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RESEARCH ARTICLE

“EFFICACY OF NYAGRODHA TWAK CHOORNA, ELA CHOORNA WITH MADHU IN MUKHAPAKA IN CHILDREN”

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Abstract

Mukhapaka is one of the common diseases in day today practice which disturbs children's ability to eat, drink, talk and lack of sleep. This disease is relentlessly increasing among the children in India, with an overall incidence of 25%. Vitamins deficiency, nutrition deficiency, iron deficiency, is very common in children and one of the causative factors of Mukhapaka, so patients of Mukhapaka are in need of a cost effective, palatable and easily available medicine. Therefore, NyagrodhaTwakchoorna, Elachoorina with Madhu, has been selected. These drugs have an action of anti-inflammatory, haemostatic, antibacterial, antiviral, antifungal, improves wound healing and provides cooling effect by their Pitta samaka property. These can be administered both internally and externally. Currently the treatment for the Mukhapaka being very limited, the present clinical study was designed to evaluate the efficacy of Nyagrodhatwakchoorna and Elachoorina with Madhu for Pralepa in Mukhapaka.

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Introduction:-

Mukha i.e. oral cavity, works as a reflector of the body health by acting as a gateway of the alimentary canal. Negligence of oral care may give rise to different oral diseases. Vitiated Pitta and the other Doshas give rise to ulcers, showing signs and symptoms of the particular Dosha, this is termed as Mukhapaka. Currently the treatment for the Mukhapaka being very limited, the present clinical study was designed to evaluate the efficacy of Nyagrodhatwakchoorna, Elachoorina with Madhu (A.H.U. 25/64-66)

30 patients with Mukhapaka were registered for trial, where Nyagrodhatwakchoorna and Elachoorina with Madhu for Pralepa was found to be helpful in efficacious hastening and healing of all PratyatamaLakshana of Mukhapaka.

Materials and Methods:-

Source of data / sample:

The patients registered from the OPD and IPD of S.D.M Trust's Ayurvedic Medical College, Danigond Post-Graduation Centre and Padma Hospital, Terdal, are the primary source of data. **Sampling technique:** Random systemic sampling

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Method of collection of data:

1. A minimum sample of 30 patients presenting with signs and symptoms of Mukhamayawere selected for the study with Nyagrodhatwak and Elachoorina with Madhu.
2. A special pro forma is prepared which includes detailed history taking, physical signs and symptoms as mentioned in our classics. Patients are clinically examined, analyzed and selected accordingly.
3. Nyagrodhatwak and ElaChoorna are given in the dose as much as required for oral application, i.e. quantity enough to combine completely with Madhu, three times in a day after oral feeds for 3/5/7 days as per the severity of the symptoms¹².

Study Design:

It is a **clinical** study with follow up of children suffering from the Lakshanas of Mukhapaka.

Assessment criteria:

Assessment of every patient was totally based on clinical observation and information given by patient/ parents/ guardian.

Clinical assessment:**Subjective criteria:**

lalashrava, sthanadwesa, ativyatha, pittamudagaratikshirm, nasashwasi, Paka, Aratias mentioned in the classics

Objective criteria:

| 1.Vyatha (pain) | | 2.Daha(burning sensation) | | 3.Mukhapaka (Raktavarnata or Redness) | | 4.Vrana Parimana (Size of the vrana) | | 5.Vrana Shankhya (No. of Ulcers) | |
|--|---|---|---|---------------------------------------|---|--------------------------------------|---|----------------------------------|---|
| No pain | 0 | No daha | 0 | No redness | 0 | Size of the vrana 0 mm | 0 | Number of Vrana 0 - 1 | 0 |
| Mild: pain during churning of food | 1 | Mild: tolerable, no need of coolingagents likeglycerine or cold juice | 1 | Dull red or pink red | 1 | Size of the vrana between 1—3 mm | 1 | Number of Vrana 1 - 3 | 1 |
| Moderate: pain during talking and gets relief by topical anesthetics | 2 | Moderate:intolerabeGets relief by cooling agents | 2 | Colour of magenta | 2 | Size of the vrana<10 mm | 2 | Number of Vrana more than 3 | 2 |
| Severe: pain even during rest, No relief by topical anesthetics | 3 | Severe: intolerablerno relief by cooling agents | 3 | Bright red | 3 | | 3 | | 3 |

| INCLUSION CRITERIA: | EXCLUSION CRITERIA: |
|---|---|
| <ul style="list-style-type: none"> • Patients between age group of 1-16 years • Willingness of the patient/ parents/ Guardian • Patients presenting with lakshana of Mukhapaka | <ul style="list-style-type: none"> • Children having congenital anomalies. • Children of HIV+ Parents • Patients suffering from Cancer • Patients suffering from any serious systemic disorders |

Method of preparation of nyagrodha twak choorna and ela choorna with madhu:

Drugs were collected from the following places:

NyagrodhaTwak – 3kg

Ela seeds – 3kg from SDMTAMC Pharmacy.

