

# Microbiology & Applied Microbiology

February 11, 2022 | Webinar

## Vitamin K accelerates wound healing process on rat skin achieved by common wound dressing agents in Erbil city/ Kurdistan

Shokhan Osman and Zahra Abdulqader Amin

Hawler Medical University, Iraq

Vitamin K is a fat-soluble vitamin which plays an important role in coagulation pathways of living organisms. The aim of the study was to test the wound healing effect of Vitamin K and some common wound dressing agents available in hospitals and private pharmacies of Erbil City/ Kurdistan which were; the Moist Exposed Burn Ointment (MEBO) and the Cica silver spray and to test their combination with vitamin K injection.

**Methods:** Six groups of albino rats were used. Group M: Mebo ointment, Group C: Cica silver spray, Group K :Vitamin K injection, Group MK: Mebo ointment+Vitamin K injection. Group CK: Cica silver spray +Vitamin K Group, and N:(No-treatment group). The duration of the experiments was as 7,14, and 21 days post wound surgery. The percentage of wound contraction was measured and the blood serum was collected to test the level of transforming growth factor- $\beta$  (TGF $\beta$ ) and platelet-derived growth factor (PDGF).

**Results:** The results showed that best wound contraction

percentage was given by the MK treated rats in comparison to the not treated rat's group. Similar results were obtained from TGF $\beta$  and PDGF data in which MK group showed significant highest levels of these growth factors.

**Conclusion:** Application of MEBO ointment showed significant results during the wound healing process when it used separately but the best result of MEBO ointments was given when it used in combination with vitamin K in treating excisional wound model on rat skin. therefore, our results provide a scientific basis of co-administration of vitamin K and MEBO in the management of wounds. Keywords: Wound healing; Rat; cskin; vitamin K; MEBO; Cica silver spray.

### Speaker Biography

Shokhan Osman is currently a lecturer in Hawler Medical University, Iraq.

e: shokhan.mahmud19@gmail.com