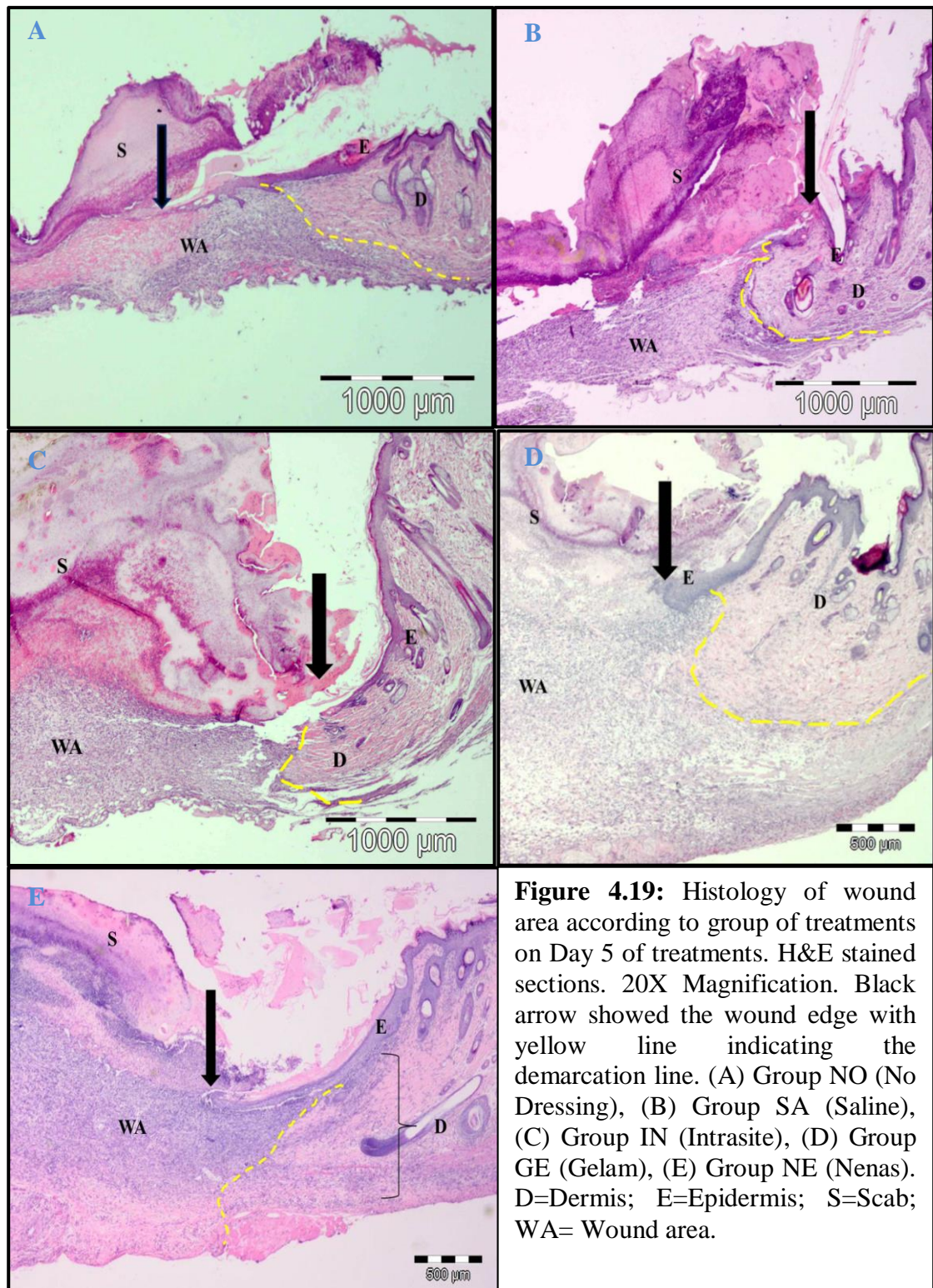
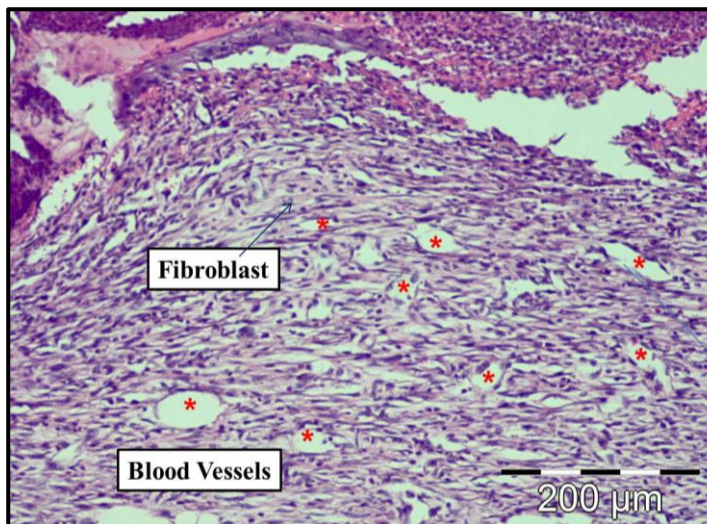


