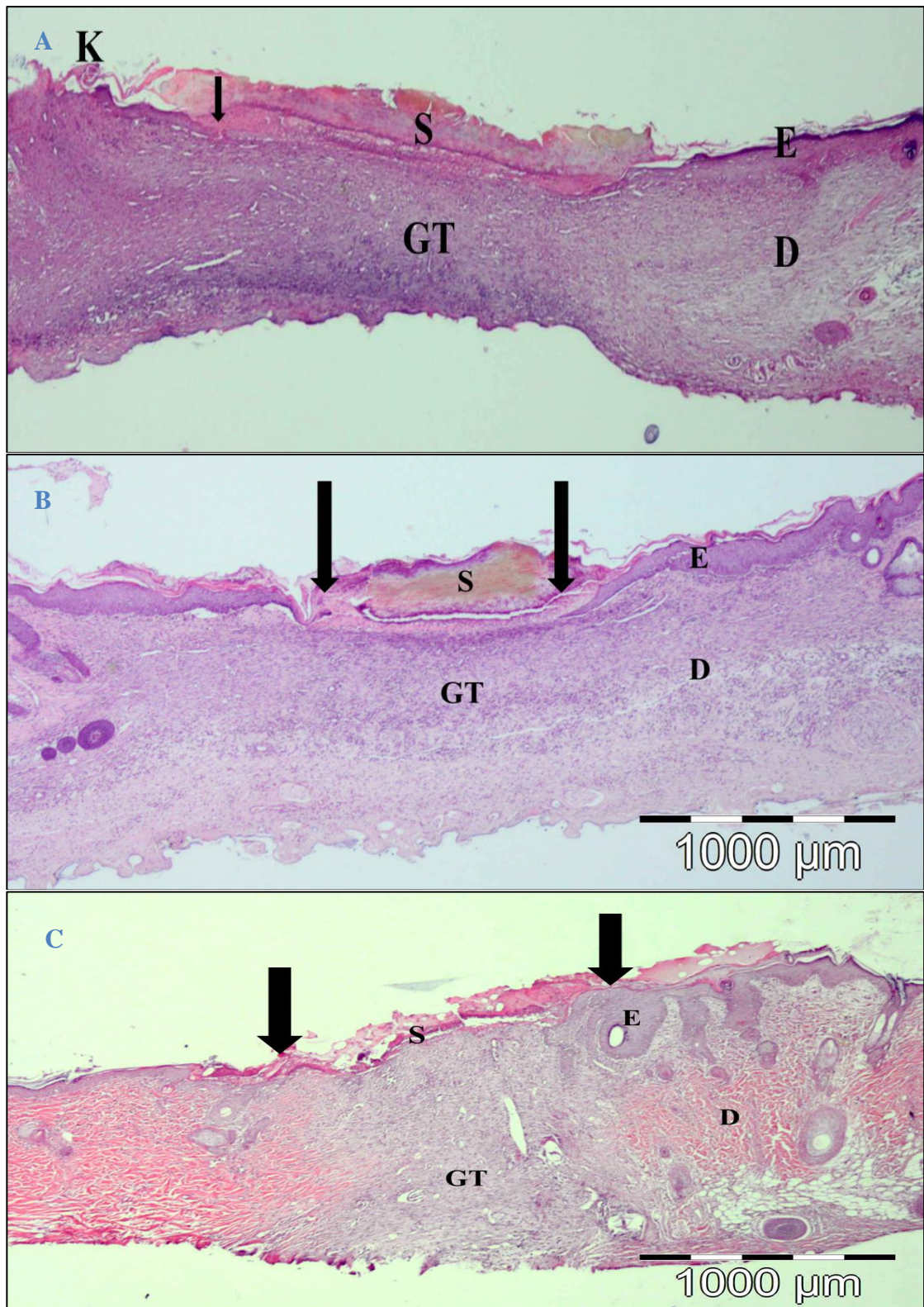


4.4.6.4 DAY 15 OF TREATMENTS



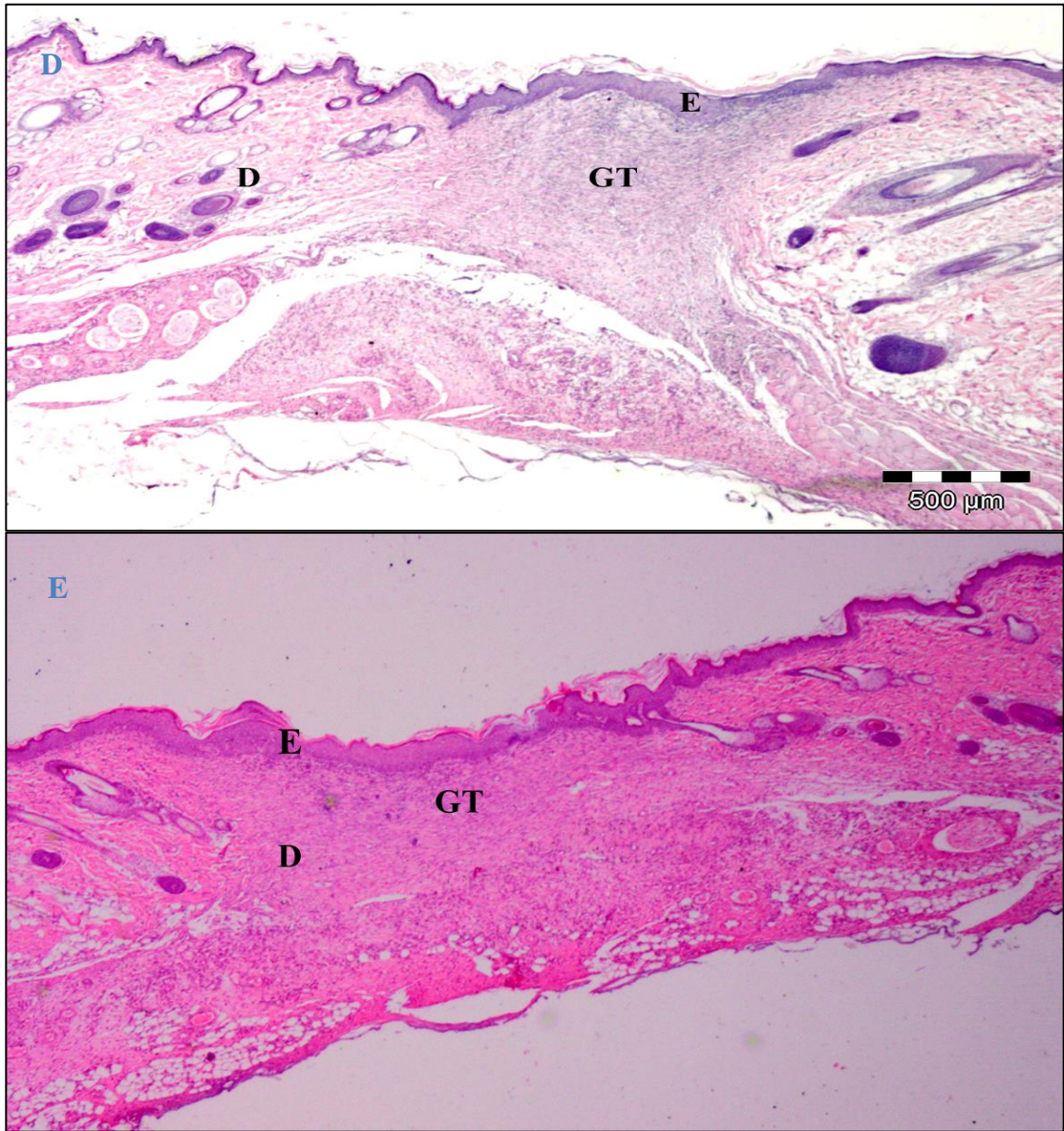


Figure 4.60: Histology of wound area according to group of treatments on Day 15 of Treatments. H&E stained sections. 20X Magnification. Black arrow showed the wound edge. (A) Group NO (No Dressing). (B) Group SA (Saline). (C) Group IN (Intrasite) (D) Group GE (Gelum). (E) Group NE (Nenas). D=Dermis; E=Epidermis; GT= Granulation Tissue; K= Keratin; S=Scab.