Madhu – organic honey from local vendor was used. Used to mix with ingredients to form a homogenous paste as per requirement quantity.

1. The ingredients were subjected to pounding and powdered using sieve-85 to prepare fine powder. These preparations were done at department of BhaisajyaKalpana, pharmacy centre in SDMTAMC.
2. These powdered drugs were cleaned and kept in shade for drying, to remove remnant moisture and later the drugs were stored in clean air sterile tight containers.

Procedure of application of the formulation:

1. Patient position: Patients were made to sit in a comfortable in erect posture and asked to open the mouth widely.
2. The site, number and other characteristic features of the ulcers are properly visualized using a torch, noted before and after the treatment. Then adequate quantity of the formulation is taken using a wooden spatula/cleaned finger and applied over the affected sites in a manner of thick paste.
3. The patients were asked to sit in the same posture for a minimum of two minutes then were allowed to go and carry on their routine activities.
4. The patient/parents/attender were properly advised to carry out the method of application even after going home, thrice a day as demonstrated by the investigator.

Duration And Follow Up Of Study:

Since this is a clinical study, the patients are kept under observation till the evaluation is completed. Study required follow up in the pattern of 3/5/7 days, till the resolution of symptoms.

Investigations:

Where ever required following investigation advised –

Complete blood counts; Oral swab/throat swab for culture and sensitivity; HIV-TRI-DOT Test.

Observation And Results:-

The observations made during the study were as follows:

Majority of the patients, i.e., 33.33% belonged to the age group of 3-6 and 6-9 years respectively; 77% of the sample were females; majority of the patients belonged to Hindu religion-63%; 67% of the sample belonged to the economic status of lower class, 90% of the patients were from rural locality; 73% of the sample followed mixed diet; 53% of the sample reported disturbed sleep; 50% of the sample had indulgence in Katu Rasa as the dominant Rasa; 90% of the sample hailed from Jangaladesha; majority of the population, i.e., 76.66% belonged to Pitta-KaphaShareerikaPrakruthi; 98% of the sample belonged to Madhyama Sara, 93% to MadhyamaSamhanana, 93% to MadhyamaPramana, 87% to MadhyamaSatmya, 73% to MadhyamaSattva, 67% to MadhyamaVyayama Shakti, 66.66% to MadhyamaAbhyavarana Shakti and 70% to MadhyamaJarana Shakti; the prevalence of the Mukhapaka types was dominated by PittajaMukhapaka with 40% of the sample;

Graph No.1:- Prevalence Of Mukhapaka Types In The Sample

Results:-

Results of the Mukhalepa on the following parameters are considered here:

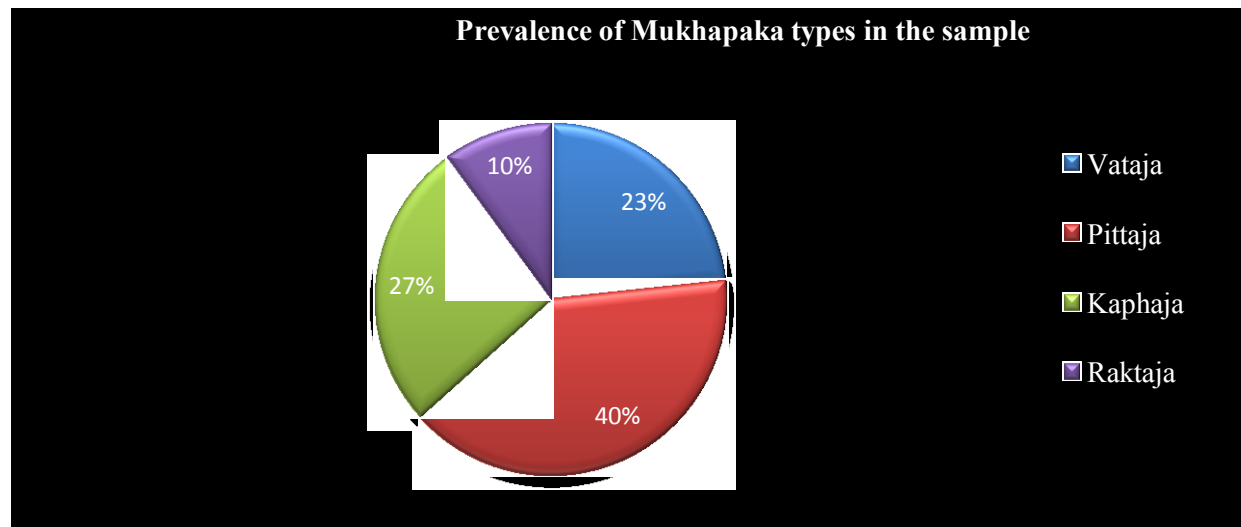
Effect Of Nyagrodha Twak-Ela Choorna With Madhu On Vyatha

