ABSTRACT:

An attempt has been made to project at one place the available Ayurvedic material on Manasroga and treatment of Manovikara in an orderly manner which would be both easy to understand and rewarding in the field of treatment. Herbo-mineral drugs have been used in Ayurvedic system of medicine for treating various disorders including Unmada. Manasavikara which is considered as an abnormal mental condition characterised by impairment of mental functions. Unmada is the most richly dealt Manasavyadhi in Ayurveda. It cannot be correlated with a specific psychiatric disorder mentioned in current science. It is a most common disorder in neuropsychiatric outpatient department. It is described in all major classics of Ayurveda. Signs and symptoms of Unmada are very similar to Schizophrenia.

Key words: Unamada, herbo-mineral formulations, B.B.R.

INTRODUCTION:

Ayurveda aims at prevention and promotion of health by the concept of positive mental and physical health. Managements of mental disorders were even during Charakas time (500 B.C.)[1] Charaka suggests that, treatment for mental illnesses should be sound through an expert in the field of mental illnesses.[2] Diseases have been classified into 3 broad types, shariravikara (physical diseases), manasavikara (mental disorders) and ubhayatmakavikara (diseases where in both body and mind are affected) like Unmada (psychosis), apasmara (epilepsy) and the like. Ayurveda has already known about individuality of manasa (psyche) and sharira (body) and their interdependent relationship in a living body. Ubhayatmakavikara include Unmada, Apasmara, Madatyaya, etc., which are also termed as manasshariradhishthitavikara, basically the shariradosas are affected. But since mental disturbance are more prominently present clinically, they are also termed as manovikara or anubhandhajanumasavikaras. Unmada is defined as the VibramaAvastha[3] of eight factors such as Manas, Buddhi, SangyaGyana, Smrti, Bhakti, Sheela, Chesta, Achara. Vibramameans misinterpretation of the original course or a state of perversion. It may be prevented by as a single drug or in the form of compound formulations, in classical texts of Ayurveda. So here an attempt made to enlisted all the formulations of Unmada which are described in B.B.R.
Ayurveda recommends three types of chikitsa viz., daivavyapasraya(spiritual therapy), yuktivyapasraya(logical therapy) and satwavajaya( psychotherapy). Under the drug therapy, in all types of mental diseases where vata, pitta and kapha are deranged, doshashodhana or srotasuddhi has to be done by adopting various sodhana. When the cleaning is properly done, samanausadha (palliatives) and rasayana (tonics) are given in order to bring back the deranged manas to normalcy.

MATERIALS AND METHODS:

Herbs represent an important source of drugs, considering the wide diversity of molecules with medicinal potential, and can make an effective contribution to the search of new bioactive products, semi-synthetic medicines or primecompounds for the synthesis of medicines. Herbal medicines are popular socially and improvements in theirformulation have resulted in a new generation of phytomedicines that are more potent than before.

Critical review of formulations indicated in treating Unmada is compiled from Bharat BhaishajyaRatnakara (B.B.R.). The whole study is based on the literary material Rasashastrika Ayurvedic classics and information from contemporary modern texts, available resources from the internet. B.B.R. being a comprehensive source for compilation of Unmada formulations. Various formulations compiled from texts of Rasashastra including Yogaratnakara (18th century CE), Rasendrasarasamgraha (14th century CE), BhaisajyaRatnavali (19th century AD), Rasendracudamani (RChu) (12th century CE), RRS (13th century CE), Rasakamadhenu (17th century CE), Rasendrachintamani (13th century CE). All formulations, mainly or secondarily indicated in Unmada are included in this study.

It is observed that traditionally nearly 33 classical Ayurvedic formulations compiled from B.B.R. for the management of Unmada. This review covers a broad spectrum of Ayurvedic drugs and formulations used in specific psychosomatic disorders. This paper highlights on the potential herbo-mineral drugs used for treating Unmada.

Table 1:
A list of Ayurvedic formulations in B.B.R. which are commonly used in treatment of Unmada are given below:

<table>
<thead>
<tr>
<th>Volume</th>
<th>Total verse</th>
<th>Total verse for Unmada</th>
</tr>
</thead>
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<td>Part 2</td>
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</tr>
<tr>
<td>Part 3</td>
<td>2163</td>
<td>17</td>
</tr>
<tr>
<td>Part 5</td>
<td>1606</td>
<td>8</td>
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</tbody>
</table>

Table 2:
Ayurvedic formulations mainly indicated in Unmada (B.B.R. Part2)

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<tr>
<th>Sr.No.</th>
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<th>Kalpa No.</th>
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<tr>
<td>Kashayprakaranam</td>
<td>Changeriprayoga</td>
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<td>Avalehaprakaranam</td>
<td>Chandravleha</td>
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<td>Pittaj Unmada,</td>
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<tr>
<td>Table3:</td>
<td>Ayurvedic formulations mainly indicated in Unmada (B.B.R. Part 3)</td>
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<td>---</td>
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<td></td>
</tr>
<tr>
<td><strong>Kashayaprakaranam</strong></td>
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<td>Brahmadiswarasaprayoga</td>
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<td><strong>Churnaprakaranam</strong></td>
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<td>Baladyamghritam</td>
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<td><strong>Dhupaprakaranam</strong></td>
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<td>Nimbaddidhupa</td>
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<td>Bhutonmada</td>
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<td><strong>Anjanaprakaranam</strong></td>
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<td>Prachetanamgutika</td>
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<td>Bhutonmada</td>
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<td>Bramhyadyavarti</td>
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<td>Pundareksvadinasayam</td>
<td>4254</td>
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<td>Bhutonmadanashaka</td>
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<td>Brahmirasadivyoga</td>
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<td>Bhutagkusharasa</td>
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<td>Unmada</td>
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<td><strong>Ghritaprakarnam</strong></td>
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<tr>
<td>Shankhapushpadyamghritam</td>
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<td>Sarwataghritam</td>
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<tr>
<td>Suryodayaghritim</td>
<td>7961</td>
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<tr>
<td>Hingwadighritam</td>
<td>8532</td>
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<tr>
<td>Hingwadighritam</td>
<td>8533</td>
</tr>
</tbody>
</table>
DISCUSSION:

A simple change in the method of preparation and ingredients can bring a change in the action, indication, and efficacy. Hence it is the need of the hour to search some alternative from other system of medicine like Ayurveda to find some unique dosage forms which are highly effective in the same conditions. Hence this study was undertaken. A well-known comprehensive treatise of Ayurveda documents the various formulations in treating. It will be a great contribution in the field of Ayurveda if research were to be conducted on formulations specifically indicated for Unmada. This work provides many formulations to treat Unmada and hence may be helpful for further research.

