

# Review of: "Comparing the Effectiveness of Aloe Vera Gel and 2% Chlorhexidine Gluconate Solution in Preventing Phlebitis Caused by Peripheral Vein Catheters in Hospitalized Patients"

Ensieh Ghasemian Lemraski<sup>1</sup>

<sup>1</sup> Ilam University

Potential competing interests: No potential competing interests to declare.

In the present research, intravenous therapy is a crucial medical intervention, but phlebitis, a common complication associated with peripheral vein catheters, can occur. Traditional methods to manage phlebitis include pharmacological treatments like 2% chlorhexidine solution. This study aims to evaluate and compare the effectiveness of aloe vera gel and 2% chlorhexidine gluconate solution in preventing phlebitis in hospitalized patients.

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- How was randomization ensured in the study? Were the participants and researchers blinded to the treatment groups to prevent bias?
- How was the sample size of 30 patients per group determined? Was a power analysis conducted to ensure that the sample size was sufficient to detect meaningful differences?
- Could you provide more details on the control group's treatment procedures? Were any additional measures taken to ensure that this group received standardized care?
- What are the potential reasons for the observed significant difference in phlebitis incidence at 72 hours but not at 24 and 48 hours? Is there a particular aspect of aloe vera gel that becomes more effective over time?
- How do the results compare with other studies using similar interventions for phlebitis prevention? Are there any specific factors that might explain differences in outcomes?
- Were there any other symptoms or side effects observed in the patients treated with aloe vera gel or chlorhexidine solution that were not mentioned in the results?
- How can the findings be implemented in clinical practice? What are the practical considerations for integrating aloe vera gel into routine catheter care protocols?
- Is there an analysis of the cost-effectiveness of using aloe vera gel compared to chlorhexidine solution? Does the lower incidence of phlebitis translate into cost savings for healthcare institutions?
- Beyond phlebitis prevention, how might the use of aloe vera gel affect overall patient comfort and recovery during intravenous therapy?
- What is the underlying mechanism by which aloe vera gel reduces the incidence of phlebitis? Are there specific compounds in aloe vera that contribute to its anti-inflammatory effects?

- Could the findings be applicable to other types of invasive procedures or medical devices? How might aloe vera gel perform in preventing complications in other clinical settings?