#### 4.4.6.1 DAY 5 OF TREATMENTS

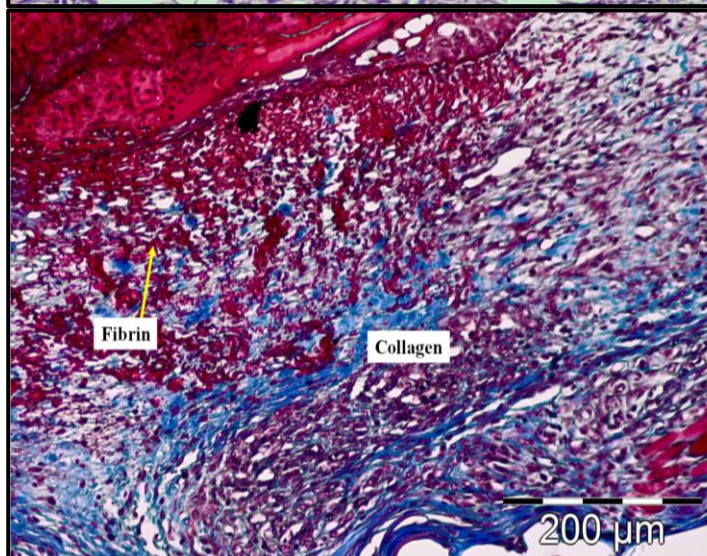


Visualization at the low magnification (e.g. 20X) of the general results on Day 5 of treatments according to treatment groups could be seen and compared in the H&E staining (Figure 4.19). Specific details and features will be discussed in the later part in this section.

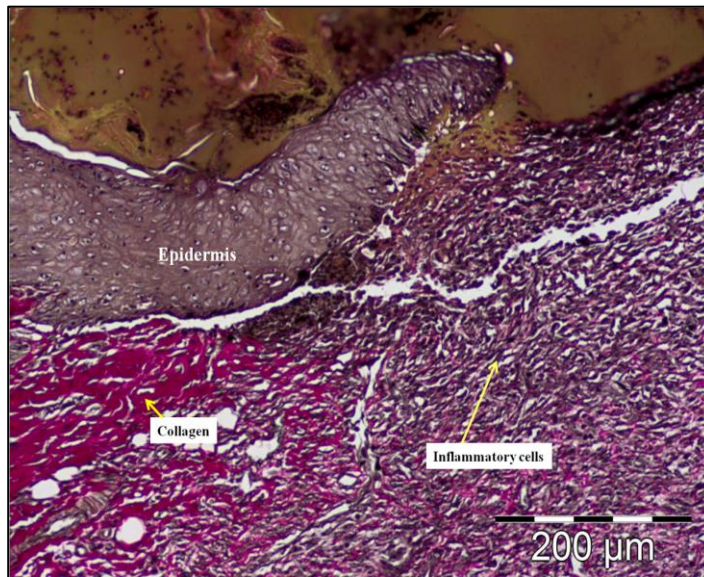
Microphotographs (Figure 4.19) showed that DL in the photomicrographs of treatment groups on Day 5 of treatments as more obvious compared to Figure 4.9. This, indicated that more migration of inflammatory cells had occurred in the wounds of Day 5 of treatments. The wound edges and epidermis found on the wound area grew thicker. Marked increased of epithelialization was found in all treatment groups. Scabs formed on the wound surface of all the treatment groups were thicker.