Rasaushadhi (herbomineral formulations) are being prescribed by Ayurvedic physicians since long with mention of toxicity. It is observed that herbo-mineral complexes are more stable and more interactive compared to plain herbs as this result in faster therapeutic action and have a longer shelf life.

CONCLUSION:

Herbo-mineral medicines make an enormous contribution to primary health care and have shown great potential in against numerous ailments of the modern world. Treatment resistant psychotic disorders are a challenging disease to treat. Ayurvedic medicinal plant products and formulations are most convenient and have greater acceptance amongst the users due to their easy availability, easy biodegradability, easy to handling, economic cost, mankind and environment friendly nature and minimum side effects. The information available in this review could be helpful to scientist, drug designers, forensic experts, and other scientific bodies related to Ayurvedic research. There are 33 formulations of mainly indicated in Unmada. So here an attempt made to enlisted all the formulations of Unmadawhich are described in B.B.R.

REFERENCES:
5) ...........Ibid, Page, 16.

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STUDY OF EFFICACY OF CHANDAN USHIR-LEPA IN THE MANAGEMENT OF PITTAJ PACHHYAMANA VIDRADHI

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ABSTRACT

Vidradhi is localized collection of pus which starts with inflammation. It’s having Vedana (Pain), Burning (Daha), Fever (Jwara), Redness (Araktata), Swelling (Shotha), Puya (Pus). Vidradhi having three stages Ama awastha, Pachyyamama avastha and Pakva avastha. Most of the patients comes in the stage of Pachhyamana avastha because of Burning, Pain, fever, Redness, swelling but negative fluctuation test i.e absent of pus. Achharyas describe treatment of vidradhi wize lepa, Jalaukacharana but if vidradhi gets pakva I and D should be done. In present study 60 patients suffering from pachyamma avastha of vidradhi selected for study. They divided into 30 patients in trial group lepa of chandan and ushir along with Tab.Triphala Guggul. This can be compared with control group of 30 pt with Mgso4 + Glycerine dressing along with Anti-biotics and Analgesic. Chandan and ushir both have Pittaghna and daha shamak property and Triphala guggulu is mrudu virechak along with Anti-inflammatory action.

Key word: Pittaj Pachyamamna vidradhi, Abscess, Chandan, Ushir

INTRODUCTION:

Human beings desire to have a healthy life. For this purpose they have been very clean and conscious in maintaining a disease-free society. In ancient times people lived by the rule of nature and a stress free life. But now-a-days people live a fast-paced life in a polluted environment. They are susceptible to a lot of diseases. Ayurveda is a life science, which deals with the treatment of diseases and maintainance of an individual’s health. Acharya Charak describe ayurveda as below

It is more than a thousand year old medical science which has its origins in Lord Bramha. Lord Bramha describes Ayurveda in one lakh shlokas and one thousand adhyas. Later, because of short span of life and limited intellectual capacities of humans it got divided into eight branches. These are Shalyatantra, Shalakyatantra, Bhutvidya, Kaumarbrutya, Agadantatra, Rasayantantra, Vajikarantatra. Acharya Sushruta “Father of Ancient Surgery” wrote Sushrut Samhita which deals with Shalya Tantra. Shushrut Samhita is divided into six sthanas, containing 186 Adhyayas and eight thousand and three hundred sutras. Original sushruta samhita is divided into five sthana and Pratisanskarta (Nagarjuna) added uttar-sthana. Shalya tantra has been hailed as the most important branch of ayurveda. It is matter of pride for us that even in ancient times Acharya described Vidradhi
and its treatment in descriptive manner i.e lepa, jalaukacharna is used in pre-ripening stage and if measures fail to control infection and if Pakva avastha is formed then bhedana should be done.

Vidradhi has been co-related to the disease Abscess as described in modern medical science. One of the most common diseases in the day to day surgical practice, Abscess is a localized soft tissue injury which may be in the form of pus. It is an inflammatory change which starts in the form of cellulitis i.e. pain, swelling, redness and mild to moderate fever but when it progresses further, there will be a localized collection of pus. In modern era although many anti-microbial drugs are available but resistance to anti-microbial drugs is increasing day by day. Many anti-microbial drugs are hepato as well as neprototoxic. Prevention is better than cure is described in all medical science. In abscess broad spectrum antibiotics are used along with anti-inflammatory drugs and for the rest of affected part, MgSO4 dressing used. If the cellulitis stage does not get suppressed and abscess is formed with fluctuation test positive, then I & D should be done.

Vidradhi is described in Sushrut Samhita in the Nidansthah 9th adhaya and treatment is described in chikitsa sthana 16th adyaya. In the present study the management of Vidradhi in pre-ripening stage i.e pachyyamana stage, where the patient suffers the most because of Pain, Redness, Swelling and Fever treatment will be done with lepa of chandan and ushir along with Tab.Triphala Guggul. This can be compared with Mgso4 + Glycerine dressing along with Anti-biotics and Analgesic. Chandan and ushir both have Pittaghna and daha shamak property and Triphala guggulu is mrudu virechak along with Anti-inflammatory action.

AIM:
Study of efficacy of chandan ushir-lepa in the management of Pittaj Pachhyamama Vidradhi.

OBJECTIVES:
1. To study the literature about Vidradhi in detail from Ayurvedic classical texts.
2. To study preparation of Chandana – Ushir churna and Triphala Guggulu vati.
3. The clinical evaluation of the local effect of Chandana – Ushir Lepa and Triphala guggul orally.
4. To study the etiopathological management of vidradhi according to modern literature.
5. The clinical evaluation of the local effect of Glycerine - MgSO4 Locally and Tab. Ciprofloxacin and Tab. Diclofenac Sodium.
6. To compare efficacy of the drugs used in both groups.

