

Review of: "Evaluation of the Tobacco Heating System (THS) During Closed Lower Limb Fracture Healing in Trauma Smokers' Patients"

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I commend the authors for their research proposal titled "Evaluation of the Tobacco Heating System (THS) During Closed Lower Limb Fracture Healing in Trauma Smokers' Patients." This study aims to assess the impact of switching from conventional cigarette smoking (CS) to a tobacco heating system (THS) on the clinical outcomes of closed tibia or femur fractures. The topic is timely and clinically relevant, particularly given the growing interest in the effects of smoking alternatives on health outcomes. The manuscript is generally well-written, the methodology is clearly presented, and the discussion is thoughtfully developed.

However, there are significant issues that need to be addressed to enhance the study's rigor and clarity:

Surgical Method and Fixation Types: The authors state, "The study will be composed of 3 groups, all lower limb (tibia or femur) fracture orthopedic trauma patients, who will undergo surgery (internal or external fixation, which involves using screws, plates or nails to hold the bone fracture)." The use of different fixation methods, particularly the choice between internal fixation and external fixation, could introduce variability in the outcomes due to differences in the rigidity provided by each method. External fixators, especially, offer less stability than internal fixation, potentially impacting fracture healing outcomes. To address this, the authors should specify how they will manage this variation. For instance, will they be using unilateral or ring (circular) external fixators? Providing clarification on the types of external fixation and how this variable will be controlled or accounted for is essential for study consistency.

In conclusion, while this study has the potential to contribute valuable insights into the effects of THS versus CS on fracture healing in trauma patients, the recommended revisions are crucial to enhance its clarity, impact, and overall scientific validity.