| GRADE | BT | | AT | |
|----------|--------------|--------|--------------|-------|
| | NO. PATIENTS | OF BT | NO. PATIENTS | OF AT |
| No pain | 0 | 0% | 21 | 70% |
| Mild | 0 | 0% | 9 | 30% |
| Moderate | 7 | 23.33% | 0 | 0% |
| Severe | 23 | 76.66% | 0 | 0% |
| Total | 30 | 100% | 30 | 100% |

| Parameter | N | Mean | Positive | Negative | SD | T value | P value | Interpretation |
|-----------|---|------|----------|----------|----|---------|---------|----------------|
|-----------|---|------|----------|----------|----|---------|---------|----------------|

| | | | | Rank | Rank | | | | |
|------|----|-------|-------|------|------|-------|--------|--------|---|
| Ruja | 30 | BT | AT | 20 | 10 | 0.626 | 11.367 | <0.005 | S |
| | | 2.766 | 0.333 | | | | | | |

In study the mean score of Ruja before treatment 2.766, after treatment 0.333, SD 0.626 and P value was < 0.005, shown significant improvement.



Effect of nyagrodha twak-ela choorna with madhu on daha:

| GRADE | BT | | AT | |
|----------------------|--------------|--------|--------------|--------|
| | NO. PATIENTS | OF BT | NO. PATIENTS | OF AT |
| No burning sensation | 1 | 3.33% | 25 | 83.33% |
| Mild | 8 | 26.66% | 5 | 16.66% |
| Moderate | 9 | 30% | 0 | 0% |
| Severe | 12 | 40% | 0 | 0% |
| Total | 30 | 100% | 30 | 100% |

| Parameter | N | Mean | | Positive Rank | Negative Rank | SD | T value | P value | Interpretation |
|-----------|----|-------|-------|---------------|---------------|-------|---------|---------|----------------|
| Daha | 30 | BT | AT | 25 | 5 | 1.055 | 6.031 | <0.005 | S |
| | | 2.066 | 0.166 | | | | | | |

In study the mean score of Daha before treatment 2.066, after treatment 0.166, SD 1.055 and P value was < 0.005, shown significant improvement

Effect of nyagrodha twak-ela choorna with madhu on raktata of vrana:

| GRADE | BT | | AT | |
|------------|--------------|--------|--------------|--------|
| | NO. PATIENTS | OF BT | NO. PATIENTS | OF AT |
| No redness | 0 | 0% | 25 | 83.33% |
| Mild | 0 | 0% | 5 | 16.66% |
| Moderate | 14 | 46.66% | 0 | 0% |
| Severe | 16 | 53.33% | 0 | 0% |
| Total | 30 | 100% | 30 | 100% |

| Parameter | N | Mean | | Positive Rank | Negative Rank | SD | T value | P value | Interpretation |
|-----------|---|------|--|---------------|---------------|----|---------|---------|----------------|
|-----------|---|------|--|---------------|---------------|----|---------|---------|----------------|

| | | | | | | | | | |
|------------------|----|-------------|-------------|----|---|-------|-------|--------|---|
| Raktata of vrana | 30 | BT 2.783 | AT 0.166 | 25 | 5 | 0.626 | 20.70 | <0.005 | S |
|------------------|----|-------------|-------------|----|---|-------|-------|--------|---|

In study the mean score of raktata of vrana before treatment 2.783, after treatment 0.166, SD 0.626 and P value was < 0.005, shown significant improvement.