MATERIAL AND METHOD:
Patients who will fulfil sign and symptoms of and diagnosis criteria of pittaj pachyanmana vidradhi were selected from IPD and OPD section from our college. From irrespective Age, Sex, religion and economical status.
SELECTION CRITERIA OF PATIENT:

Diagnostic Criteria

Diagnosis of Pittaj Vidradhi was made according to the signs and symptoms mentioned in classical ayurvedic texts and contemporary medical books

Inclusion Criteria

1. Primarily patient is selected on the basis of clinical parameter of pittaj pachyamana vidradhi. (Shoth, Daha, Araktata, Vedana)
2. Age- group between 18 to 50 of both sexes.
3. Pittaj Pachyamana vidradhi maximum of 4 days duration.
4. Patient with pachyamanavasth of shotha [Local inflammation]
5. Patient willing for written inform consent

Exclusion Criteria

- Pakvavidradhi or suffering from vidradhi more than 4 days
- Cold abscess
- Non reactive abscess
- Patients suffering from Diabetes mellitus, HIV, malignancy, Bleeding disorder
- Patients on Aspirin and other Antiplatelet drugs
- Osteomyelitis & any other major illness
- Patient having allergy to Diclofenac and Quinolone

Withdrawal criteria

- During treatment any complication arises patient will be liable for rejection. It will be treated with other treatment like suitable antibiotics & pain killer.
- During trial patient not willing for continuation of treatment.
- LAMA (leave against medical advice)

Assessment criteria

Assessment of subjective parameters will be done on the basis of –

- Gradation of symptoms Before Treatment (First day) and
- Gradation of symptoms After Treatment (Pus formation day)

Parameters of Study

Gradation & Criteria of subjective parameters

1) Pain (Vedna)

- No pain - Absent (0)
- Painful Touch - Mild (1)
- Painful Touch but bearable - Moderate (2)
• Continuous Unbearable pain - Severe (3)

2) Burning (Daha)
• No Burning - Absent (0)
• Occasionally - Mild (1)
• Continuous bearable - Moderate (2)
• Continuous Unbearable - Severe (3)

3) Fever (Jwara)
• Afebrile - Absent (0)
• Below 99° F - Mild (1)
• 100° F to 102° F - Moderate (2)
• Above 102° F - Severe (3)

4) Redness (Aaraktata)
• No Redness - Absent (0)
• Light Pink & In noticeable - Mild (1)
• Pinkish Red & Noticeable - Moderate (2)
• Pink Red & Noticeable - Severe (3)

5) Swelling (Shotha)
• No swelling - Absent (0)
• Less than 1 cm &redness - Mild (1)
• More than 1-2 cm with rise in temperature -Moderate (2)
• More than 2 cm with rise in temperature - Severe (3)

6) Pus (Puya)
• Absent (0)
• Present (1)

METHODOLOGY:

60 Patients selected fulfilling the criteria were selected. These patients are divided into two groups wize Group A and Group B

Group A- 30 patients admitted Tab. Triphala Guggul 500mg BD, Chandan+ Ushir lepa with Go Dugdha lepa Locally

Group B- 30 patients admitted Tab. Ciprofloxacin 500mg,Tab. Diclofina sodium 50mg, MgSo4 + Glycerine Dressing Locally

OBSERVATION AND RESULTS:

Gender
In Group A 14 patients were male and 16 patients were female.
In Group B 16 patients were male and 14 patients were female.

**Age**

In Group A 8 patients were in between 18-28 yrs of age, 13 patients were in between 29-39 and 9 patients was 40-50 yrs of age.

In Group B 7 patients were in between 18-28 yrs of age, 9 patients were in between 29-39 and 14 patients was 40-50 yrs of age.

**Occupations**

In Group A 4 patients were businessman, 5 patients were farmer, 15 patients housewives, 2 patients were job and 4 patients were students

In Group B 5 patients were Businessman, 10 patients were Farmer, 12 patients were housewives and 3 patients were students.

**Religion**

In Group A 20 patients were Hindu, 4 patients were Muslim and 6 patients were Buddhist.

In Group B 19 patients were Hindu, 4 patients were Muslim and 7 patients were Buddhist.

**Effect of therapy:**

**Effect of therapy according to relief in Patient’s score**

Table Relieved score and % relief in Patients’ score

<table>
<thead>
<tr>
<th>Sr. No.</th>
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<th>Group B</th>
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<tr>
<td>31</td>
<td>Average Relief (A)</td>
<td>71.25%</td>
<td>31 Average Relief (B)</td>
<td>77.52%</td>
</tr>
</tbody>
</table>
The relieved symptom score and percent relief are given in the Table 5.24. Overall average relief in Patients’ score in Group A is 71.25\% and in Group B is 77.52\%.

**Effect of therapy according to relief in Symptoms’ score**

Table Relieved score and %relief in Symptoms’ score in Group A

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Symptom (Group A)</th>
<th>B.T.</th>
<th>A.T.</th>
<th>Relieved</th>
<th>% Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pain</td>
<td>75</td>
<td>20</td>
<td>55</td>
<td>73.33</td>
</tr>
<tr>
<td>2</td>
<td>Burning</td>
<td>66</td>
<td>8</td>
<td>58</td>
<td>87.88</td>
</tr>
<tr>
<td>3</td>
<td>Fever</td>
<td>44</td>
<td>12</td>
<td>32</td>
<td>72.73</td>
</tr>
<tr>
<td>4</td>
<td>Redness</td>
<td>71</td>
<td>15</td>
<td>56</td>
<td>78.87</td>
</tr>
<tr>
<td>5</td>
<td>Swelling</td>
<td>70</td>
<td>41</td>
<td>29</td>
<td>41.43</td>
</tr>
</tbody>
</table>

Table Relieved score and %relief in Symptoms’ score in Group B

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Symptoms (Group B)</th>
<th>B.T.</th>
<th>A.T.</th>
<th>Relieved</th>
<th>% Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pain</td>
<td>76</td>
<td>7</td>
<td>69</td>
<td>90.79</td>
</tr>
<tr>
<td>2</td>
<td>Burning</td>
<td>72</td>
<td>25</td>
<td>47</td>
<td>65.28</td>
</tr>
<tr>
<td>3</td>
<td>Fever</td>
<td>48</td>
<td>3</td>
<td>45</td>
<td>93.75</td>
</tr>
<tr>
<td>4</td>
<td>Redness</td>
<td>74</td>
<td>7</td>
<td>67</td>
<td>90.54</td>
</tr>
<tr>
<td>5</td>
<td>Swelling</td>
<td>78</td>
<td>38</td>
<td>40</td>
<td>51.28</td>
</tr>
</tbody>
</table>

Average Relief (A) 70.84\%

Average Relief (B) 78.32\%

The relieved symptom score and percent relief are mentioned in the Table 5.25 and Table 5.26. Overall average relief in Symptoms’ score in Group A is 70.84\% and in Group B is 78.32\%.

