IJCRT.ORG ISSN : 2320-2882

INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

RED SPIDERLING OINTMENT: TREASURE OF NATURE

(HEALING COMES FROM NATURE)

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Abstract: For the treatment of skin problems, a variety of topical dermatologic treatments, ranging from solids to liquids, are offered. The majority of ointments are made of base, which primarily serves as a vehicle or carrier for the medications. The choice of ointment is a crucial component of formulation because the type of the base also affects how well it works. In contrast to fatty alcohols, traditional ointment bases have been oleaginous in nature, consisting of hydrocarbons like petrolatum, beeswax, and vegetable oils that do not permit the addition of any water. Topically applied ointments can serve a variety of functions, including protective, antimicrobial, emollient, antipruritic, keratolytic, and astringent. If the end product is to fulfill any of the aforementioned functions, the base of the ointment is crucial. The ointment base composition regulates the transfer of medications from the base to the human tissues as well as the depth of penetration .

Key Words: Antimicrobial, ointment .

I. INTRODUCTION

Edema

Edema is the medical term for swelling caused by fluid trapped in your body's tissues. Edemahappens most oftenin your feet, ankles, and legs,but can affect other parts of your body,suchasface, handsand abdomen

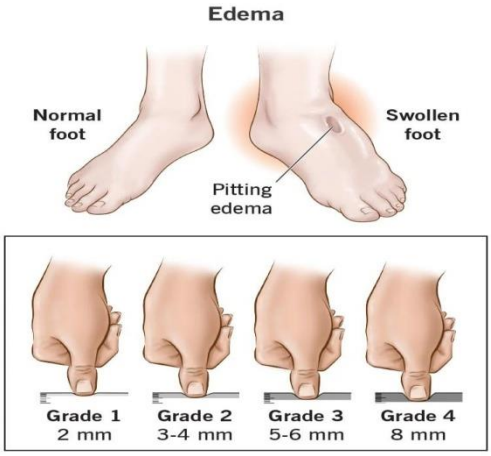

Fig.Edema

Treatment By Naturally Obtained Plant :

Fig.Punarnava plant

Macroscopic characters o f punarnava:

- **Stem** : Greenish purple, stiff, slender, cylindrical, swollen at nodes, minutely pubesaent ornearly glabrous, prostrate divaricately branched, branches from common stalk, often more than a metre long.
- **Roots**:welldeveloped,fairlylong,somewhattortuous,cylindrical,0.2-1.5indiameter, yellowish brown to brown coloured, surface soft to touch but rough due to minute longitudinal striations and root scars, fracture,short, no distinct odour, taste,slightlybitter, sweet, pungent.
- **Leaves** : opposite in unequal pairs, larger ones 25-37 mm long and smaller ones 12-18 mm long ovate – oblong or suborbicular, apex rounded or slightly pointed, basesubcordate or rounded, green and glabrous above, whitish below, margin entire orsubundulate, dorsal side pinkish in certain cases, thick in texture, petioles nearly aslongastheblade, slender.
- **Flowers** : very small, pink coloured, nearly sessile or shortly stalked, 10-25 cm, insmall umbells, arranged on slender long stalks, 4-10 corymb, axillary and on terminalpanicles, bracteoles, small,acute, perianthtube constrictedabovethe ovary,lowerpart greenish, ovoid, ribbed, upper part pink, funnel-shaped, 3 mm long, 5 lobed,stamen2-3.
- **Fruit** : one seeded nut, 6 mm long clavate, rounded, broadly and bluntly 5 ribbed,viscidlyglandular.

Phytochemicals

Generally whole plant consists the following phytochemical constitiutents, thosearepunarnavine(Alkaloids),B–sitosterol (Phytosterols), liriodendrin(lignans), punarnavoside(roteboids),boerhavine(xanthones) and potassiumnitrate(salts).

Beta-sitosterol

Beta – sitosterol(SIT) is a bioactive phytosterol that are naturally present in plant cellmembraneswith chemicalstructure similar tothemammalian cell – derived cholesterol.Theyarehighly presentin lipid–rich plantfoodssuchas nuts, seed,legumes, andoliveoil.

