**Laboratory Diagnosis of Clotting Disorders**

**Clotting Time Test (C.T)** The C.T determines the ability of capillary blood to clot within a time, after a puncture of the capillaries

**Equipments:-**

1-Un - Heparinized capillary tube (Blue color).

2-Lancet

3-Watch

**Specimen:-**

The specimen must be used is the capillary blood.

**Procedure:-**

1-Sterilize the surface of finger.

2-Prick by lancet and record the time.

3- Collect the blood with un-heparinized capillary tube.

4- Move the capillary tube between your fingers in sloping, until the blood moving is stopped.

5-Break of a small piece of capillary tubes every 33 sec. until you see the strand of fibrin.

6- Stop the watch, record the total time. This represents the C.T expressed in min. **Normal value: -** C.T = 2 – 11 min.

**Bleeding Disorders**

The bleeding disorders associated with abnormalities in the quality and quantity of the coagulation.

These abnormalities are due to structure of blood vessels or impaired platelets function, like a reduction in their number in the blood stream, or disorders of plasma proteins involved in coagulation.

Abnormal synthesis of coagulation factors will result in a bleeding disorder known as **Hemophilia**.

There are many different forms of hemophilia, each of which results from the lack of one or more clotting factors, this leads to in some conditions to spontaneous bleeding into the muscles or joints and may produce a local gangrene.

Some dietary reasons can contribute in the disorder of bleeding such as vit.k deficiency, which is essential for synthesis and activation of some coagulation factors. Also in some conditions that the person requires transfusion of large amount of stored blood tend to infect with defects of bleeding because when blood is stored some clotting factors undergo chemical changes and become inactive, also the platelets tend to disappear from the stored blood after 4 - 5 days, and fall in their numbers cue to the dilution of the patient s blood and from increased bleeding.

**Laboratory Diagnosis of Bleeding Disorders**

**Bleeding Time Test (B.T)**

There are many different tests were developed over the years, including the Duke test we are deal with it:-

Principle:-

The Duke test measures the time required for the stop of bleeding after a puncture through the skin.

Equipments:-

1-Lancet

2-Filter paper

3- Watch

**Specimen:-**

Capillary blood

Procedure:-

1-Sterilize the edge of the ear lobe.

2-Prick the skin by lancet and record the time.

3- Take a drop of blood by the filter paper every 33 sec.

4- Notice the blood, until it clot and stop the watch.

5- Record the total time that represent the B.T expressed by min.

**Normal Value:-**

B.T = 2-8 min