**Figure 4.20:** Fibroblasts and blood vessels found in the wound area of Group NO (No dressing) on Day 5 of treatments. H&E stained section. 100X Magnification. Blood vessels (labelled with \*) found near the wound edges indicated the starting of angiogenesis.

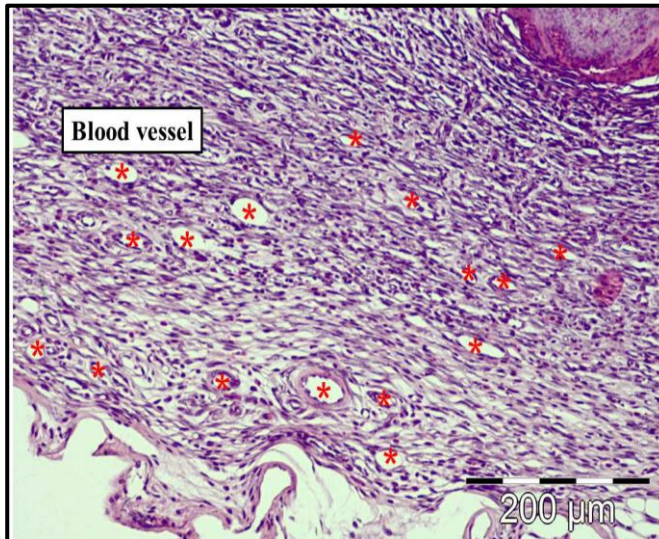


**Figure 4.21:** Wound area in the wound of Group NO (No dressing) on Day 5 of treatments. MT stained section. 100X Magnification. Collagen was stained blue in color.

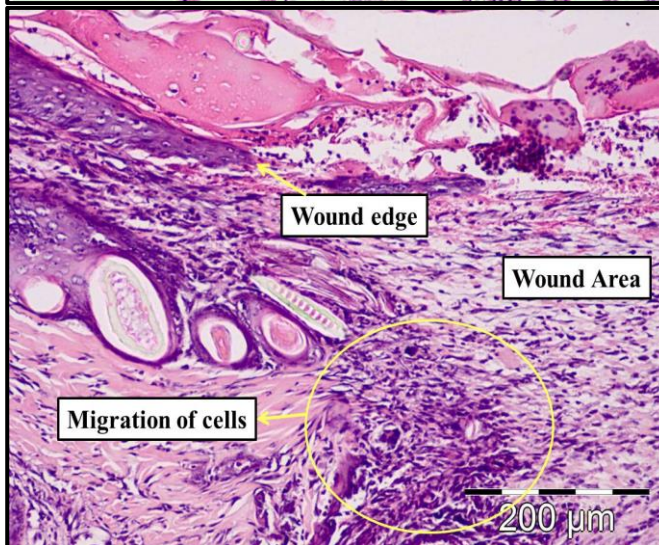


**Figure 4.22:** Epithelialization in the wound of Group NO (No dressing) on Day 5 of treatments. VE stained section. 100X Magnification. Wound edge becomes more obvious and epithelial cells grew thicker.

