



“A COMPARATIVE STUDY OF GUDUCHI KWATH AND CAP.PLATBOOST TO INCREASE THE PLATELET COUNT IN DENGUE FEVER.”

Ayurveda

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KEYWORDS

Dengue fever ,Guduchi kwath, cap.Platboost

INTRODUCTION

Ayurveda an eternal science of healthy living treasures deals with physical, psychological & spiritual of human life.

Ayurveda is a science of life after a natural care to the protection of health and prevention of diseases. Certain diseases may not be life threatening but increasingly annoying and irritation to the individual in his routine activity more over neglected they may lead to a series of complications later into Acute Respiratory Distress syndrome (ARDS).

Charakacharya has explained jwara of 8 types(as per Doshapradhanya); viz.Vataj, Pittaj, Kaphaj, Sannipataj,Vatapittaj, Vatakaphaj, Pittakaphaj and Agantuj. Also Charakacharya has described Vishamjwara separately which is based upon the pattern of Jwara Vega due to Dosh gati.It is of five types;viz. Santata, Satata, Anyedyushka, Tritiyaka and Chaturthaka.

Bhavprakash has explained Dandak jwara and Asthibhanjan jwara in Jwara chikitsa Adhyay. Dandak jwara is also called as Dandapatanak jwara which is explained in sannipata awastha. As Dengue fever is known as Break Bone Fever, which can be correlated with Asthibhanjanjwara.

Need of Research

Now a day's Dengue fever has become very common. It is presenting as an epidemic. Though the mortality rate has come down compared to earlier times due to low virulence of the dengue virus, still it is major risk which may lead to mortality. There are many misconceptions regarding Dengue fever and people opt to various medicinal and food materials when patient is crippled with the disease. Guduchi which is having Anti-inflammatory, antibacterial, antimicrobial, antipyretic, anti-arthritis, anti-allergic, hepato-protective, analgesic, immunostimulant, antioxidant, etc. in action.Also is cheap, easily available, and easy to take. Also it is a proven drug in the management of Jwara. Random Donor Platelet, Single Donor Platelet are expensive and may not be easily available. There is no known medicine which helps in the increase of the platelet count as far as modern medicine is concerned.

AIM & OBJECTIVES

AIM: To evaluate the Comparative efficacy of Guduchi kwath and Cap. Platboost to increase the platelet count in Dengue fever.

OBJECTIVES:

1. To evaluate the term Dengue fever on the basis of the Ayurvedic concept.
2. If any, Side effects of Guduchi kwath will be observed.

Hypothesis- Guduchi kwath is effective in increasing the platelet count in dengue fever.

REVIEW OF LITERATURE:

Relevance: Before undertaking any research work it is very important to have Eagle's eye view of previous research conducted in present context or allied subject.

MATERIALS AND METHODS:

Material:

Guduchi (Tinospora Cordiofolia)

Properties

Rasa	-	Titka, Kashay
Virya	-	Ushna
Vipak	-	Madhur
Guna	-	Guru, Snigdha
Prabhav	-	Vishaghna

Karma

Doshakarma - Tridoshashamak, Pittasarak

Other Karma - Kushthaghna, vedanasthapan, trushnanigrahan, dipan, pachan, anuloman, krimighna, hridya, rasayan, balya, vishaghna, vrushya, pramehaghna, mutrajanan, jwarahar, sangrahi

Chemical Composition – Tinosporine, tinosporon, tinosporic acid, tinosporol, tinosporide, tinosporidine, columbin, chasmanthin, palmarin, berberine, geloin, giloinisin, 1,2 – substituted pyrrolidine, etc.

Pharmacological Actions

Hypoglycemic, anti-inflammatory, antibacterial, antimicrobial, antipyretic, antiarthritic, antiallergic, hepatoprotective, analgesic, immunostimulant, antioxidant, hypotensive, adaptogenic, antitumor , antidiabetic, etc.

Use In Various Diseases

Gout, skin conditions, haemorrhoids, diabetes, fevers, rheumatoid arthritis, eye diseases, general debility, asthma, vomiting, flatulence, acid gastritis, fractures

Useful Parts – Stem, Leaves, Sattva, Root

Pharmacognosy

Stem – terete, sparsely lenticellate. Young stem green with smooth surfaces and swelling at nodes, older ones show a light brown surface marked with protuberances due to circular lenticels.

