

Figure 4.32: Blood in the wound area in Group GE (Gelum) on Day 5 of treatments. H&E stained section. 400X Magnification. Blood vessels (labeled with *) with various sizes saturated in the wound area.

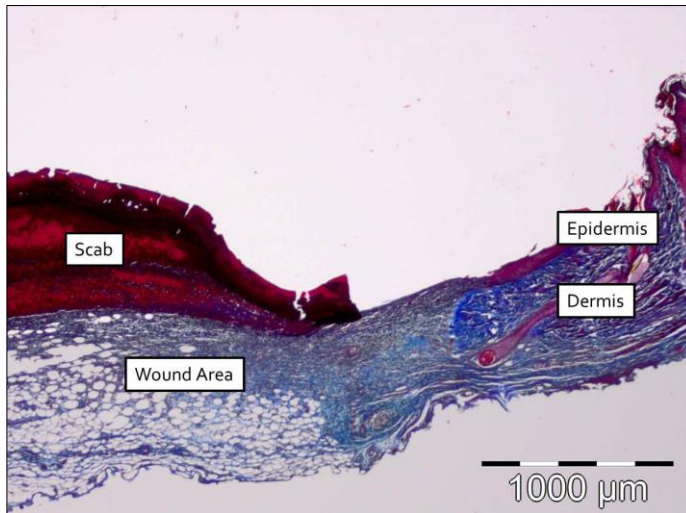


Figure 4.33: Histology of wound in Group GE (Gelum) on Day 5 of treatments. MT stained sections. 20X Magnification. Wound area was stained blue in color indicating the increase of the collagen.

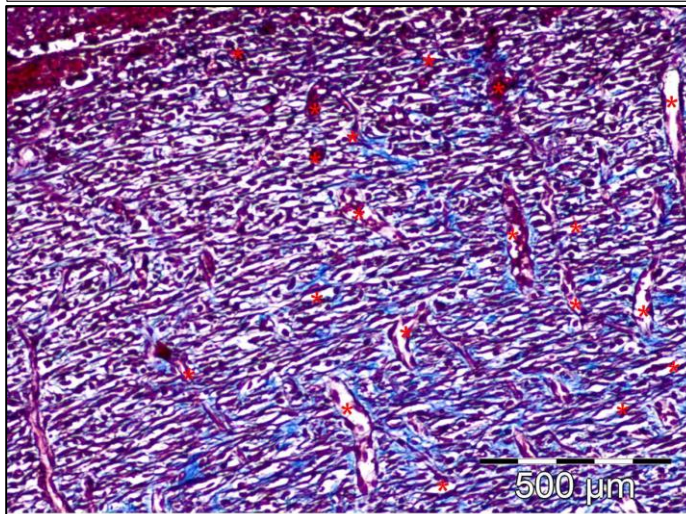


Figure 4.34: Blood vessels, collagen and fibroblast in wound area of Group GE (Gelum) on Day 5 of treatments. MT stained sections. 20X Magnification. Blood vessels (labeled with *) in smaller size saturated in wound area especially around the surface of the wound. Slides were stained in blue color indicating the collagen in the wound area had increased.

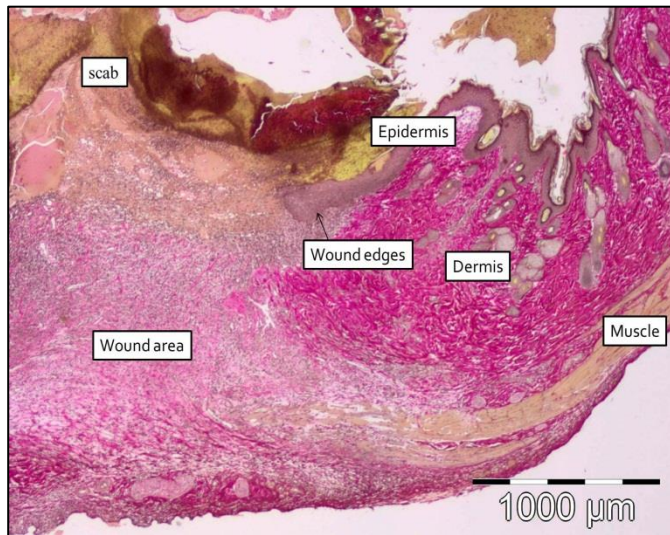


Figure 4.35: Histology of wounds in Group GE (Gelam) on Day 5 of treatments. VE stained section. 20X Magnification. Yellowish color in wound area was not obvious indicating that the exudates amount had reduced. Thick and clear wound edge was observed.