Effect of nyagrodha twak-ela choorna with madhu on vrana sankhya:

| GRADE | BT | | | AT | | |
|----------|--------------|----|--------|--------------|----|--------|
| | NO. PATIENTS | OF | BT | NO. PATIENTS | OF | AT |
| No ulcer | 0 | | 0% | 28 | | 93.33% |
| Mild | 3 | | 10% | 2 | | 6.66% |
| Moderate | 17 | | 55.66% | 0 | | 0% |
| Severe | 10 | | 33.33% | 0 | | 0% |
| Total | 30 | | 100% | 30 | | 100% |

| Parameter | N | Mean | | Positive Rank | Negative Rank | SD | T value | P value | Interpretation |
|---------------|----|-------------|-------------|---------------|---------------|-------|---------|---------|----------------|
| Site of vrana | 30 | BT 2.233 | AT 0.066 | 28 | 2 | 0.663 | 17.90 | <0.005 | S |

In study the mean score of site of vrana before treatment 2.233, after treatment 0.066, SD 0.663 and P value was < 0.005, shown significant improvement.

Effect of nyagrodha twak-ela choorna with madhu on vrana parimana:

| GRADE | BT | | | AT | | |
|----------|--------------|----|--------|--------------|----|--------|
| | NO. PATIENTS | OF | BT | NO. PATIENTS | OF | AT |
| No ulcer | 0 | | 0% | 28 | | 93.33% |
| Mild | 5 | | 16.66% | 2 | | 6.66% |
| Moderate | 17 | | 56.66% | 0 | | 0% |
| Severe | 8 | | 26.66% | 0 | | 0% |
| Total | 30 | | 100% | 30 | | 100% |

| Parameter | N | Mean | | Positive Rank | Negative Rank | SD | T value | P value | Interpretation |
|---------------|----|-----------|-------------|---------------|---------------|-------|---------|---------|----------------|
| Size of Vrana | 30 | BT 2.1 | AT 0.066 | 28 | 2 | 0.657 | 17.084 | <0.005 | S |

In study the mean score of size of vrana before treatment 2.1, after treatment 0.066, SD 0.657 and P value was < 0.005, shown significant improvement.

Discussion:-

Mukhapaka is a PittajaNanatmajavyadhiinitiated by Ushna-teekshna-viruddhaharanidana leading to Yugapat vitiation of Vata-Pitta-Kapha which causes Vrana in MukhaGuha, especially involved with PakaPrakriya. The main disease pathology in this disease is the production of Paka in the Dushyas.

The drugs used for the present formulation showed efficacious and promising results, which could probably be due to the following properties:

1. NyagrodhaTwak→ Excellent Pittaprashamaka, having Kashaya –Madhura Rasa, Guru Guna, ShitaVirya. It is also a Raktaprasadaka drug and thus helps in relieving the PakaPrakriya or the inflammatory pathology.
2. Ela→ It predominantly has Shitavirya, MadhuraAnurasa by which it takes care of Pitta Prakopa; but Katupradhana which alleviatskaphadosha. It also has Krumihara property, by virtue of which it proves to be anti-fungal, anti-bacterial and anti-viral. It is also anti-inflammatory in nature.
3. Madhu→ It is mainly VranaShodhaka, VranaRopaka and VranaSandhanakara in nature. It is Kapha-Pitta

- Shamaka by its Kashayapradhana, MadhuraAnurasa, RukshaGuna.
- Since the interest of study is the group of children, the proposed therapy should be very much pliable to them. Also as per Charaka and Kashyapa, the medicines that are to be given in children should predominantly be Madhurarasaayukta, Mrudugunayukta, Sheetagunayukta.
 - Hence the formulation chosen is having majority of the properties in concordance with the features of medicines to be given in children as per the Ayurvedic classics.

Conclusion:-

Mukhapakais one of the common Mukharogas, the origin of which could be ascribed to the vitiation of Pitta dosha. Hence, it is a PittajaNanatmajaVyadhi. The laxanas of Mukhapaka can be co-related to stomatitis as mentioned in the conventional medicine. The disease Mukhapaka if not identified in its early course or if neglected, has all **potentials to turn into a notoriously chronic disease**. Mukhapaka in the age group of children is quite common and very bothersome due to the following factors like:

- Immature or undermatured structural and functional self tissues, organs and system (DosaDhatu and Mala).
- Low immunity and more vulnerable or prone status to diseases in general
- Infants are unable to express pain and burning symptoms, although the physical signs of the Mukhapaka should not be missed by the Vaidya.

The present formulation is not at all invasive and is also has an upper hand over the conventional topical anaesthetics and steroids.

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