Dose - Stem powder – 3-6 gm, Stem decoction – 50-100 ml, Sattva – 1-2 gm

Preparation of Kwath for one time:

1/2 Pal (20 gm) Guduchi Kand (stem) bharad taken and added with 16 times of water (320 ml) ,boiled on Mandagni upto 40 ml (1/8th part) remains. Then filtered it and given after both meals.

Guduchi and Tikta Rasa

Charakacharya has quoted that for Doshapachan and Shaman, decoctions made from Tikta Rasa are advisable.As Tikta Rasa is having prominently Vayu and Akash Mahabhuta ,the Dravyas having Tikta Rasa are Laghu,cleans the Strotas,have Sheetaveerya and does the Pachan.By Agnivardhan property,these Dravyas act on Agnimandhya,Aam and Pittanubandh,thus helps in the pathogenesis (Samnya Sampraptibhanga) of Jwar (fever). Thus Guduchi having Tikta and Katu Rasa does Agnideepan, Aampachan

Guduchi is antibacterial,anti-pyretic, immunomodulator, analgesic, having no any kind of toxicity, hepatoprotective,anti-inflammatory, antimicrobacterial, Smooth muscle relaxant, antioxidant, cardioiprotective hypoglycemic activity and thus helps in dengue

haemorrhagic fever.

- Guduchi bharad purchased from local Ayurved medical stores.
- The standardization of drug was done in BVDU-COA, Rasashastra Department.
- The authentication of drug was done from recognized institute.
- Total 60 no. of diagnosed cases selected for the study and patients were divided into 2 groups. Each group 30 had complete subjects.

CAP.PALTBOOST (*Carica papaya*)

Carica papaya is the widely cultivated a tropical fruit plant native to south America

Botanical Description:-

The papaya is a small, sparingly branched tree, usually with a single stem growing from 5 to 10 m (16 to 33 ft) tall, with spirally arranged leaves confined to the top of the trunk.

The lower trunk is conspicuously scarred where leaves and fruit were borne. The leaves are large, 50–70 cm (20–28 in) in diameter, deeply palmately lobed, with seven lobes.

SYNONYMS – Madhukarkati Gopakarkati

REGIONAL LANGUAGE NAMES-

Bengali	: Papeyaa, Pappiyaa
Eng.	: Papaya, Melon tree, Pawpaw
Guj.	: Erandakaakadi, Papaiyu, Papita
Hindi	: Papitaa
Kannada.	: Pirangi, Pappaay
Malyalam.	: Karmaasu, Pappaay, Karumatti
Marathi.	: Papaayaa, Papai
Punjabi.	: Erandakharbujaa
Tam.	: Pappali
Telagu.	: Boppayi, Bobbaasi, Paringi

DESCRIPTION -

Pericarp of fruit in pieces measuring upto 6 cm in length, 1.5 cm in width and 1 to 2 mm. thick; surface shrunken, epicarp portion dark greenish-brown, mesocarp cream to yellowish brown, leathery, odour characteristic; taste, bitter and mucilaginous.

CONSTITUENTS -β-carotene, papain, carpaine.

PROPERTIES AND ACTION –

Rasa	: Tikta, Madhura
Guna	: Laghu
Veerya	: Ushna
Vipaka	: Madhura
Karma	: Pittahara, Kaphahara, Deepana, Stanya, Hridya, Brihana
Ref:-Ayurvedic Pharmacopodia of India Part-1 Volume 6 PP Published by Govt of India	

Medicinal Uses : The fruit and juice are eaten for gastrointestinal ailments; a fresh leaf poultice is used to treat sores.

Now a days the leaves extracts are used herbal remedy for improving platelet count.

The fresh root with sugarcane alcohol can be taken orally or as a massage to soothe rheumatism.

A flower decoction is taken orally for coughs, bronchitis, asthma and chest colds.

In some countries, the seeds are used as an abortifacient and vermifuge

GROUPA: - GUDUCHI KWATH.

GROUPB: -CAP.PLATBOOST.

METHODS:

- **Type of study:** Randomized controlled clinical trial
- **Place of study:** Bharati Vidyapeeth Deemed University, College of Ayurved, and Ayurved Rugnalaya, Pune- 411043.

SELECTION CRITERIA

INCLUSION CRITERIA:

- IPD Patients.
- Patients of either gender having age above 18 years up to 60 years.
- Having viral fever with thrombocytopenia and diagnosed on the basis of lab. Investigations - Dengue IgG, IgM, Ns1Ag either test

positive or two tests positive or all tests positive.

- Platelet count $\geq 30000/\text{cumm}$.