Figure 4.36: Histology of wound area in Group GE (Gelam) on Day 5 of treatments. VE stained section. 100X Magnification. Collagen and fibroblast were stained in red color. The epithelial cells become thicker. Blood vessels (labeled with *) saturated in the wound area.

H&E stained slide (Figure 4.18D) showed that epithelialization had started on Day 5 of treatments in the wounds treated by Gelam honey. Marked wound edges were found, the epithelial cell layer was thickening at the wound edges (Figure 4.35). Blood vessels were found saturated in the area around the wound site just as seen in MT stained sections. A lot of blood vessels in smaller size were found near the surface of the wounds. MT and VE stained slides showed that the collagen level started to increase from the bottom to the top of the wound area indicated by the increased intensity of blue color stain vertically. Collagen was stained in blue in MT stained. Fibroblasts were found accumulating in the surface of the wound area (Figure 4.35). Epithelialization had started but not completed (Figure 4.32). Thick scab was still

attached on the surface of the wound area. Marked wound edge was found on Group GE (Gelam) on Day 5 of treatments (Figure 4.34).

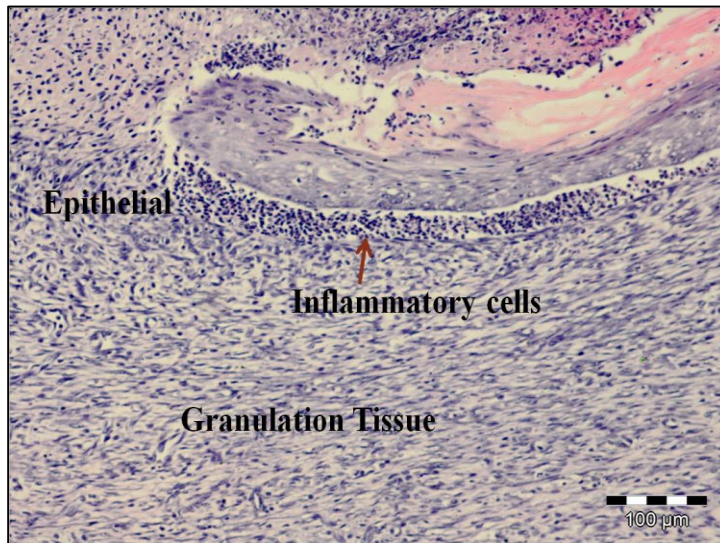


Figure 4.37: Cells migration in the wound of Group NE (Nenas) on Day 5 of treatments. H&E stained section. 400X Magnification. Abundant inflammatory cells found near the epithelial cells.

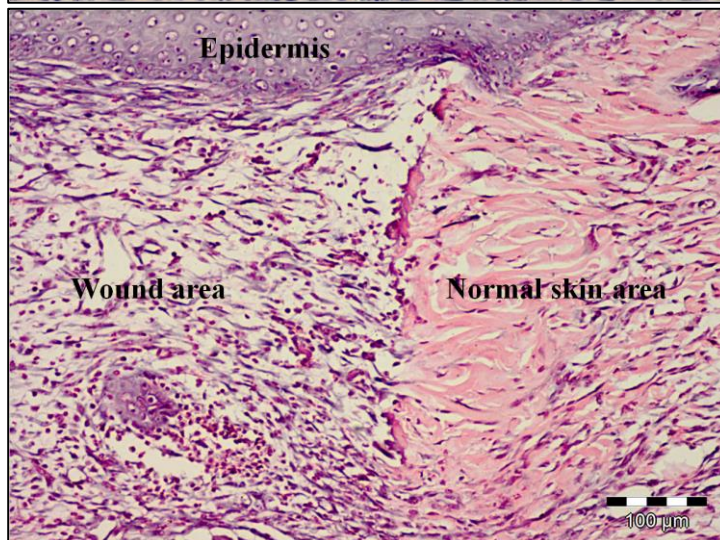


Figure 4.38: Different between the wound area and normal skin found in wound of Group NE (Nenas) on Day 5 of treatments. 400X Magnification. Clear demarcation line found.

