



Round : Forensic Medicine

Group no : A4

Done By : Feras Atieh

patterned abrasions and intradermal bruises. The mechanism is similar for both of them and depends on the varying height

(ridges and grooves) of the surface of the causative object.

Hypostasis (Livor Mortis) vs. Bruises

Differentiation 11.3: PM staining and bruise²¹

S.No.	Feature	PM staining	Bruise
1.	Cause	Distension of vessels with blood in dermis	Rupture of vessels which may be superficial or deep
2.	Cuticle	Not abraded	May be abraded
3.	Site	Occurs over extensive area of the most dependent parts	Occurs at the site of and surrounding the injury, may appear anywhere on the body
4.	Appearance	No elevation of involved area	Often swollen, because of extravasated blood and edema
5.	Margins	Clearly defined	Merge with the surrounding area
6.	Color	Uniform bluish-purple color	Different colors, depending on the age of bruise
7.	On incision	Blood is seen in blood vessels which can be easily washed away, subcutaneous tissues are pale	Extravasation of blood into the surrounding tissues, cannot be washed by water, subcutaneous tissues are deep reddish-black
8.	Effect of pressure	Absent in areas of the body which are under even slight pressure	Lighter over the area of pressure or support
9.	Superimposed abrasion	Not present	May be present
10.	Microscopically	Blood cells are found within the blood vessels and there is no evidence of inflammation	Blood cells are found outside the blood vessels, evidence of inflammation present

	Incised	Lacerated
Instrument	Sharp	Blunt
Shape	Shape is according to cause	Associated bruising and abrasions of skin edges and adjacent tissues.
Associated other types of wounds	Clear	Associated bruising and abrasions of skin edges and adjacent tissues.
Edge	Everted edge	Ragged edge
Self-inflicted	May be self-inflicted	Rarely self-inflicted
Bleeding	Larger amount	Lesser amount
Bridge fibers	Absent	Present

Table 11.2: Age of bruise

Duration	Color
Fresh	Red (oxygenated blood)
Few hours to 3 days	Blue (deoxyhemoglobin) ¹⁵
4-5 days	Bluish black to brown (hemosiderin) ^{16,17}
5-6 days	Green (biliverdin) ¹⁸ garden
7-12 days	Yellow (bilirubin)
2 weeks	Normal

Table 11.1: Age of abrasion

Duration	Features
Fresh	Bright red, oozing of serum and some blood.
2-24 h	Exudation dries to form a reddish scab, comprising blood, lymph and epithelial cells. Polymorphonuclear cells infiltrate (scab formation).
2-3 days	Reddish-brown scab, less tender. ¹⁰
4-5 days	Scab is dark brown in color.
5-7 days	Scab is brownish black and starts falling off from the margins. Epithelium grows and covers defect under the scab (epithelial regeneration).
7-12 days	Scab dries, shrinks and falls off, leaving depigmented area underneath. It gradually gets pigmented in due course of time (subepidermal granulation).
> 12 days	Epithelium becomes thinner and atrophic. New collagen fibers are prominent. Basement membrane is present and vascularity of the dermis decreases (regression).

Penetrating: The wound goes into the organ but doesn't go all the way through.

Perforating: or Transfixing: The wound goes all the way through the organ.

Complications of Wounds :

1. Neurogenic shock (Primary shock). 2. Traumatic shock (Secondary shock).