**5.6.3 Average Relief % in Patients’ and Symptoms’ score**

Table Shows Average Relief % in Patients’ and Symptoms’ score

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Group</th>
<th>Avg. Patient Score (%)</th>
<th>Avg. Symptom score (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Group A</td>
<td>71.25</td>
<td>70.84</td>
</tr>
<tr>
<td>2</td>
<td>Group B</td>
<td>77.52</td>
<td>78.32</td>
</tr>
<tr>
<td>3</td>
<td>Difference</td>
<td>6.27</td>
<td>7.48</td>
</tr>
</tbody>
</table>

Figure 5.14 Shows Average Relief % in Patients’ and Symptoms’ score
It was observed that average relief is more in Group B than Group A. Hence it can be said that according to average relief % local application of Glycerine + MgSO₄ along with Tab Ciprofloxacin and Tab Diclofenac orally is effective than local application of Chandana Ushira lepa along with Triphala Guggulu orally in Pittaja Pachyamana Vidradhi to reduce Symptoms’ and Patients’ score.

CONCLUSION:

Chandan and Ushir having sheet and pitta shamak property. Guggulu having Anti-microbial and anti-inflammatory property. In the present Study Statistical analysis shows in group B burning reduce than Group A while fever, Redness, swelling and pain reduce in group A. Nature of Pachyamana Avastha of vidradhi is toward to get Pakva. Pittaja Pchyamana Vidradhi doesn’t resolve commonly.

REFERENCES:

ANALYTICAL EVALUATION OF PRADARARI LOHA

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2.Professor and H.O.D. Department of Rasashastra and Bhaishajya Kalpna, Shri Ayurved Mahavidyalaya, Nagpur.

ABSTRACT:
Formulations of drugs of herbo-mineral origin have been comprehensively described in Rasashastra. Analytical standardization of such formulation is the need of the day to assure a quality medicine. Pradarari Loha is one such Kalpa mentioned in Bhaishajya Ratnavali, Stree roga Chikitsa Adhyaya. It is a Vati consisting of Loha Bhasma, Abhraka Bhasma and certain herbs. Present study is aimed at preparation of Pradarari Loha which was evaluated analytically. Loha Bhasma, Abhraka Bhasma and Pradarari Loha were evaluated for Loss on drying(LOD) which was found to be 0.042%, 0.075% and 8.565% respectively, Loss on ignition(LOI) was found to be 99.25%, 99.52% and 17.36% respectively, Acid insoluble ash was 1.25%, 4.25% and 1.26% respectively and pH was found to be 4.6, 5.5, and 4.91 respectively, Iron was estimated to be 63.53, 21.53 and 9.54 respectively. SEM of Loha Bhasma and Abhraka Bhasma was performed which showed particles size between 1-50 micron. Pills of Pradarari Loha were evaluated for Uniformity of weight which was 0.2499g, Uniformity of Size was 8.20mm, Tablet Hardness was 2.2 Kg/Sq cm, Disintegration time 17 mins Friability was found to be 0.0889%.

Key Words: Pradarari Loha, Loha Bhasma, Abhraka Bhasma.

INTRODUCTION:
Rasashastra is branch of Ayurveda which elaborately describes the preparation of mineral based drugs and its judicial use so as to achieve maximum health benefit from it. Rasadrvyas are known to be fast acting, tasteless, required in low dose and easy to administer hence, they hold a pace of immense importance in Ayurveda in treating various ailments. The prevalence of Pradara Roga in adult female have been sufficiently high. Pradarari Loha is a Kalpa which is indicated in the treatment of different types of Pradar Roga and symptoms associated with it. A clinical study on efficacy of Pradarari Loha was conducted but no analytical study was performed till date hence, this study was performed to ensure a quality Product.

MATERIAL AND METHODS:
Loha and Abhraka were procured from local market and were subjected to Shodhana and Marana. Loha Shodhana was done by heating Loha up to red hot stage and subsequently immersing it into in to Tila Taila, Takra, Gomutra, Kanji, Kulti Kwatha and Triphala Kwatha. The process was repeated 7 times for each liquid media. Shuddha Loha was further triturated in Triphal Kwatha made in Gomutra and was subjected to Gajaputa(850°C) 21 times until Loha Bhasma was obtained.

Shodhana of Abhraka was done by heating and quenching of Abhraka into Triphala Kwatha 7 times. Dhanyabharaka Nirmana was done by immersing Dhanya and Shuddha Abhraka tied in jute bag into...
Kanji for three days and later rubbing it vigourously. Dhanya Abhraka was triturated with Eranda Patra Swarasa and Guda and subjected to Gaja Puta. Abhraka Bhasma was obtained after 24 puta.

All the other ingredients of Pradarari Loha were collected from the local market. Churna of Manjishtha, Shalmali, Patha, Bilva, Musta, Dhataki, Ativisha and Loha Bhasma and Abhaka Bhasma were taken in equal proportion and triturated with Kutaja Kwatha. Dough was made and pills were rolled, dried, stored and evaluated analytically. Loha Bhasma and Abhraka Bhasma were evaluated for particle size by performing SEM and again Loha Bhasma, Abhraka Bhasma and Pradarari Loha was tested for LOD, LOI, Acid Insoluble Ash, pH, and Iron content. Pills of Pradarari Loha were evaluated for Uniformity of weight, Uniformity of size, Hardness Disintegration time and Friability.

OBSERVATON AND RESULT:

Observations were made during different analytical testing of Loha Bhasma, Abhraka Bhasma and Pradarari Loha. On organoleptic evaluation both Loha Bhasma and Abharaka Bhasma showed smoothness, tasteless, lusterless with no specific ordour and produced no perceptible sound on chewing. Loha Bhasma was bluish black in colour and Abhraka Bhasma was brick red in colour. Pradarari Loha showed smoothness, taste like Kutaja Kwatha and smell of Dhatki Pushpa, brownish black in colour. Observations and results of analytical parameters of Loha Bhasma, Abhhraka Bhasma and Pradarari Loha are tabulated in table no. 1 and figure 1 and 2.

