

Fig 12: Blood Bleeding time Measurement apparatus

Practical - 12

Date: / /

Aim: To determine the bleeding time of blood sample (Duck's method).

Reference:.....
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Requirements: Sterilized Needle/Lancet, stopwatch, Alcohol swabs, Whatman filter paper, Volunteer for blood.

Theory:

The time required for complete stopping of blood flow from the punctured blood vessels called the bleeding time. Normally it is 1-3 minutes for a normal human's blood. Normal clotting time and bleeding time values differ because bleeding time is the time for stopping bleeding by the formation of fibrin network on the surface of punctured skin; that is it is the surface phenomenon. But the clotting time is the time for clotting the whole blood, collected in the capillary tube; therefore it is a volume phenomenon. For this reason clotting time is more than the bleeding time, when determining by conventional methods.

Principle:

With the Duke's method, the patient is pricked with a special needle or lancet, preferably on the earlobe or fingertip, after having been swabbed with alcohol. The prick is about 3–4 mm deep. The patient then wipes the blood every 30 seconds with a filter paper. The test ceases when bleeding ceases.

Procedure:

1. Finger of a subject is sterilized with spirit and pricked with sterilized needle.
2. Time of pricking is noted.
3. Take the stain of the punctured point on a filter paper on 30 second and keep taking stain of blood in 20 second intervals until the bleeding stops.
4. The time of no stain has come is noted properly; it is the bleeding time of the subject.

Precaution:

Following precautions should be enforced:

- Needle should be sterilized.
- A faint stain of blood should not be avoided.
- Time should be noted properly.

Normal bleeding time: 1-5 minutes

Clinical Significance:

It plays a significant role.

- To study the haemorrhagic disorders.
- To study the coagulation defects.
- To have an idea about the platelets count of the patient.

RESULT: The bleeding time of blood sample is _____

Questions Bank

1. What is the Blood bleeding time?
2. What is the haemorrhagic disorders?
3. What is the platelets count?
4. What is the normal bleeding time of human?
5. What is the sterilization?
6. Write the process of formation of blood fibrin network.
7. What is the Alcohol swabs?
8. Blood act as a buffer solution explain it.
9. Write the total amount of blood in adult human.
10. Write the composition of blood.