption Black Bleeding from upper gastrointestinal tract, Iron, charcoal. Green Ingestion of Spinach, antibiotics.

Procedure for the microscopic examination of faecal samples for parasites

1. place a drop of saline a clean slide.

2. place a small piece of stool on the slide and mix with saline, cover with a cover slip. If the specimen contain mucus, the examination prefer to be done without saline. The mucus is put on the slide and covered with cover slip.

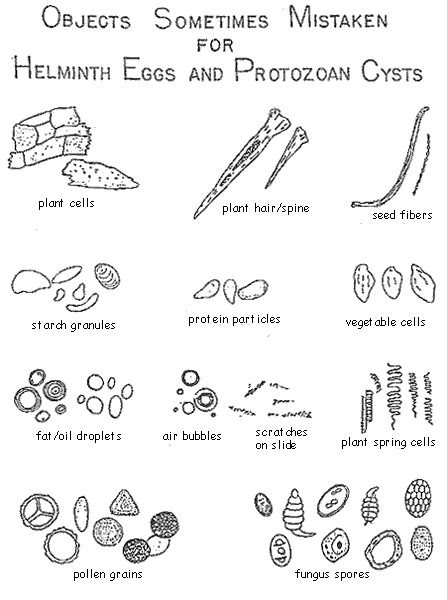
3. examine under 10X and 40X objectives. 4. report the presence of :

- Large numbers of pus cells - RBCs - Amoebas, flagellates - Eggs, larvae & cysts.

Using of Saline: Normal saline (0.85%) is used for routine examination of stool samples, as it is isotonic. Using of Iodine: Iodine is used to examine the nuclei of cysts. Using of Eosin 1%: this provide a pink background and that will help to clear the unstained objects.

Concentration methods: Two types of concentration techniques are used for stool examination 1- Sedimentation technique: – Formol ether technique – Formol ether SAF – Formol ether PVA

2- Floatation technique – Zinc sulfate – Saturated salt solution .

.