Discussion

Analytical study was done to analyze physicochemical changes brought about by different Sanskara.

LOD gives the moisture content in percentage of sample. The method employed was as per Ayurvedic pharmacopeia of India. The mean LOD of Loha Bhasma Abhraka Bhasma and Pradarari Loha were 0.042%w/w, 0.075%w/w and 8.565%w/w respectively. LOI was done to estimate in organic contents of sample. The method employed was as per API. The Mean LOI of Loha Bhasma Abhraka Bhasma and Pradarari Loha were 99.25%w/w, 99.52%w/w and 17.36%w/w respectively. Acid insoluble Ash determines the amount of drug which is available for absorption from the GIT. The Acid insoluble Ash value of Loha Bhasma Abhraka Bhasma and Pradarari Loha were 4.25, 1.25 and 1.26%w/w respectively. pH indicates the acidity or alkalinity of a solution. pH was calculated by using digital pH meter in two concentration 1% and 10% concentrations of given samples. The pH of Loha Bhasma Abhraka Bhasma and Pradarari Loha were 4.6, 5.5 and 4.91 respectively which indicated that the Bhasmas and Kalpa are moderately acidic in nature. Fe was estimated which was found to be 63.53, 21.53 and 9.54 respectively.

Pradarari Loha was evaluated for Uniformity of weight by using five batches of ten tables each. The uniform weight of pills was 0.2499g. The hardness of PL was observed to be 2.2 kg/Sq.cm. It indicates that the Pills are of sufficient structural integrity. The friability test for tablet was done by using friability test of apparatus and it was 0.0889%w/w, which indicates that pills have good strength to sustain abrasion during transportation and handling. Disintegration time was done and it was observed that it takes t 17min for pills to disintegrate in stomach.
SEM was used to find out particle size of Bhasma also to aid EDAX for elemental analysis. The images were captured at different magnification ranging from 300X to 10000X. Loha Bhasma and Abhraka Bhasma showed the presence of nano particles of around 1-50 micron. Some of the particles got fused with each other and particles were not of definite shape.

CONCLUSION:

All the test performed on different parameters indicated that although Pradarari Loha pills were made manually but were uniform in weight and size. The Hardness and friability of pills was good. The Estimation of Iron in Pradarari Loha was low as compared to Loha Bhasma and Abhraka Bhasma. The pH of Pradarari Loha, Loha Bhasma and Abhraka Bhasma was slightly acidic which was within normal limits. The SEM study showed that the Bhasma have fine particle size which indicated that Bhasmas are very fine. All the Above results indicate that the product is of standard quality.

Table no.:1

Observations on organoleptic characters of Pradarari Loha

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Organoleptic characters</th>
<th>PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Shabda</td>
<td>No</td>
</tr>
<tr>
<td>02</td>
<td>Sparsha</td>
<td>Soft</td>
</tr>
<tr>
<td>03</td>
<td>Rupa</td>
<td>Reddish Black</td>
</tr>
<tr>
<td>04</td>
<td>Rasa</td>
<td>Like Kutaja</td>
</tr>
<tr>
<td>05</td>
<td>Gandha</td>
<td>Like Dhataki</td>
</tr>
</tbody>
</table>

Table no.:2

Showing results of LOD, LOI, AISA value and pH of AB, LB and PL

<table>
<thead>
<tr>
<th></th>
<th>LOD % w/w</th>
<th>LOI %w/w</th>
<th>Acid insoluble Ash %w/w</th>
<th>pH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loha Bhasma</td>
<td>0.075</td>
<td>99.52</td>
<td>1.25</td>
<td>5.5</td>
</tr>
<tr>
<td>Abhraka Bhasma</td>
<td>0.042</td>
<td>99.25</td>
<td>4.21</td>
<td>4.6</td>
</tr>
<tr>
<td>Pradarari Loha</td>
<td>8.565</td>
<td>17.36</td>
<td>1.26</td>
<td>4.91</td>
</tr>
</tbody>
</table>

Table no.:3

Results of Pradarari Loha

<table>
<thead>
<tr>
<th></th>
<th>Uniformity of weight(g)</th>
<th>Uniformity of size(mm)</th>
<th>Hardness (kg/Sq.cm)</th>
<th>Friability(%)</th>
<th>Disintegration time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pradarari Loha</td>
<td>0.249</td>
<td>8.20</td>
<td>2.2</td>
<td>0.088</td>
<td>17min</td>
</tr>
</tbody>
</table>
Table no.: 4
Estimation of Fe in Loha Bhasma, Abhraka Bhasma and Pradari Loha

<table>
<thead>
<tr>
<th>Estimation of Fe( % in sample)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loha Bhasma</td>
</tr>
<tr>
<td>63.53</td>
</tr>
<tr>
<td>Abhraka Bhasma</td>
</tr>
<tr>
<td>21.53</td>
</tr>
<tr>
<td>Pradari Loha</td>
</tr>
<tr>
<td>9.54</td>
</tr>
</tbody>
</table>

REFERENCES:

CONCEPT OF AGNI AND AYURVEDA

Dr. Rahul Purushottam Dhas¹, Dr. Jayashree Katole²

2. Professor & HOD, Kayachikitsa, Dr. V.J.D.G.A.M., Patur.

ABSTRACT:

Agni is responsible for strength, health, longevity; vital breath and it determine the quantity of food to be consumed. The word *agni bala* is used to denote the superiority, mediocrity and inferiority nature of *agni* and accordingly it digest the good amount, moderate amount and less amount of food respectively. Ingested food is to be digested, absorbed and assimilated, which is necessary for the maintenance of life, and is performed by the *Agni*. According to the functions and site of action, *Agni* has been divided into 13 types, i.e. one *Jatharagni*, five *Bhutagni* and seven *Dhatvagni*. *Jatharagni* is the most important one, which digests four types of food and transforms it into *Rasa* and *Mala*. This article revolves around the details of *Agni* described in various texts of Ayurveda.

KEYWORDS: *Agni*, *bhutagni*, *dhatvagni*, *jatharagni*.