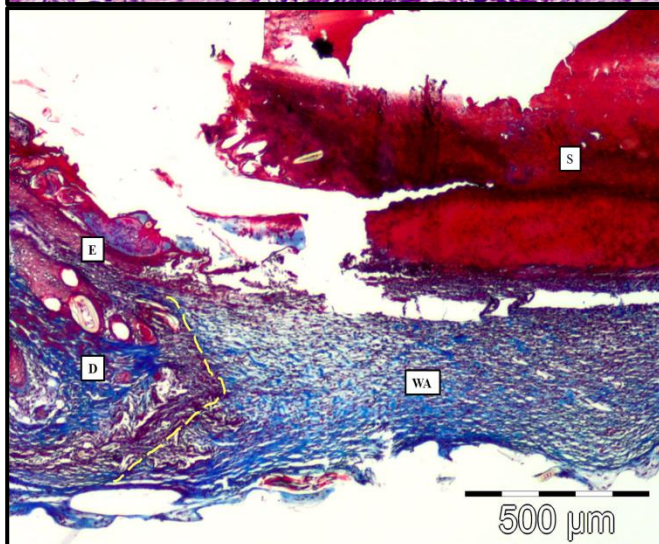
Photomicrographs of H&E stained slides (Figure 4.19 A and Figure 4.20) showed that the amount of inflammatory cells increased and infiltration occurred at the area near the wound edges (Figure 4.19A). Epithelialization had started. Thick scabs were found attached to the surface of wounds. Small blood vessels were found at the area near the wound edges (Figure 4.20). MT stained slides showed increase of fibroblast level in the wound bed indicating that the proliferation had started (Figure 4.20 and Figure 4.21). Mild collagen was found on the wound bed. Blood vessels were more obvious, but collagen content was less (Figure 4.21). Photomicrographs of VE stained slide (Figure 4.22) showed that wound area was filled with inflammatory cells (stained black in color).



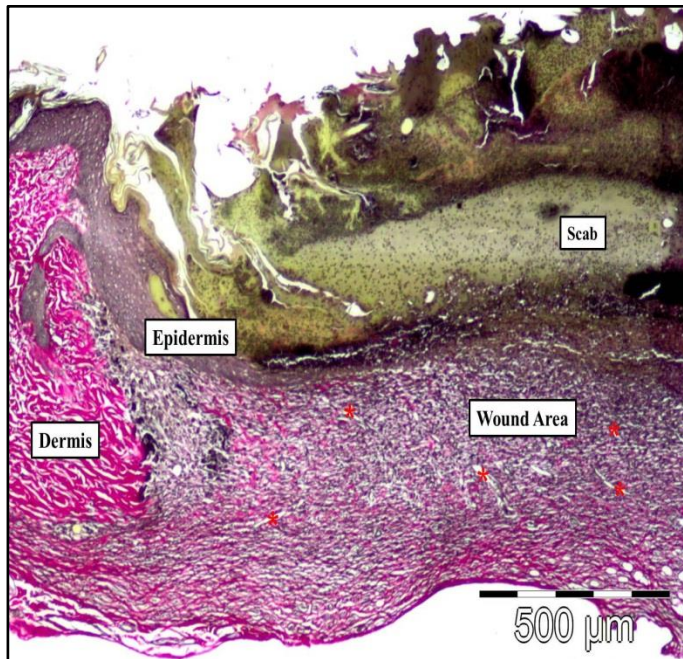
**Figure 4.23:** Blood vessels in the wound area of Group SA (Saline) on Day 5 of treatments. H&E stained section. 100X Magnification. Blood vessels in various size found in the wound area indicated that angiogenesis was occurring. Blood vessels were labeled with \*.



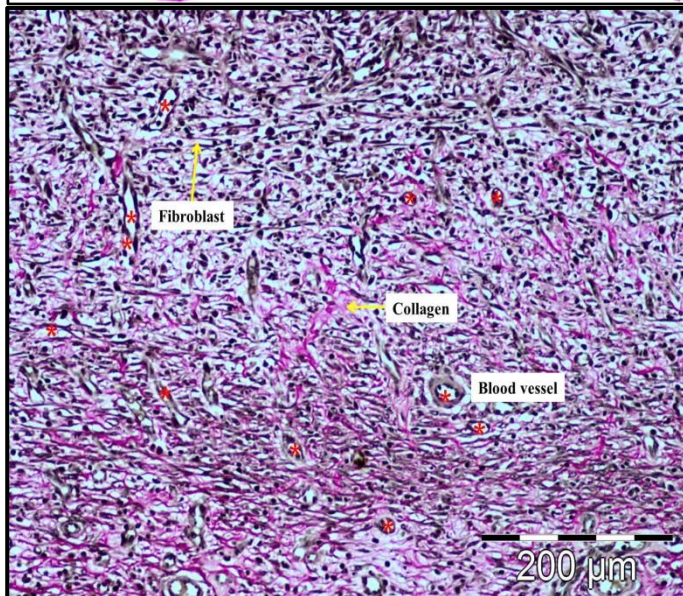
**Figure 4.24:** Cell migration near wound edges in Group SA (Saline) on Day 5 of treatments. H&E stained section. 100X Magnification. Cell migrations more obvious, forming a clear and thick demarcation line.