Materials and methods :

1. *Material:*

- **Requirements:**

  Soxhletapparatus,spatula,heatingmantle,stand,extractseparator,funnel,filtermeasuring cylinder, beaker, measuring cylinder, evaporating dish, water bath,leavesofpunarnava.

  Chemicals:

  Woolfat,cetostearylalcohol,hardparaffin,yellowsoftparaffin,camphor

2. ***Method:***

- *Collection & drying:*

Leaves of Punarnava were collected of local area from Ahmednagar. Cleaned and dried at room temperature in shade and away from direct sunlight. The dried leaves were coarsely powdered in grinder. Large difference in particle size of crude drug result in long extraction time as the course particle increase the extraction time and fine powdered material was sieved through 60-120 mesh to remove fines and large particles and the powder was subjected for further study.

Fig.Dried levaes of Punarnava

1. Ethanolic extract:

The leaf of Punarnava were dried under shade at room temperature for seven days and powdered it by the use of grinder and were sieved through sieve no.40 to get the coarsepowder (100gm) and was extracted with ethanol as solvent by soxhlet apparatus and filteredthenobtainedextractedwasconcentratedandstoredinvacuumdesiccator.Theobtainedyieldwa scalculated.[8]

Fig.Extraction using Soxhlet apparatus

Fig. Organic layer separation

THINLAYER CHROMATOGRAPHY

Principle:

The principle of separation is adsorption. It is reliable technique in which solute under goes distribution between two phases, stationary phase and mobile phase. The mobile phase flows through because of capillary action (against gravitational force). The compounds having higher affinities towards the stationary phase eluted slower whereas the compound having lessee affinities towards stationary phase eluted faster.

TLC plate preparation:

The plates were prepared by using Silica gel G. 40 gm of Silica gel G was mixed with 85 ml of water to prepare homogenous suspension and poured in the spreader. The plates was prepared, air dried until the transparency of the layer disappeared, then dried at 110 degree Cfor30 minutes and kept in desiccators.

Selection of mobile phase:

Solvent mixture was selected on the basis of the phytoconstituents present in each extract. Factors such as nature of components, stationary phase, polarity, influence the rate of separation of constituents was considered. From the vast analysis, best solvents were selected which showed good separation with maximum number of components.

Rf value = Distance travelled by solute from the baseline / Distance travelled by solvent from the baseline

Formulation of ointment:

Formulatable:

Ingredients	Quantity Taken	Role of ingredients
Woolfat	2.5 gm	Emollient
Cetostearyl alcohol	2.5 gm	Emulsifying agent
Hard paraffin	2.5 gm	Emollient
Yellow soft paraffin	40 gm	Ointment base
Camphor	1 gm	Counterirritant
Extract	1.5 gm	Anti-edema

Procedure:

1. Accurately weigh all the ingredients and extract as well.
2. Add hard paraffin and cetostearylalcoholin evaporatingdish.
3. Melt above mixture on waterbath.
4. Then add wool fat and yellow soft paraffinin to the previous mixture.
5. Then add sufficient quantity of the extract.
6. Remove from the water bath and cool.
7. Transfer it in to a suitable container and label.

Fig.Punarnava ointment

Category:

Anti-edemal,Anti-inflammatory.

Storage:

It should be stored in the tightly closed and completely filled containers.

Precautions:

1. Hypersensitivity to any of the component, then stop the use of ointment.
2. Avoid contamination during use.
3. Donot allow the open mouth of container to come in contact with any.
4. Keep away from children.

4. Evaluation

Physical examination:

- Colour:Yellowish White
- Odour: Aromatic
- Texture: Smooth
- State: Semisolid

Determination of pH:

- pH = 5.5

- *Rubout:*

  It included spreadibility and wetness. A0.1gm of ointment was appliedon skin surface of human volunteer and the properties were observed.

- *Skin sensitivity test:*

  The skin sensitivity sho wednoirritation, redness in dicatingthat ointmentisnonirritant.