INTRODUCTION

*Ayurveda* has described an important factor of digestion and metabolism in our body as *Agni*. In *Ayurveda*, the term “*Agni*” is used in the sense of digestion of food and metabolic products. *Agni* converts food in the form of energy, which is responsible for all the vital functions of our body. Therefore, *Ayurveda* considers that *Dehagni* is the cause of life, complexion, strength, health, nourishment, lusture, oja, *teja* (energy) and *prana* (life energy)¹. The *audaryagni* present inside the abdomen of animals is known by various names such as *Vaiswanara*, *Audarya tejas*, *Kagni*, *Jatharagni*, *Kosthagni*, and *Pachakagni*. This *agni* is not in the form of flame as the terrestrial fire but is in the form of liquid which is called as ‘*Pitta*’ in *Ayurveda*. ‘There is no *agni* apart from *pitta* and *pitta* itself is *agni*’ asserts *Caraka*.² The term ‘*Pitta*’ is used to designate its physical or material form and the term “*Agni*” to designate its functions. Sometimes these are used interchanging also. Further, *Agni* is subdivided into thirteen kind’s viz., one- *Kosthagni*, five-*Bhutagnis* and seven-*Dhatwagnis*. *Kosthagni* is the chief of all the other kinds. It is present inside the *amasaya* (stomach and small intestines) and *pakwasaya* (large intestine), it attends to the function of digestion of food and contributes moities of itself to the other *agnis* also, thereby providing them with strength. It is also known as *Pachaka pitta*. Though composed of all the *panchamahabhotas* it is predominantly *tejas* (*agneya*), though it is liquid in form it is devoid
of the qualities of liquid viz. sita (cold), snigdha (moist), etc and is called Anala (fire) due to its predominant functions of paka (cooking, digestion)\(^3\). Bhutagnis are five in number, and present in the koshagni or pachaka pitta itself. These are known as parthivagni, apyagni, tajasagni, vayavyagni and nabhasagni. They help the koshagni in the digestion of food, especially to digest those kinds of foods which are of identical nature\(^4\). Parthivagni specially helps in the digestion of parthiva kind of food, apyagni the apya kinds of foods and so on. These bhutagnis derive their strength (functional capacity) from the koshagni itself. Dhatwagnis seven in number, are present, one in each of the seven dhatus (tissues) of the body\(^5\), and each one is called by name of the dhatu in which it is present such as Rasagni, Raktagni, etc. Each of them is specific by itself (in its composition and function) and suitable only to particular dhatu in which it is present (dhatu visista). Each dhatwagni attends to the digestion of Posakansa (nutrient material) supplied to that dhatu by circulating rasa dhatu. The dhatwagni present in the mamsa dhatu can digest the nutrient material required for mamsa dhatu only but cannot digest those of other dhatus, similarly is the case with the other dhatwagnis. This is what is known as visista or specificity of dhatwagnis. The dhawagnis also derive their strength from koshagni itself, and so depend on it for their functioning. If the koshagnis is normal, the dhatwagnis are also normal, if the koshagnis are weak, the dhatwagnis are also weak and if the koshagnis is powerful the dhatwagnis are also powerful. Vagbhata says that even the dosas and malas also have their own agnis. These are also related to koshagni\(^6\). An attempt has been made to understand Agni through Ayurvedic perspective. In this article definition, Kosthagni Vyapara, Importance of Agni, Agni Samya and Vaisamya Effect of Agni Vaismaya, will be descibed.

**KOSTHAGNI VYAPARA (FUNCTIONS OF DIGESTIVE FIRE):**

The food ingested, is acted upon by the normal Kosthagni vis a vis pachaka pitta and cooked properly to produce two substances, the Sarabhaga or the Ahara rasa (the essence of food) and Kitta bhaga (the waste products of food). The sarabhaga or ahara rasa undergoes further changes being acte upon by the bhutaganis and gets converted into Rasadhatus-the first dhatu (first tissue) of the body. The activities of kosthagni and bhutagnis together form the Ahara paka or digestion offood. The rasadhatus contains the nutrient materials derived from the food and required by the dhatus (tissues). This rasa dhatu circulates all over the body supplying the nutrients to all the other dhatus, which utilize this material for their growth (metabolism)\(^7\).
IMPORTANT OF AGNI:

_Bala_ (strength), _varna_ (colour), _swasthya_ (health), _utsaha_ (enthusiasm), _upacaya_ (development of the body), _prabha_ (complexion), _ojas_ (strength), _tejas_ (valour), _vaya_ (age), and even _ayu_ (life) - all depend on _Agni_ and its function (fire-like activity). So long as _agni_ is normal, man can have a healthy and long life, loss of _Agni_ leads to loss of life\(^8\). Foods containing the nutrient materials of the _dhatus_ can be of help to the _dhatus_, only after they are cooked (digested) well by the _Agni_.

AGNI SAMYA AND VAISAMYA (NORMALCY AND ABNORMALCY):

Existence of all the different kinds of _agnis_ in their required _pramana_ (quantity), _gunas_ (qualities) and _karmas_ (functions) is known as _Agni Samya_ (normalcy). While _vridh_ (increase) and _kshaya_ (decrease) in these aspects is known as _Agni Vaisamy_ (abnormalcy) _Vridhi_ (increase) and _kshaya_ (decrease) are known as _tikshna_ (strong, powerful) and _manda_ (weak) respectively. Both these are abnormal, and give rise to many diseases in the body.

KOSTHAGNI:

The _kosthagni_ (gastric fire, digestive activity) present in man, is of the following four kinds\(^9\):

1. **Samagni** (the normal one), is that which digests the food in the scheduled time without giving any trouble to the body. It is conducive to health and so ideal. It is normally found is persons of _samsarga_ and _sammishra prakriti_ (constitution originating from the combination of two and all the three _doshas_ respectively.)

2. **Visamagni** (the erratic) is that which changes from one time of food to the other in its functioning, producing flatulence, pain in the abdomen, obstruction to the free elimination of faces and flatus and such other troubles to the body. It is normally found in persons of _vata prakriti_ (nervous constitution), develops in others also by over indulgence in _vatakara ahara vihara_ (foods and activities which increase _vata_) and given rise to diseases of _vata_ origin.

