

# Effects of Homoeopathic Medicines used as Adjuvant with External Application in Enhancing Healing of Wounds from 18 to 40 Years Age Group: A Randomized Experimental Study

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DOI: <https://doi.org/10.52403/ijhsr.20220929>

## ABSTRACT

**Introduction:** Wound healing consists of a perfect and coordinated cascade of events that result in tissue reconstitution. According to Indian studies on wound epidemiology, the frequency of chronic wounds in the community is 4.5 per 1000 people, but the prevalence of acute wounds is nearly doubled at 10.5 per 1000 people. The likelihood of increased rates of disability and lowering quality of life as a result of wounds was a primary motivator for this research. Homoeopathy has wonderful medicines which impacts the wound healing. It not only causes enhances wound healing it also improves the number of days that a wound takes to heal. It helps in managing the outcomes of abnormal wound healing. Both internally administered and external applied Homoeopathic medicine causes wounds to heal at much steady rate and also prevents the abnormal healing of the wounds. Hence this study was taken up to show the efficacy of Homoeopathic remedies that can be used both internally and externally in the cases of wounds.

**Material and Methods:** An experimental study was conducted with a sample size of 30 patients with different types of wounds from all socio-economical conditions which were fulfilling inclusion and exclusion criteria. Consent from parents was taken. Case taking as per case recording format case was done. Followed by case processing, a similimum matching the totality of symptoms was given to the patient. The outcome assessment criteria were classified as improved and not improved on the basis of Bates Jensen Wound Assessment Tool. The results were analyzed by using Paired t Test and outcome was assessed by the degree of improvement as per Bates Jensen Wound Assessment Tool.

**Results:** The results were very promising. Out of 30 cases, 28 cases showed improvement and 2 cases were not improved. Statistical analysis was done with the help of 'paired t-test. The inference is concluded that the p value is <0.00001. Hence, we can conclude that, result is significant at  $p < 0.05$ .

**Conclusion:** The study concludes that Homoeopathic medicine when used internally and externally has shown enhanced healing of wounds.

**Keywords:** Wound healing, Homoeopathic Management, External application.

## INTRODUCTION

Wound healing is the outcome of a well-coordinated series of processes that lead to tissue regeneration. The healing process is common to all or any wounds, independent

of the agent that has caused it. <sup>(1)</sup> The healing of wounds has always provided challenges for the medical profession whether chronic or acute. Understanding the processes which enable wounds to heal is

primarily administered by the utilization of models, *in vitro*, animal and human. Human models are widely acknowledged as providing the finest opportunity to understand the elements that drive wound healing and to evaluate the efficacy of wound therapies. <sup>(2)</sup> The wound-healing programme is a complex interplay between multiple cell types that involves a variety of intercellular signalling mechanisms. According to the stages of normal wound healing, most wounds heal quite fast and efficiently within a few weeks. <sup>(3)</sup> Wound healing is defined as the re-structuring and re-functioning of injured or diseased tissues. Blood clotting, tissue repair, scarring, and bone healing are all examples of healing processes. Healing is the first intention results in the restoration of continuity by fibrous adhesion without the production of granulation tissue, leaving a thin scar. When the borders of the wound are too far apart to be brought together, healing by second purpose wound repair by union by adhesion of granulating surfaces is used. Granulations grow from the wound's base and sides up to the surface. Healing by third intention is by the gradual filling of a wound cavity by granulations and a cicatrix. <sup>(4)</sup> The public health sector is concerned about skin wounds and poor wound healing. Treatments that are complex and take a long time add to the cost of healthcare. Even in the most straightforward cases, burns, chronic wounds, and other difficult-to treat wounds necessitate surgery and prolonged hospitalisation. <sup>(5)</sup> Chronic wounds were found to be prevalent in the community at 4.5 per 1000 people, but acute wounds were nearly doubled at 10.5 per 1000 people. The most common cause of chronic wounds was inadequate and incorrect management of acute wounds. The practise of walking and working barefoot, particularly in agricultural regions, has also contributed to an increase in the number of cases of improper wound healing. <sup>(6)</sup> Many drugs of plant origin that have been reported to possess potent wound healing activities 12-41 were found to have free radical

scavenging activity. <sup>(7-8)</sup> Homoeopathic potency prepared based on these plants may help in wound healing and preparing. The amount of complications that occur in healing of wounds can be managed by Homeopathy in simple way. Both internal and external application of the Homeopathic medicine helps in preventing complications and help in wound healing. <sup>(9-10)</sup> Various medicines made as per Homoeopathic principles are shown to help in healing of wounds. When both the internal and external application of Homeopathic medicine was used, the healing process can be done without any complications. Thus to see whether the use of Homoeopathic remedies both internally and externally can improve the wound healing and enhance the time healing for wound to get healed.

