

**WOUND HEALING – LOCAL LYMPHATIC SYSTEM DOWN-REGULATES REACTION TO MICROBES AND OWN ANTIGENS?**

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**Introduction:** Open and closed wounds cause response of regional lymphoid tissue. The question arises what kind of reaction proceeds in lymph nodes and whether it reflects cellular and molecular events in the healing wound.

**Aim:** To study phenotypes of cells in wound and draining lymph nodes after primary and secondary skin injury.

**Material and methods:** Group 1a. Incisional wound of dorsum of paw and stitching. Group 2a. Subdermal injection into paw of 10<sup>8</sup> Staph.epidermidis for 6 days. Group 3a. Closed fracture of tibia. Follow-up period lasted in all groups for 7 days. Group 1b. Incisional wound followed after 7 days by another incision. Group 2b. Re-injection of 10<sup>8</sup> Staph.epidermidis. Group 3b. Re-fracture of tibia. Specimens from the site of injury or bacterial injection and popliteal and iliac lymph nodes were taken on day 7 in groups 1a, 2a and 3a, and on day 14 in groups 1b, 2b and 3b. Infiltrating and lymph node cell phenotypes were identified with moAbs Results. Groups 1a, 2a,3a. Paw skin. In all groups, 7 days after primary injury, multiple (++) MHCII+, ED1+ and CD54+ cells were found in subepidermal region or fracture gap. Lymph nodes. In all groups an increase in lymph node weight and cell concentration was observed. The W3/25+, MHC II+, ED1+, HIS48+, OX7+ and OX62+ and CD54+ cells accumulated in follicles, paracortex and medulla. The percentage of W3/25+CD25+ (T regulatory) was not increased. High frequency of B cells was seen in follicles and medulla. Groups 1b,2b,3b. In all groups evidently less of infiltrates in the paw and positively stained cells in lymph nodes were seen.

**Conclusions:** There were no qualitative differences in skin infiltrates and lymph node cell subtypes between the the primary and secondary injury. In some cases secondary injury caused less inflammatory reaction. The mechanism of local suppression is studied.