3. **Tikshnagni** (the powerful or strong) is that which digests even large quantities of food earlier to the scheduled time, producing burning sensation inside the abdomen, sour belchings, thirst, feeling of hot fumes coming out and such other troubles to the body. It is normally found in persons of _pitta prakriti_ (bilious constitution), develops in others by the use of _pittakara ahara vihara_ (food and activities causing increase of _pitta_) and gives rise to diseases of _pitta_ origin.

4. **Mandagni** (the weak) is that which cannot digest even little quantity of food in the scheduled time, produces heaviness of the abdomen, stasis of food for long period inside, difficulty in breathing and such other troubles to the body. It is normally found in persons of
kapha prakriti (phlegmatic constitution), develops in others by the use of kaphakara ahara viharas (foods and activities which increase kapha) and gives rise to disease of kapha origin.

Except samagni, the first type, which is prakrta (normal), the remaining three are vaikrta (abnormal), and lead to the production of various diseases\(^{10}\). The number of diseases produced by mandagni (weak digestive activity) is more than those produced by the other two.

Hence a categorical statement that "all diseases are due to Mandagni"\(^{11}\)

**EFFECT OF AGNI VAISMAYA:**

When the three kinds of abnormal agni (digestive activity) stated above are present, digestion of food will not be proper. In Mandagni, the food will be Apaka (inadequately digested or not digested at all), in case of Tikshnagni it will be dagdhapaka (overburnt) and in case of Visamagni it will be pakwa-apakwa (mixture of digested and undigested) and also different from one period of digestion to the other\(^{12}\). In all these conditions there will be accumulation of Ama (undigested materials remaining over) in the Rasa dhatu. The quantity of such Ama materials will be copius (large) in Mandagni and less in the other two.

**CONCLUSION:**

Explaining briefly the digestive and metabolic functions of Agni, Acharyam Charaka has mentioned that various types of dietetic materials are digested by their own Agni (Bhutagni), encouraged and enhanced by Antaragni (Jatharagni), which is further digested and metabolized by Dhatvagni to associate the body with the nutritional strength, complexion and happy life along with providing energy to the seven dhatus. The Tridosas, Dhatus and Malas are maintained normal and healthy by the Agni itself, present in each of them. Such is the importance of Agni to life.

**REFERENCES:**

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STANDARDIZING TECHNIQUE OF SATWA KALPANA-
CRITICAL REVIEW

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2. HOD & Professor, Department of Rasa Shastra and Bhaishajya Kalpana, Shri Ayurved Mahavidyalaya, Nagpur

ABSTRACT:
Standardization is necessary now a day. Lots of work is going on now in standardization of Ayurvedic drugs to prove compatibility and safety on modern parameters. Ayurveda has got a unique ‘Ghana Satwa’ (Plant Extract) concept for increasing potency of drug and effective in less dose. Various method of preparations along with shelf life period are described in Ayurveda. In this article there is an attempt made to analyze the probable analytical parameters which may prove useful for the Standardization of Satwa Kalpana.

INTRODUCTION:
Panchavidha Kashay Kalpana (Five basic pharmaceutical processing) are mainly described in Ayurvedic Pharmaceutics¹. Swarasa (juice), Kalka (Paste), Kwatha (decoction), Hima (cold infusion), Phanta (hot infusion) these are five basic Kalpanas. These are used since antiquity to treat diseases in their basic form or in other forms. Acharya Charaka has given opinion that the drug having potency to maintain health is the best drug ² so that’s why new dosage forms have been derived from these basic Kalpanas i.e. Sneha Kalpana, Sandhan Kalpana, Churna, Vati, Ghana, etc.

Satwa Kalpana is one of the invention of these different dosage form of drugs. Satwa-essence/Sara Bhaga of plant material³. It’s a starchy material present in the plants. It refers to the aqueous extractable solid substance collected from herbal origin⁴.

Satwa Kalpana was firstly described as a Guduchi Satwa Nirmana in Yogaratnakar, Rajayakshma Chikitsa and then Rasa Yog Sagar Generally method of extraction is as follows-
The drug part is identified with ‘Starch material’ is collected. It is cut into smaller pieces of 2-3 inch length and outer husk is removed if possible. The drug is roughly crushed in Khalwa Yantra and soaked in enough quantity of water for about 6 to 8 hours in a stainless steel vessel. Later the mixture is macerated rigorously to facilitate the release of ‘Starchy material’ into the liquid.

Then the remnants fibrous and woody parts are removed from the liquid and the vessel is placed undisturbed for some time to allow the starchy particles to settle down at the bottom. Now the stable clear supernatant water is carefully siphoned out without disturbing the starch sediment. The starch sediment at the base is washed with little quantity of water, dried in shade completely and
collected. It is stored in moist proof polythene covers or airtight glass containers. The yield will be
grayish white powder and only 5% of the drug used is obtained as starch.

There are many medicinal plants which are used to prepare Satwa Kalpana i.e. Guduchi(*Tinospora cordifolia*), Udumbara(*Ficus racemosus*), Ardaka(*Gingiber officinalis*)

Standardization is a necessary issue for herbal/polyherbal preparations in order to evaluate the quality of the drug based on the quantification of their active principles. India, as place of origin of the traditional system of healthcare may play a leading role in the making of standardized, therapeutically effective Ayurvedic drugs. The analytical parameters that can be supportive to standardize Satwa Kalpana are as follows:

1. **Descriptions:**
   - Colour
   - Odour
   - Taste

   These are the examinations which can be done by sense organs. Any deviation from the normal colour, odour, taste, signify that due to some chemical reaction sample is changing its normal phenomenon.

2. **Loss on drying**

   Signifies the amount of residual water in the finished product. Ideally it should be nil.

3. **Total Ash**

   Ash value helpful in determining the quality and purity of crude drugs, especially in powder form. The objective of ash vale determination is to remove all traces of organic matter, which may otherwise interfere in an analytical determination.

4. **Acid-insoluble ash**

   Acid insoluble ash is the part of total ash which is insoluble in diluted hydrochloric acid. The ash or residue yielded by an organic chemical compound is as a rule, a measure of the amount of inorganic matter present as impurity.

5. **pH**

   Determines acidity or alkinity of the substance.

6. **Water soluble extractive**

   It plays important role in evaluation of crude drugs. Less extractive value indicates addition of exhausted material, adulteration or incorrect processing during drying or storage or formulating.