## METHODOLOGY

The study design used is experimental study. Cases of wounds were recruited from Outpatient department of the institute. Sample Size of 30 cases was enrolled in this study. Sampling technique used was simple random sampling technique. Study duration is for 18 months. Duration of each cases would be 12 months or till improvement occurs; whichever is earlier. Duration of follow of each case- at an interval of 15 days or earlier if required.

### Inclusion Criteria:

1. Patients of 18 years to 40 years age group.
2. Patients of both genders.
3. Patients of different socioeconomic backgrounds.

### Exclusion Criteria:

1. Patients with irregular follow up.
2. Cases with severe injuries requiring blood transfusion and hospitalization.
3. Cases with grave pathological changes.
4. Patients suffering from systemic diseases, such as cardio/respiratory diseases, diabetes etc.
5. Patients' parents unwilling to sign the written consent and photographic work.

**Subject withdrawal criteria:**

1. Patients who want to discontinue treatment.
2. The patients in whom the deterioration of vital parameters occur

**Bates Jensen Wound Assessment Tool -**  
Outcome assessment will be based on the difference in pre & post scores of Bates Jensen wound assessment tool.

**RESULT**

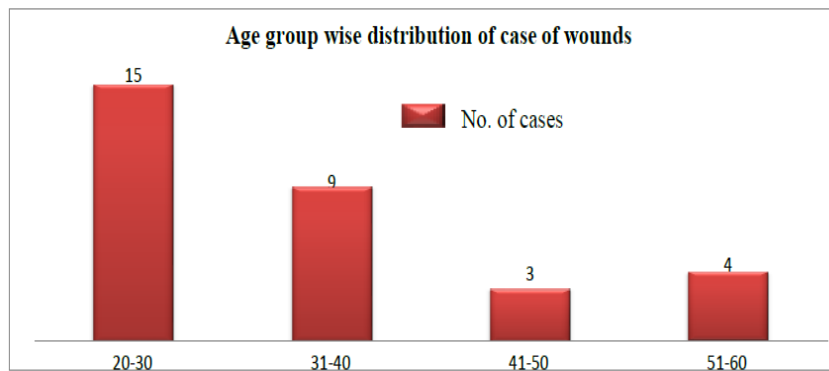
The results from this study are interpreted with mean difference before and after shown between the Bates Jensen Wound Assessment. Table no.1 explains about distribution genders within cases.

Table No.1: Gender wise distribution of case of wounds

Gender	Number of cases
Male	16
Female	14

Further figure no.1 explains the demographic information about age distribution of cases of wounds.

Figure No.1: Age group wise distribution of case of wounds



P value and statistical significance: The two-tailed P value is less than 0.0001 by conventional criteria; this difference is considered to be extremely statistically significant seen in table no. 2.

Table No.2- Bates – Jensen criteria for Wound Assessment before and after.

Groups	Bate Jensen Score Before	Bate Jensen Score After
Mean	31.00	9.80
SD	11.50	9.10
SEM	2.10	1.66
N	30	30

Confidence interval: The mean of Bate Jensen Score Before minus Bate Jensen Score After equals 21.20, 95% confidence interval of this difference: From 15.10 to 27.30. Intermediate values used in calculations:  $t = 7.1063$   $df = 29$  standard error of difference = 2.983 mentioned in figure no.2.1 & 2.2 & 3.

Figure No.2.1 Histogram of Case distribution.

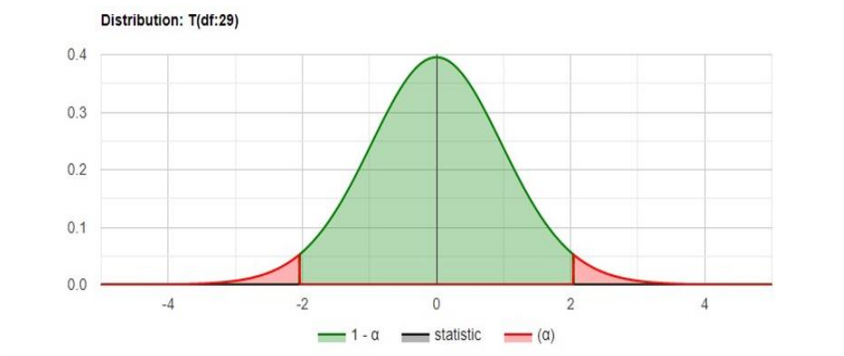


Figure No.2.2 Histogram of Case distribution.