EXCLUSION CRITERIA:

- Patients having age 18 years & below 18 years and above 60 years.
- Platelet $< 30000/\text{cumm}$
- Patients having active bleeding- gum bleeding, hematuria, PR bleeding and any kind of bleeding syndromes / disorders.
- Malarial fever, Typhoid fever, UTI, Rickettsial fever, URTI, LRTI
- Any other major illness like Diabetes, Hypertension, IHD, MI, Renal diseases, meningitis.
- Pregnancy, lactating mother, PV bleeding, DUB.
- Chronic alcoholic, liver cirrhosis.
- Dengue shock syndrome
- H/o. upper GI bleed, small intestine bleeding, lower GI bleeding
- Patient known history of idiopathic thrombocytopenia.

Study groups and Treatment details

Particulars	Group A	Group B
No. of Patients	30	30
Medicine To be given	Guduchi kwath	Cap Platboost (Extract of Papaya leaf) (Akumentis)
Dose	40ml	1100 mg
Time	2 times a day i.e. After lunch & dinner (vyanadan-kala)	TDS
Duration	7 days	7 days
Anupan	Luke warm Water	Luke warm Water
Route of Drug Administration	Oral	Oral

ASSESSMENT CRITERIA:-

Objective Criteria

- Platelet count

Axillary body temperature by using thermometer every 6 hourly.

SUBJECTIVE CRITERIA-

- Headache
- Backache, Joint and muscle pain/ache in the extremities with break bone
- Skin Rash
- Petechial hemorrhages, on the extensor surface of the limbs and over chest
- Itching

Gradation of symptoms:-

Headache	
No Pain	: 0
Mild Pain (1-3)	: 1
Moderate Pain (4-6)	: 2
Severe pain (7-10)	: 3
(Refn - Visual Analogue Scale)	

Backache, joint and muscle pain:

No Pain	: 0
Mild Pain (1-3)	: 1
Moderate Pain (4-6)	: 2
Severe pain (7-10)	: 3
(Refn - Visual Analogue Scale)	

Skin Rash:

Absent	: 0
Mild (initial rash)	: 1
Moderate (second rash)	: 2
Severe (generalized rash)	: 3

(Refn - Indian journal dermatology 2010 Jan –mar, 55(1):79-85)

Petechial hemorrhages: Tourniquet test

Negative: When Absent	: 0
Positive: When > 20 petechiae/ 2.5 cm^2 are observed	: 1
(Refn - Indian journal dermatology 2010 Jan –mar, 55(1):79-85)	
Itching:	
Yes	: 1
No	: 0

Laboratory investigations -

- Haemogram
- Platelet count daily –quantitative study
- LFT, PT
- Dengue- , NS1Ag, IgG, IgM.
- Urine-R, M,
- Renal Function Test (RFT) and CXR-PA, USG-A+Pas required.

• PRIMARY END POINTS

Improvement in the platelet count.

• SECONDARY END POINTS

- 1.Reduction in symptoms of dengue fever.
2. Normalization of body temperature

Criteria Visits	Screening and Treatment start visit 0	V1	V2	V3	V4	V5	V6	V7
Clinical examination	✓	✓	✓	✓	✓	✓	✓	Assessment
Daily platelet count	✓	✓	✓	✓	✓	✓	✓	Assessment
laboratory & other Investigation	✓	×	×	×	×	×	×	Assessment
Treatment	✓	✓	✓	✓	✓	✓	✓	Assessment

OBSERVATION**Role of Guduchi and Tikta Rasa**

Charakacharya has quoted that for Doshapachan and Shaman, decoctions made from Tikta Rasa are advisable. As Tikta Rasa is having prominently Vayu and Akash Mahabhuta, the Dravyas having Tikta Rasa are Laghu, cleans the Strotas, have Sheetaaveerya and does the Pachan. By Agnivardhan property, these Dravyas act on Agnimandhya, Aam and Pittanubandh, thus helps in the pathogenesis (Samnya Sampraptibhanga) of Jwar (fever). Thus Guduchi having Tikta and Katu Rasa does Agnideepan, Aampachan

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CONCLUSION

- 1) Guduchi Kwath in the dose of 40 ml mor-evening in the dengue haemorrhagic fever showed improvement in the platelet count
- 2) This can be used as a single drug in uncomplicated cases.
- 3) Helps in lowering the temperature.
- 4) Helps in relieving the maculopapular rash .
- 5) Works as an antiallergic and antihistaminic
- 6) No any kind of side effect of the Guduchi Kwath seen
- 7) It's a good appetizer. Shows overall improvement.
- 8) No side effects seen
- 9) More blind studies are needed.