**Figure 4.25:** Histology of wound in Group SA (Saline) on Day 5 of treatments. MT stained section. 40X Magnification. Level of collagen content in the wound area increased and stained blue in color.



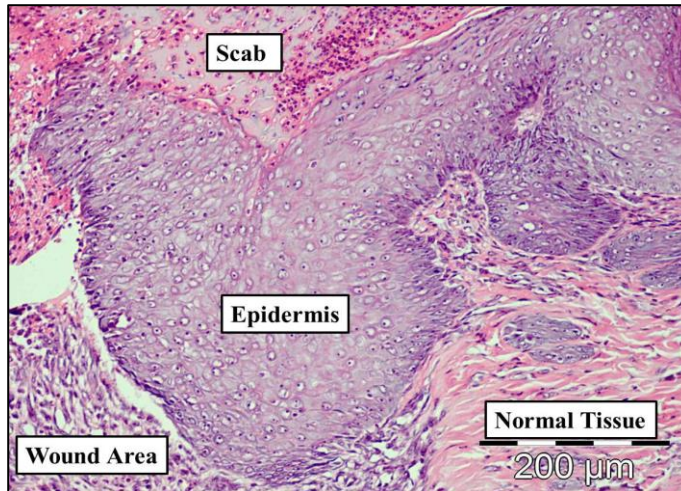
**Figure 4.26:** Histology of wound in Group SA (Saline) on Day 5 of treatments. VE stained section. 40X Magnification. Thick epidermis found in the wound area. Blood vessels (labeled with \*) saturated in wound area.



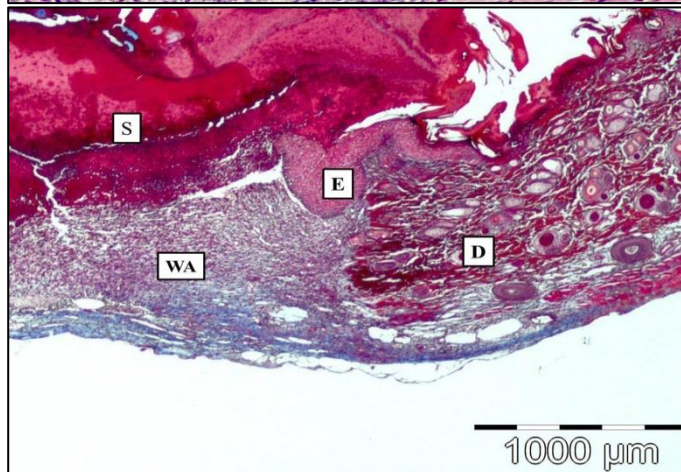
**Figure 4.27:** Blood vessels, collagen and fibroblast in wound area of Group SA (Saline) on Day 5 of treatments. MT stained section. 100X Magnification. Abundant fibroblast (black) found at the top part of the wound area. The bottom part was full with blood vessels (labeled with \*). Collagen was stained red in color.

Photomicrographs reported that epithelialization started on Day 5 of treatments onwards in Group SA (Saline) (Figure 4.26). Abundant inflammatory cells such as macrophages were found in the area near to wound edge and formed a clear demarcation line (Figure 4.24). Scab on the wound surface thickened and marked epidermis was found in wound edge (Figure 4.26). Fibroblasts and collagen level increase indicated the formation of granulation tissue in the wound area. Photomicrographs of MT stained slides (Figure 4.25) showed the increase of fibroblasts and collagen level (stained in blue color) in wound area. This indicated the process of