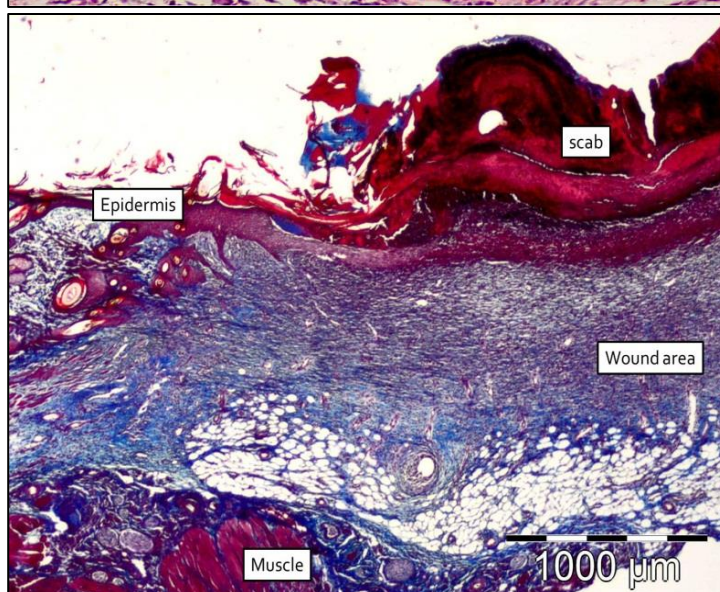


Figure 4.39: Histology of wound for Group NE (Nenas) on Day 5 of treatments. MT stained sections. 20X Magnification. Thick scab found on the surface of the wound area. Thick epithelial cells found on the wound area on the wound area. Wound area were stained blue in color indicated the level of collagen increased.

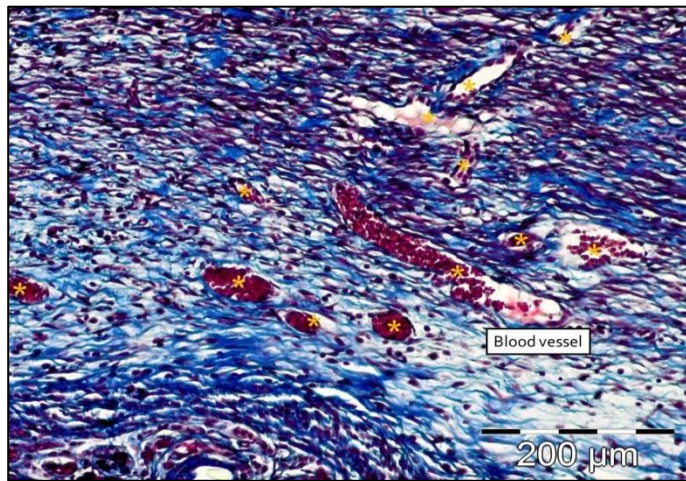


Figure 4.40: Histology of wound area in Group NE (Nenas) on Day 5 of treatments. MT stained section. 100X Magnification. Blood vessels (labeled with *) with various size saturated in wound area. Some were filled with blood cells. Collagen was stained with blue.

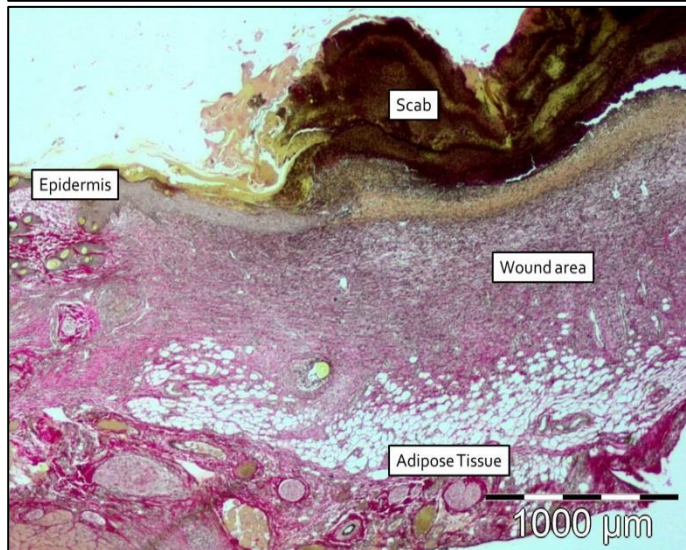


Figure 4.41: Histology of wound in Group NE (Nenas) on Day 5 of treatments. VE stained sections. 20X Magnification. Thick scab was found attached on the wound area. Wound area was stained red and brown indicating the presence of inflammatory cells and collagen.

Results showed that epithelialization had started in the wounds of Group NE (Nenas) on Day 5 of treatments. Scab formation became thicker. Epithelial cells layer of the wound edge became thicker compared to Day 1 of treatments. Macrophages infiltration was seen in the wound site. Inflammatory cells migrated to the area near to the newly formed epidermis (Figure 4.37). Thus, the wound area was in purplish blue due to the abundant number of inflammatory cells. Results of MT stained slides showed that the fibroblast level was increased and dense collagen was found in the wound area (Figure 4.38). Blood vessels were also found a lot in the wound area (Figure 4.40). Fibrosis was abundant in wound surface. In VE stained slides (Figure 4.41), wound areas were faintly stained with the staining. The wound area were stained with slightly yellowish color at the surface of the wound area indicated the presence of exudates on the wound (Figure 4.41).