Pharmacologicalactivities[38]*:*

- Immunomodulatoryeffects
- Immunosuppressiveeffects
- Antidiabeticactivity
- Amti-metastaticactivity
- Antioxidantactivity
- Antiproliferativeactivity
- Analgesic&anti-inflammatoryactivity
- Anti-viralactivity
- Hepatoprotectiveactivity
- Antibacterialactivity
- Anti-fibrinolyticactivity
- Bronchialasthma

Therapeuticuses[39]*:*

- Itis goodforliver.
- Itfightsagainstobesity.
- Itis goodfordiabetes.
- Itpreventsheartfailure.
- Itcuresimportance.
- Itis aremedyforUrinaryTractinfection.
- Itisdiuretic.
- Itis good fortheeyes.
- Itisgreatforarthritis.
- Ithelpswithstomachdisorders.

RESULT:

50gmofPunarnavaOintmentwasPreparedEvaluatedandSubmitted.

CONCLUSION:

AsthenameaffirmedPunarnava(Punar+Nava).Punarmeans–onceagain,navameansbecoming new, really because of its multiple benefits and pharmacological actions, Punarnavaproved itself as magical nature remedy by Ayurveda. Further research needs to be undertaken toestablishtheauthenticactivities willbeassured bypharmacologicalactivity.

FUTURESCOPE

- World wide herbal drug industry is growing up at a fast speed.
- Herbal medicine is defined as branch of science in which plant based formulations are used to alleviate the diseases.
- In the early 20th century, when synthetic analgesics were not yet widely available, herbal medicine was the predominant mode of treatment.
- With increase in use of allopathic system of medicines, herbal drugs gradually lost it spopularity among people.
- Almost a century has passed and it has witnessed limitations of allopathic system of medicines.
- Lately herbal medicines has gained momentum and it is evident from the fact that certain herbal remedies are more effective.
- WHO has stressed on the need of better utilization of the indigenous system of medicines which is based on the local availability of the medicinal plants in the country. There for ether eistremendousincrease in the use of plant derived products.
- Drug development from the medicinal plants is cheaper as compare to synthetic drug development.
- There has been increased demand of raw medicinal herbs of Indian origin from western countries.

REFERENCES

1. RawlingsAV,HardingCR.Moisturizationandskinbarrierfunction.DermatolTher2004;17Suppl1:43-8.
2. MartyJP.NMFandcosmetologyofcutaneoushydration.AnnDermatolVenereol2002;129:131-6.
3. CravelloB,FerriA.Relationshipsbetweenskinpropertiesandenvironmentalparameters.Skin ResTechnol2008;14:180-6.
4. CancalonP.Chemicalcompositionofsunflowerseedhulls.JAmOilChemSoc1971;486:29-32,12.
5. https://my.clevelandclinic.org/health/diseases/12564-edema
6. Paswan,Shravan."TraditionalIndianHerbs:PunarnavaandItsMedicinalImportance."Researchgate.https://www.researchgate.net/publication/285176083.
7. United States Department of Agriculture Agricultural Research Service.https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomydetail?id=400189.
8. MishraS,AeriV,GaurPK,JachakSM."Phytochemical,therapeutic,andethnopharmacologicaloverviewfor atraditionallyimportantherb:BoerhaviadiffusaLinn." Biomedical Residential International. May2014.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4053255/
9. http://www.indiaoz.com.au/health/ayurveda/h_r/herbs_Punarnava.shtml.
10. CruzGL.DicionarioDasPlantasUteisDoBrasil,5thed.,Bertrand:RiodeJaneiro,Brazil.1995.
11. Coimbra,Raul.ManualdeFitoterapia2ndEd.,EditoraCejup:Belem, Brazil.1994.
12. http://indianherbalguru.com/2010/05/07/punarnava/
13. JainSP, et.al. IndiaJ Ethnopharmacol1984;12(2):213-222.
14. AgarwalRR. ProcAcadSci1934;4:73-76 (1934).