



Euphorbia hirta Leaves Extracts for Removal of Warts and Skin Diseases

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Abstract

Euphorbia hirta is a medicinal plant which is been widely used from olden days as a herbal medicine for various purposes for mankind. Our country is known for its medical and Ayurvedic treatments. Various parts of the plant is been used for various uses, and here the leaves are been used for the treatment of warts and skin diseases. Questionnaire was prepared and the feedback was collected before the usage of this medicinal plant. The latex or the sap of the plant was collected from *Euphorbia hirta* and it has been used for the treatment. After the completion of the treatment again questionnaire was given and the feedback was collected for the group of people. This research describes about the medicinal properties, the days of treatment, the feedback and the other important aspects of *Euphorbia hirta*. The research enlightens on how efficient the leaf extracts of *Euphorbia hirta* totally irradiated the warts and the fungal diseases totally without any pain and side effects. Moreover, the availability of the leaves are abundant and easily available, hence economical. There are many medicinal plants around us like this each having its own chemical composition which can be used in our daily life without any side effects instead of going for synthetic drugs.

Keywords: *Euphorbia hirta*, Latex, Medicinal Plant, Questionnaire, Sap

1. Introduction

Plant parts find various uses, here the leaves are been used for the treatment of warts and skin diseases¹. *Euphorbia hirta* is a kind of weed usually called as asthma plant which has its origin in India. A feedback study was carried out on this plant². Medicinal plant extracts and Ayurvedic medicines do not have any kind of side effects when compared to the synthetic drugs which leads to side effects and harmful to human body³. Each and every part of the plants, its fruits and even seeds are used for medicinal treatment. More than 3000 medicinal plants are recognized in India for having medicinal values in curing various diseases. This research is based mainly on the removal of warts and fungal infections on the skin⁴.

2. General Information of *Euphorbia hirta*

Euphorbia hirta is an annual herb which grows upto 25 inches as an erect plant. It belongs to the family Euphorbiaceae⁵. It is a hairy plant which has leaf arrangement in opposite direction and its purplish in colour. Its fruits are yellow in colour and seeds are wrinkled. Some of the vernacular names are *Ammam pacharisi* in Tamil, *Dudhi* in Hindi, *Nelapapai* in Malayalam and *Nanabala* in Telugu. These *Euphorbia hirta* are found in roadsides, or in gardens. It possess antifungal, antimalarial, antiasmthic, antibacterial properties in it⁶.

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3. Pharmacological Activity on Diseases

Many works have been done previously on *Euphorbia hirta* and it is found that many active chemical compounds are been isolated from it. By methanolic extract quercitrin and myricitrin have been isolated⁷. Aqueous leaf extract of *Euphorbia hirta* showed antioxidant activity and ethanolic extract showed antifungal activity. The n-hexane extract of *Euphorbia hirta* showed anti-inflammatory effects. Other than these tinyatoxin, choline, camphol derivatives are also present in *Euphorbia hirta*⁸.

4. Methodology

Students of BIHER campus, Chennai who have warts and fungal infections on skin have been identified and segregated as of in Figures 2 and 3. Around 35 students were having the issue of warts and fungal infections. They were grouped.



Figure 1. *Euphorbia hirta* collected from BIHER campus.



Figure 2. Samples of the warts in the fingers of the students



Figure 3. Samples of the warts in the fingers of the students.



Figure 4. Samples of the fungal infection on the toes of the students.



Figure 5. Samples of the fungal infection on the toes of the students.

Warts are growths in skin due to the papilloma virus and these are often contagious⁹. These are rough when felt and the colour may vary from black, brown to skin colour itself and its painful in daily life.

There are several methods involved in removal of these warts with modern technologies like chemical peel, excision where the wart is cut off, treatment by laser, etc. All these procedures involve pain while

undergoing treatment. But when it is treated with the latex of the plant *Euphorbia hirta*, there was no such pain involved in the treatment.

Ring worm cause fungal infections in the toes. It's a kind of fungus which live naturally in the environment and infect the toes mostly as of in Figures 4 and 5¹⁰.

5. Questionnaire

The questionnaire was given to students in BIHER which consisted of a list of questions like, the name, age and gender of the person, if he/she has a wart or fungal infection, which part of the body has developed infection/wart, in how many days the wart/fungal infection have developed, the size of the wart, how the person feel the pain involved in the wart/fungal infection in their daily life, if any other treatment they have undergone for this, if so how it has responded for it.

6. Collection of Samples

The *Euphorbia hirta* plants were collected from the campus of BIHER as in Figure 1. Initially, leaf was plucked and the sap of the plant had been collected in a glass cuvette with lid. Only a single drop of sap was obtained from one leaf when it was plucked from the stem. It was very tedious job to collect the sample. Later, the stem in a distance of about 2 cm was cut and pressed to move the sap from the stem to outside the cut area as in Figure 6. These fresh samples were given to the students who had wart and fungal infections. The sap was applied on the infected area around 7 to 8 times a day with the help of filler as in Figure 7. Each day fresh samples was collected and given to the students for each day's use.