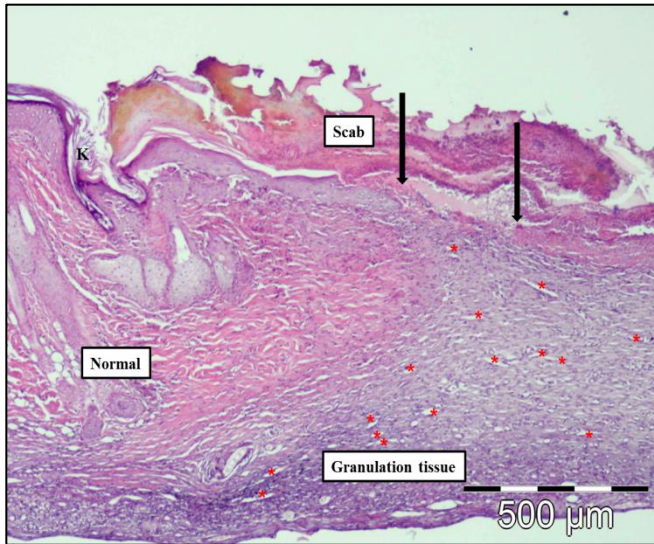


Figure 4.61: Granulation tissue in Group NO (No dressing) on Day 15 of treatments. H&E stained sections. 100X Magnification. Black arrow showed the wound edge. Blood vessels (labeled with *) were observed.

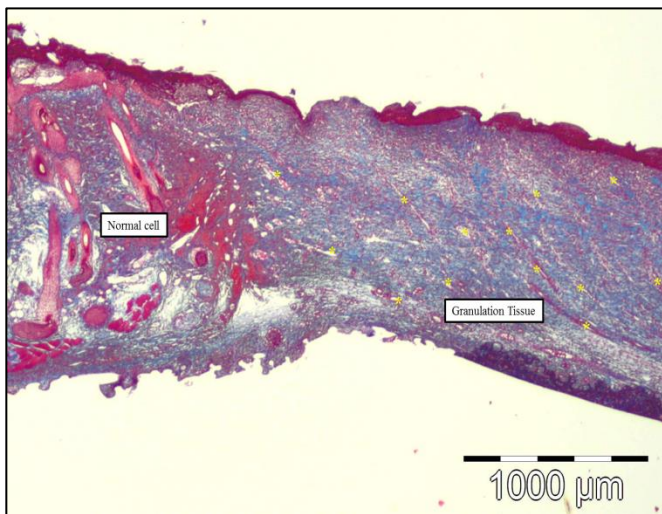


Figure 4.62: Collagen level in granulation tissue of Group NO (No dressing) on Day 15 of treatments. MT stained sections. 20X Magnification. Blood vessels (labeled with *) could be observed in the granulation tissue.

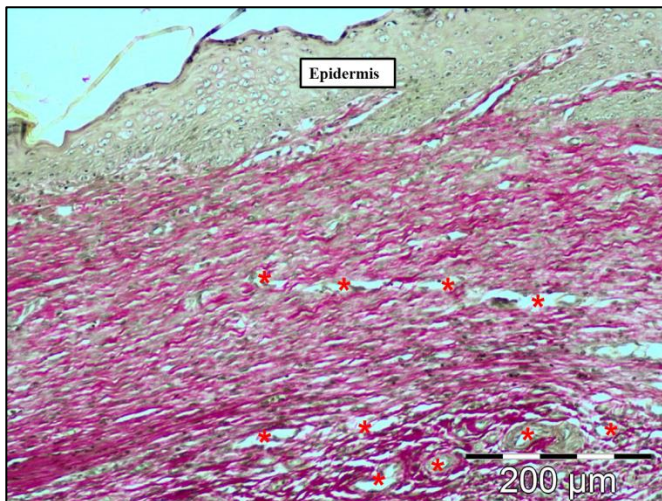


Figure 4.63: Granulation tissue of Group NO (No dressing) on Day 15 of treatments. VE stained section. 100X Magnification. Blood vessels (labeled with *) could be observed. Collagen (red) arranged loosely in the granulation tissue.

Result obtained from H&E staining (Figure 4.60 A and Figure 4.59) showed that scab formed was still attached and epithelialization was not complete, although thick epithelial cells layer was formed. Other than that, the result of MT stained slide

(Figure 4.62) and VE stained slide (Figure 4.63) showed that blood vessels were saturated in the granulation tissue. The blood vessels in granulation tissue were in big sizes. Collagen level in the granulation tissue increased as the intensity of the blue stain color increased (Figure 4.62). Collagen fibers in Group NE (Nenas) were denser compared to the granulation tissue on Day 10 of treatments. Mild fibrosis was found in the granulation tissue (Figure 4.63).

