I. TESTS FOR HEMOSTASIS, BLEEDING TIME:

Hemostasis involves the following 4 inter-related steps:

1. Vasoconstriction blood vessels.
2. Platelet plug formation.
3. Formation of a blood clot.
4. Fibrinolysis (dissolution of the clot).

PHYSIOLOGICAL BASIS OF BLEEDING DISORDERS

Bleeding disorders may be inherited or acquired, and acquired defects are more common. Disorders of bleeding, due to platelet and vessel wall defects (bleeding of small vessels during cuts and bruises) are more common than coagulation disorders that are due to deficiencies of clotting factors.

PROCEDURE:

The Duke and Ivy methods are used for determination of the bleeding time; in this lecture we will discuss the Duke Method:

1. Get a deep finger-prick under aseptic conditions to get free-flowing blood. Start the stop watch and note the time.

2. Absorb/remove the blood drops every 30 seconds by touching the puncture site with the filter paper along its edges, without pressing or squeezing the wound.

3. Note the time when bleeding stops, i.e. when there is no trace of blood spot on the filter paper.

4. Count the number of blood spots and express your result in minutes and seconds. Normal bleeding time = 1–5 minutes.

OBSERVATION:

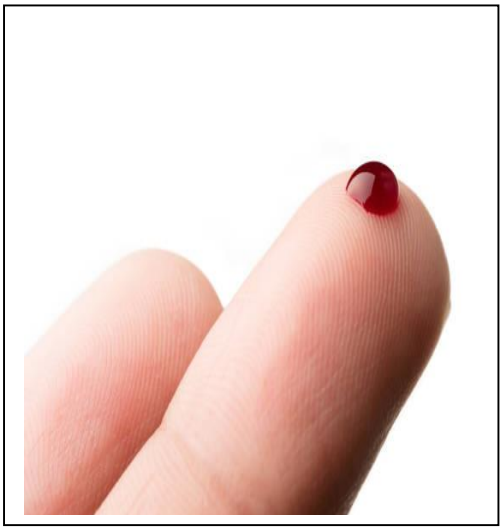
• The BT is prolonged in purpura (platelet deficiency, or vessel wall defects) while it is usually normal in hemophilia.

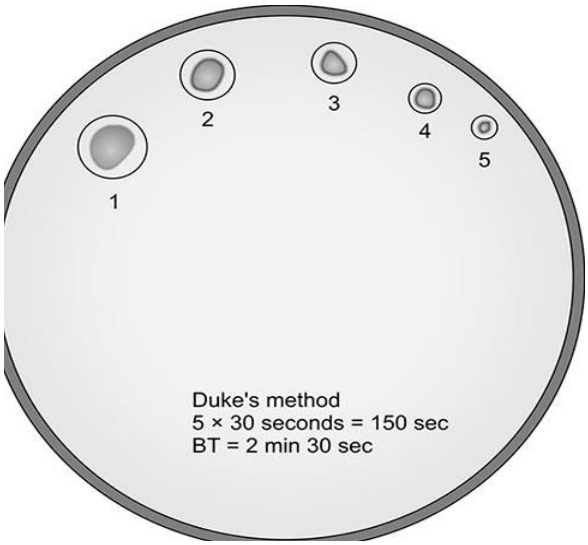
• Lack of several clotting factors may prolong BT.

• If bleeding continues for more than 10–12 minutes, stop the test and press a sterile gauze on the wound.

Bleeding time depends on:

I. Breadth and depth of the wound.
II. Degree of hyperemia of the skin puncture site.
III. Number of platelets and their functional status.
IV. Functional status of the blood vessels.
V. Temperature; in cold weather, low temperature promotes vasoconstriction, thus shortening BT.




1
2
3
4
5
Duke's method
5 × 30 seconds = 150 sec
BT = 2 min 30 sec


SPORTS TIMER
CAROLINA