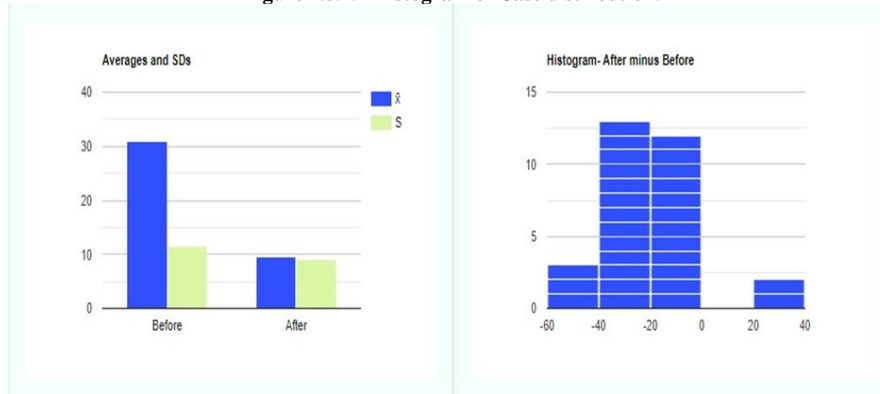
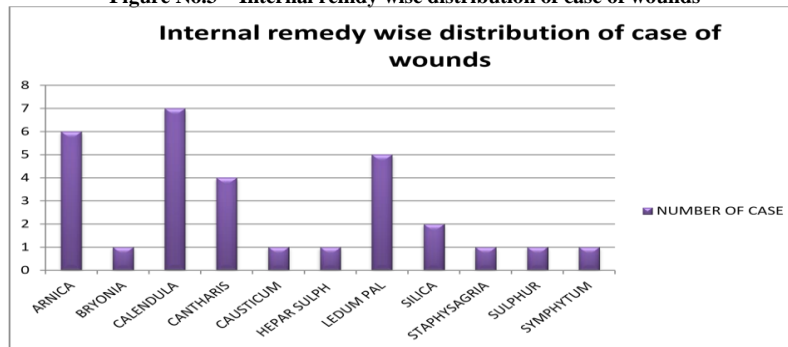


Figure No.3 – Internal remedy wise distribution of case of wounds



## DISCUSSION

Wound healing is the result of a well-coordinated series of events that leads to tissue regeneration. The healing process is common to all or any wounds, independent of the agent that has caused it. Wound healing, whether chronic or acute, has always been a difficult task for doctors. In vitro, animal, and human models are used to learn about the processes that enable wounds to heal. Human models are widely considered as the best way to learn about the elements that influence wound healing and to assess the efficiency of wound treatments. Many drugs of plant origin that have been reported to possess potent wound healing activities were found to have free radical scavenging activity. Homoeopathic potency prepared based on this plant may help in wound healing and preparing. The amount of complications that occur in healing of wounds can be managed by Homeopathy in simple way. The study was designed with an aim of understanding the role of indicated Homoeopathic medicine prescribed internally along with external application in enhancing healing of wounds

from 18 years to 40 years age group. The findings of the study are discussed below. To fulfill the purpose of the study a total of 30 cases were taken by simple random sampling. To arrive at the conclusion, statistical analysis by Paired T test was done. The maximum number of cases were found in age group of 20-30 years which was 15 cases which accounts to 50 % of cases. The study concludes that of 30 patients enrolled for the study, the total number of improved cases were 28 (93.33 %) and not improved were 2 (6.66 %). The gender wise distribution of cases was found in Males (16 cases) more as compared to males (14 cases) Most common type of wound were Punctured, Laceration and Burns respectively accounting to 6 cases each i.e. 20% each. Most commonly prescribed remedy Internally based on totality of symptoms was Calendula in 7 cases (23.33 %) followed by Arnica in 6 cases (20 %) and Ledum Pal in 5 cases (16.66%). Most commonly prescribed Potency internally is 30 C in 15 cases (50 %). Most commonly prescribed remedy externally based on therapeutic

understanding was Echinaceae in 11 cases (36.66 %) followed by Arnica in 7 cases (23.33 %) and Calendula in 6 cases (20%). Most commonly administered externally application form was in tincture form in 21 cases (70 %), followed by ointment in 5 cases (16.66 %).

## CONCLUSION

All the above observations surely proved the fact that there is a scope of Homoeopathic medicines prescribed internally along with external application helps in enhancing healing of wounds from 18 years to 40 years age group. For further recommendation, the same study must be conducted on large number of cases. The same study must be conducted with various other Homoeopathic remedies which help in cases of wound healing without leading to any complication. The study must be continued for a long period of time. The further comparison amongst the modalities available in modern medicine can be done.

**Acknowledgement:** Authors declare no any acknowledgement.

**Conflict of Interest:** The author declares no known competing financial interests or personal relationships that could have appeared to influence the work reported in this research paper.

**Source of Funding:** This work received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

**Ethical Approval:** Approved

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How to cite this article: Megha Sharma, Kavita Khandare. Effects of homoeopathic medicines used as adjuvant with external application in enhancing healing of wounds from 18 to 40 years age group: a randomized experimental study. *Int J Health Sci Res.* 2022; 12(9):228-232. DOI: <https://doi.org/10.52403/ijhsr.20220929>

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