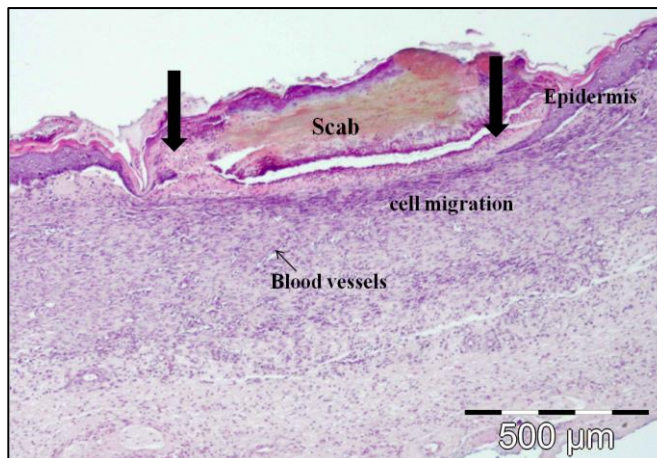


Figure 4.64: Wounds of Group SA (Saline) on Day 15 of treatments. H&E stained section. Black arrows showed the wound edges. 40X Magnification. Scab remained attached to the wound surface.

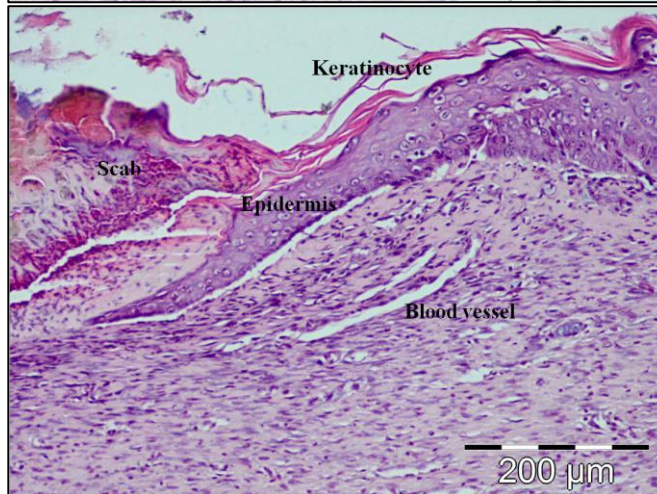


Figure 4.65: Blood vessels of the wound of Group SA (Saline) on Day 15 of treatments. H&E stained sections. 100X Magnification. Marked wound edges observed.

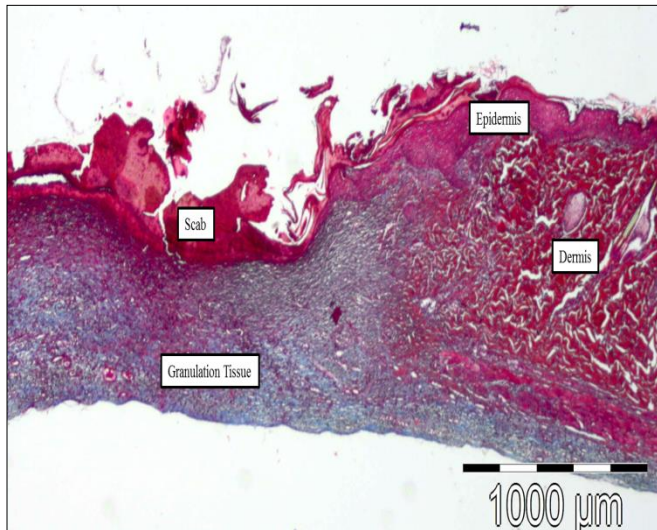


Figure 4.66: Histology of wound of Group SA (Saline) on Day 15 of treatments. MT stained sections. 20X Magnification. Collagen level (blue) of the granulation tissue increased.