7. Collection of Feedback

The application of the sap of *Euphorbia hirta* had been given to the students according to the size of the wart and the infection in toes¹¹. A normal sized wart with diameter of about 0.2 mm to 0.5 mm was required the sap of *Euphorbia hirta* for a maximum of 3 to 4 days with 7 to 8 times of application per day as in Figures 8 and 10.



Figure 6. Collection of Sap of *Euphorbia hirta* in a glass cuvette.



Figure 7. Application of sap of *Euphorbia hirta* on the wart.



Figure 8. Sample of pictures before the application of the sap of *Euphorbia hirta* on wart.



Figure 9. Sample of pictures after the application of the sap of *Euphorbia hirta* on wart.



Figure 10. Sample of pictures before the application of the sap of *Euphorbia hirta* fungal infections on the toes.



Figure 11. Sample of pictures after the application of the sap of *Euphorbia hirta* fungal infections on the toes.

The warts which were larger than 0.5 mm require 3 additional days of application of the sap. The wart uprooted itself and a small pit was formed. The feedback form to be filled was given to the students after the wart was uprooted. The form consisted of questions such as

how many days they had applied the sap of *Euphorbia hirta*, how many times they applied it in a day, during the application days how they felt, did they experience any pain and how this process was different from other modern techniques in removing the warts and the fungal infections in toes.

8. Results

The feedback obtained from students on application of the sap on the infected area was painless. The average day of eradication of wart was 5 days. The wart started to diminish gradually by the application of the sap of *Euphorbia hirta* and finally it uprooted itself forming a pit. The fungal infections on the toes started to vanish but it took little more time than the wart to eradicate completely. The average number of days for usage of sap to treat fungal infection in toes is around 8 days.

9. Conclusion

The above research concluded that *Euphorbia hirta* treated the wart and fungal infections in toes completely without any trace as in Figures 9 and 11. The sap application on 35 students was successful. And the main important part of this research is that there was no pain or any blood loss during the usage of *Euphorbia hirta* sap. This is one of the best ways to remove the warts and fungal infections than the other modern techniques which are painful and higher cost for treatment. *Euphorbia hirta* was found in the streets or in the corners of the gardens so it was cheap and could be easily used for the treatment.

10. References

1. Asha S, Deevika.B, Sadiq AM. *Euphorbia hirta* Linn - A review on traditional uses, phytochemistry and pharmacology. World J. Pharm. Res. 2014; 3(4):96-7.
2. Al-Snafi AE. Pharmacology and therapeutic potential of *Euphorbia hirta*. IOSR J. Pharm. 2017; 7(3):7-20. <https://doi.org/10.9790/3013-0703010720>
3. Tabassum N, Hamdani M. Plants used to treat skin diseases. Pharmacogn. Rev. 2014; 8(15):52-60. <https://doi.org/10.4103/0973-7847.125531>. PMID:24600196. PMCID: PMC3931201
4. Basma AA, Zakaria Z, Latha LY, Sasidharan S. Antioxidant activity and phytochemical screening of the methanol

- extracts of *Euphorbia hirta* L. Asian Pac. J. Trop. Med. 2011; 4(5):386–90. [https://doi.org/10.1016/S1995-7645\(11\)60109-0](https://doi.org/10.1016/S1995-7645(11)60109-0)
5. Nyeem MAB, Haque MS, Akramuzzaman M, Siddika R, Sultana S, Islam BMR. *Euphorbia hirta* Linn. a wonderful miracle plant of Mediterranean region: A review. J. Med. Plants Stud. 2017; 5(3):170–5.
 6. Patil SB, Magdum CS. Phytochemical investigation and Antitumour activity of *Euphorbia hirta* Linn. Eur. J. Exp. Biol. 2011; 1(1):51–6.
 7. Uppal G, Nigam V, Kumar A. Antidiabetic activity of ethanolic extract of *Euphorbia hirta* Linn. Der Pharmacia Lettre, 2012; 4(4):1155–61.
 8. Gayathri A, Ramesh KV. Antifungal activity of *Euphorbia hirta* L. inflorescence extract against *Aspergillus flavus* A mode of action study. Int. J. Curr. Microbiol. App. Sci. 2013; 2(4):31–7.
 9. Ahmad W, Singh S, Kumar S. Phytochemical screening and antimicrobial study of *Euphorbia hirta* extracts. J. Med. Plants Stud. 2017; 5(2):183–6.
 10. Runyoro DKB, Ngassapa OD, Nondo RSO, Melkiory P. Antifungal activity against onychomycosis causative fungi and Brine shrimp lethality of a *Tanzanian ornamental* plant *Euphorbia cotinifolia* L. (Euphorbiaceae). J. Pharm. Sci. and Res. 2017; 9(1):63–7.
 11. Ukwubile CA. Health implications of using *Euphorbia hirta* Linn. (Euphorbiaceae) extracts in the treatment of ‘Jedi Jedi’ infection in newborns (Age one to six months) in Nigeria. Pharmacogn. Commun. 2013; 3(1):27–32. <https://doi.org/10.5530/pc.2013.1.7>