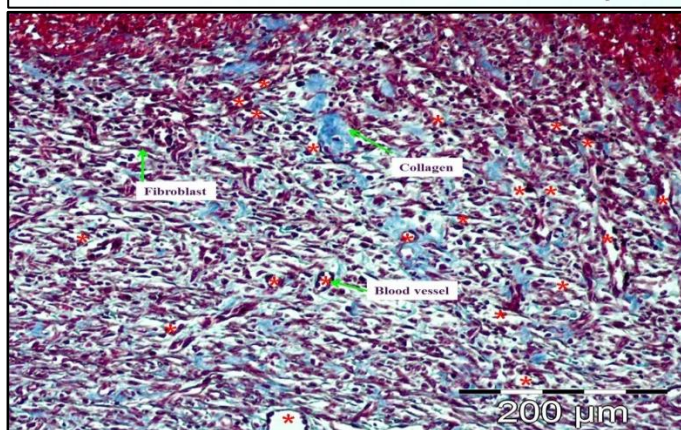
fibroplasia had already started on Day 5 of treatments. Photomicrographs of VE stained slides showed that wound area was well stained indicating that the amount of exudates (yellowish color) had reduced on Day 5 of treatments.



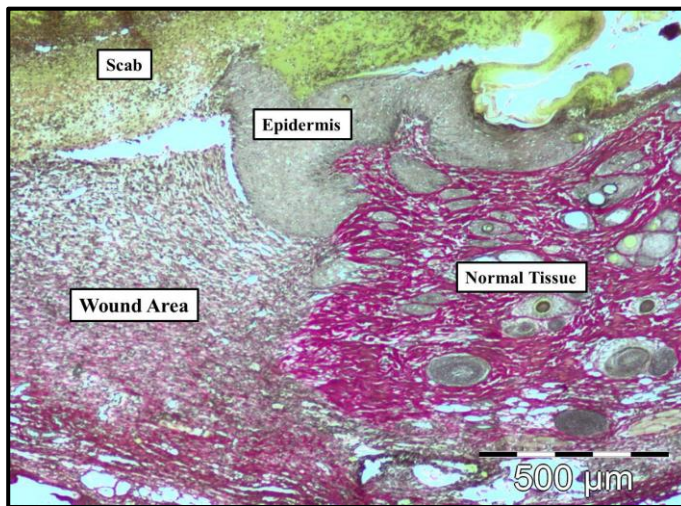
**Figure 4.28:** Epithelialization in Group IN (Intrasite) on Day 5 of treatments. H&E stained sections. 100X Magnification. Thick epithelial cells formed.



**Figure 4.29:** Histology of wound of Group IN (Intrasite) on Day 5 of treatments. MT stained sections. 20X Magnification. Epithelial layer of the wound edges thickened. Thick scab formed on the surface of the wound area. D= Dermis; E= Epidermis; S=Scab; WA= Wound area.



**Figure 4.30:** Level of collagen and fibroblast in wound area of Group IN (Intrasite) on Day 5 of treatments. MT stained sections. 100X Magnification. Blood vessels saturated in the wound area (labeled with \*). Collagen was stained in blue color.



**Figure 4.31:** Histology of wound in Group IN (Intrasite) on Day 5 of treatments. VE stained sections. 40X Magnification. Scale bar=500  $\mu$ m. Wound area stained in lighter red color indicating that the collagen level in wound area was less.

Photomicrograph of the HE stained slides of Group IN (Intrasite) on Day 5 of treatments (Figure 4.19C and Figure 4.28) showed that the inflammatory cells were abundant at the wound area. Epithelialization started in this stage and the epithelial of the wound edges thicken compared to the other treatment groups. Photomicrographs of MT stained slides (Figure 4.28 and Figure 4.30) showed that the fibroblast and collagen level increased on Day 5 of treatments. Abundant blood vessels in various sizes were found saturated in the wound area (Figure 4.30). Blood vessels near the surface of the wound were small. Collagen level at the bottom of the wound area was increased. Fibroblasts were abundant near the surface of wound area. Photomicrograph of VE stained (Figure 4.31) showed that wound area was stained slightly lighter in color indicating the collagen level of wound area was lesser compared to the normal tissue. The level of collagen had started to increase compared to Day 1 of treatments.