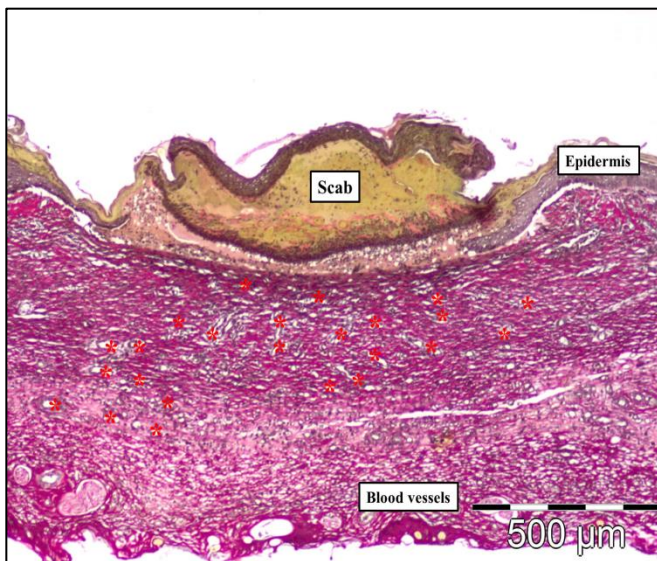


Figure 4.67: Histology of wound of Group SA (Saline) on Day 15 of treatments. VE stained sections. 40X Magnification. Blood vessels (labeled with *) found saturated in granulation tissue. Scab found still attached on the wound. Marked wound edges present.

Result of H&E stained slide showed that epithelializaion was still incomplete in Group SA (Saline) on Day 15 of treatments although wound area was reduced. Scab formed on the surface of the wound was not fully detached (Figure 4.60 B) and keratinization was found. MT stained slide showed granulation tissue in blue. There were dense collagen and mild fibrosis found in these wounds (Figure 4.66). VE stained slide showed that very few elastic fibers found on the granulation tissue. Collagen fibers appeared to be arranged loosely in the granulation tissue (Figure 4.67). Scab formed was stained in yellowish color (Figure 4.67). All of the staining method showed that blood vessels were still abundant in the granulation tissue but the size of blood

vessels had reduced to smaller size compared to Day 10 of treatments in the same groups.

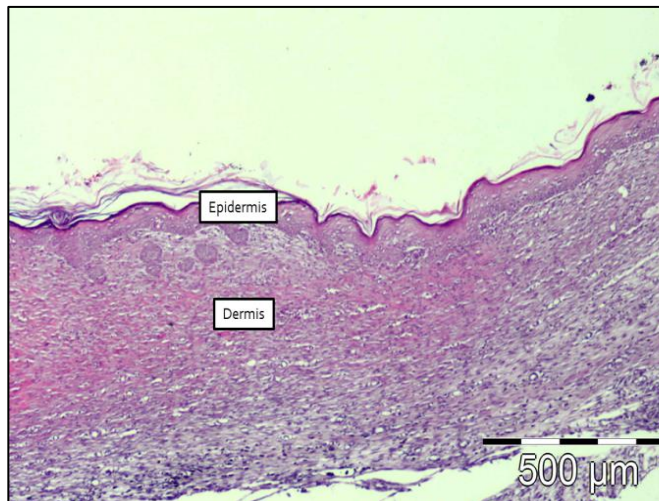


Figure 4.68: Granulation tissue of Group IN (Intrasite) on Day 15 of treatments. H&E stained sections. 40X Magnification. Complete epithelialization. Wound was fully recovered.

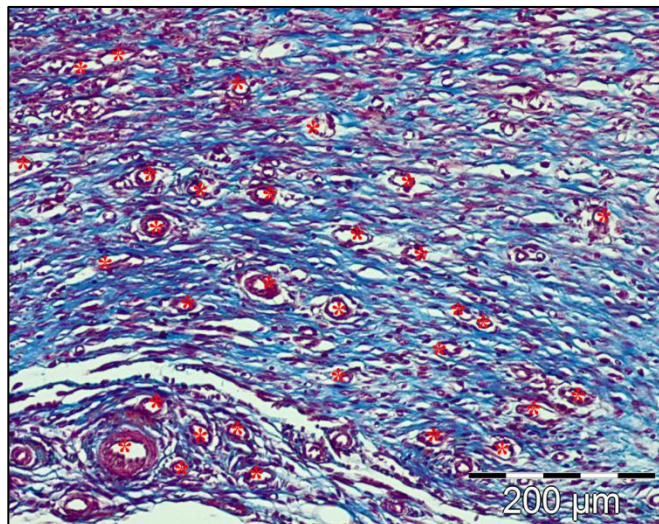


Figure 4.69: Blood vessels and collagen in granulation tissue of Group IN (Intrasite) on Day 15 of treatments. MT stained sections. 100X Magnification. Small blood vessels (label with *) were saturated in the granulation tissue. Dense collagen (blue) found in granulation tissue.

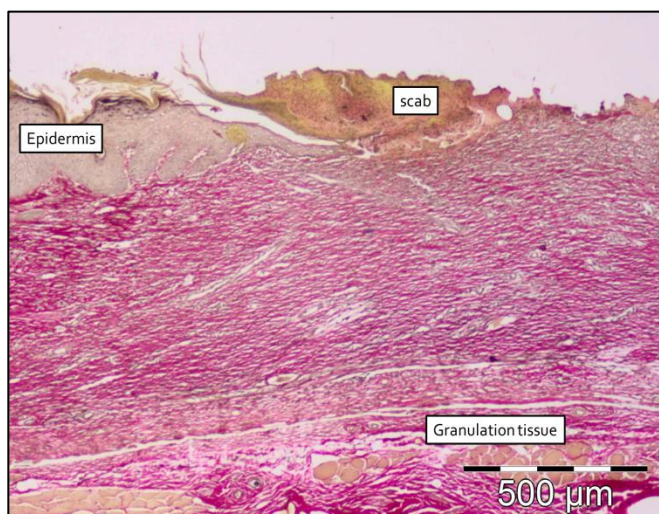


Figure 4.70: Granulation tissue of Group IN (Intrasite) on Day 15 of treatments. VE stained sections. 40X Magnification. Scab was not fully detached from the surface of the wound. Thick epithelial cells layer found.

H&E stained slides of Group IN (Intrasite) on Day 15 of treatments demonstrated several different conditions. In some specimens the scabs were still attached on the wound surface (Figure 4.60C). There were wounds that the scab was completely detached but epithelialization was still incomplete. There were also specimens demonstrating the complete epithelialization with increase in the thickness of epidermis layer (Figure 4.68) Epidermis of the wound edges thickened. MT stained slides (Figure 4.69) demonstrated the increase of collagen. Mild fibrosis found near the surface of wound. The size of blood vessels started to reduce. VE stained slides showed that fibroblast level increased. Results from all the staining methods showed that blood vessels were still exists in the granulation tissue. But those that found near the surface were reduced in size. In those wounds that had completed epithelialisation, the number and size of blood vessels near the wound surface had reduced. Only those blood vessels were found in the bottom of the wound bed.

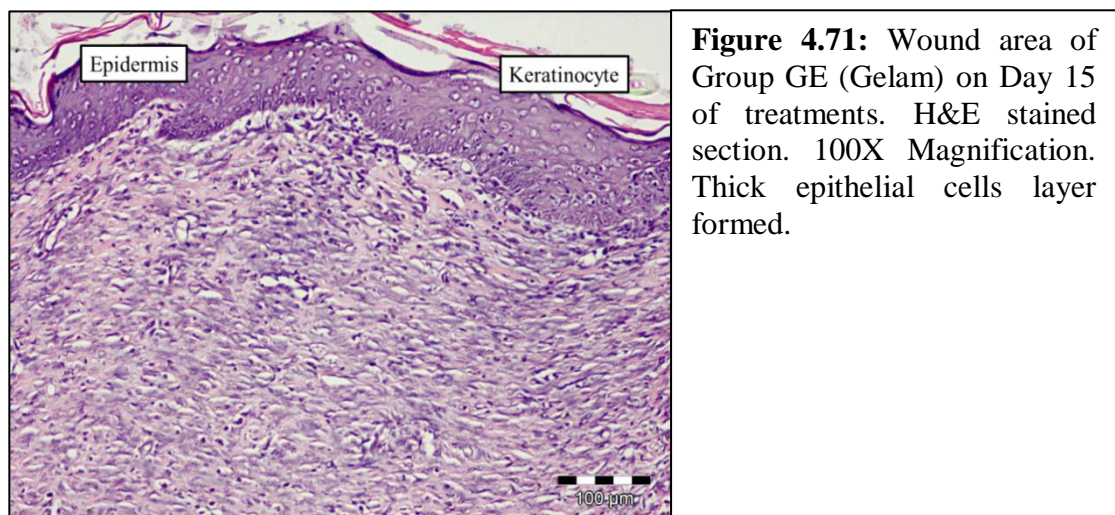


Figure 4.71: Wound area of Group GE (Gelam) on Day 15 of treatments. H&E stained section. 100X Magnification. Thick epithelial cells layer formed.