7. **Alcohol soluble extractive**

   It also indicative for same purpose as the water soluble extractive

8. **Identifications TLC/HPTLC/ HPTLC with marker**
It is standard analytical tool for the identification, detection of the compound. It is one of the sophisticated instrumental technique for qualitative and quantitative analysis of the herbs and herbal drugs.

9. **Test for heavy metals**

To determine the concentration of heavy metals in herbal drugs is needed to detect impurity and toxicity if present.

10. **Microbial contamination**

This test is useful in microbial contamination as fungal and bacterial load during packing, storage, raw material handling, finished dosage form, to maintain quality and safety and potency of the drug.

11. **Test for specific pathogens**

This test is useful in finding.

12. **Pesticide Residue**

Most of the herbal drugs contain pesticide residue so it should be tested to maintain quality of herbal drugs.

13. **Test for Aflatoxins\(B_1,B_2,G_1,G_2\)**

This test is necessary to established safety of drugs, and to give toxic free herbal drug to the pharmaceutical industries.

**DISCUSSION:**

The preparations used in Ayurveda have should be analyzed against certain physicochemical parameters in order to get optimal concentration of known active constituents present in the drug. Analysis of these parameters gives knowledge regarding various aspects of herbal drugs. Loss on drying signifies moisture content in the final product as water in the product degraded its quality and shelf life also. Any deviation from the normal colour and odour signify due to chemical reaction drug is changing its normal phenomenon.

**CONCLUSION:**

Standardization is the process of establishing a technique standard, which could be a standard specification, standard test method, standard procedure (or practice). The need for the quality control methods for the Ayurvedic drugs is must due to commercialization of Ayurveda and manufacturing units during current era and also due to Ayurvedic drugs comes under the Drugs and Cosmetic Act.

Data obtained from above parameters may be used to established the standards for the formulation of Satwa from different herbal origin. The fixation of standards will be definitely useful for Satwa Kalpanas.
References


A CASE STUDY OF DUSHTA VRANA TREATED WITH LAJJALU YASHTIMADHU KALKA WITH GHRUT

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ABSTRACT:

“The destruction / break / rupture / discontinuity of body tissue / part of body, is called Vrana.” A clean wound in a normal body heals earlier with a minimum scar as compared to contaminated wound. Wound healing is mechanism where the body attempts to restore the integrity of the injured part. Several factors affects the normal process of wound healing such as the site of wound, contamination (foreign bodies/bacterial), local factors like vascular insufficiency or previous radiation, systemic factors such as malnutrition, Disease like diabetes mellitus, Immune deficiencies and medications like steroids. Acharya Sushruta mentioned 60 Upakramas for the management of Vrana and local application of Lajjalu Yashtimadhu kalka with Ghrut is one among them. The local application of kalka is one of the best substitutes for of chronic wound healing & the Lajjalu Yashtimadhu kalka with Ghrut have better shodhana & ropana effect. A case report of 34 year – old man, who presented with complaints of an open traumatic ulcer on the dorsum of the right foot associated with pain, discharge, slough, foul smell, oedema and discoulouration of the skin has been presented here.

INTRODUCTION:

Man, The superior most of all species who always remain in search of one prime goal that is perfect health. Researches are carried out from Vedic era to current age. The wound is biggest challenge to medical profession from Vedic era. The wound is healed by three way First is primary intention, Second is Secondary intention & Third is tertiary intention (delayed primary intention). Sometimes the wound refuses or fails to heal, this type of wound is called as Non healing wound.

The Wound healing process is dependent on several local and general factors [1]. In ayurved literature these Vrana are classified as Sadyo Vrana & Dushta Vrana [2]. Dushta vrana is formed due to refusal or failure of natural healing process.

Dushta vrana implies the excessively damaged condition characterized by vitiation of mamsa, meda dhatus and doshas which are caused by external injuries with exudation of foul-smelling pus (durgandhayuktha puyam), pain, temperature, inflammation, redness, itching and also oozing of foul-smelling blood (durgandhayuktha raktham) with no intention to heal4. In consideration of development, trauma has increased remarkably in past decades. Traumatic wounds occur at the rate
of 50 million or more every year worldwide, growing globally at 1.7% CAGR (2012-2020) that require cleansing and treatment with low-adherent dressings to cover the wound, prevent infection, and allow healing by primary intention.

Acharya Susruta the pioneer of surgery had advocated 60 procedures for wound care to meet the challenge of wound management. Among them lepa is considered as one of the best treatment. Here in this case Lajjalu Yashtimadhu kalka with Ghrut, a formulation from shrutruta is advocated which is used in case of dushta vrana having tendency of non-healing even after proper cleaning and removal of pus and slough.

In this case study local application of Lajjalu Yashtimadhu kalka with Ghrut Lajjalu Yashtimadhu kalka with Ghrut is done with lepa. This process is done for 30 min. [3]. In this case study Lajjalu Yashtimadhu kalka with Ghrut is use as medicated Lepa & this Lajjalu Yashtimadhu kalka with Ghrut have a property of Shodhan & Ropan so it is more effective in dushtasvrama.

CASE REPORT:

A 34 yrs old male patient presented with the complaints of a non-healing ulcer. Before 2 months he was accidently injured by a steel bar the wound is formed over the dorsum of Right foot. He was treated with Antibiotic ointment (Povidine iodine) by a local doctor but it failed to respond. After few days ulcer become infected with freely flowing pus.

There was no history of DM, HTN or any other major disorder. The family history was also not significant with the patient disorder.

Local Examination:-The floor was covered by slough, edges were inflamed. Ulcer is seen over the dorsum of foot measuring about 7 X 5 X 0.5 cm in dimension with purulent discharge and irregular margin. Tenderness was also present with surrounding indurations and local rise in temperature. Local lymph nodes were not involved. There is no any immunological disorder. Routine haematology and urine investigations were within normal limits.

Every morning the wound was cleaned with the freshly prepared lukewarm Triphala kwatha. After cleaning Lajjalu Yashtimadhu kalka with Ghrut lepa was locally applied. Dressing was done with the sterile gauze and bandage.

RESULT:

The clinical features of dushta vrana were improved at the end of First week and the wound was healed completely at the end of 2nd week leaving only a minimal scar Fig. 3. With a follow up for a period of 1months, the patient has shown no signs of recurrence.

DISCUSSION:
• Effect on Vrana Vedana:- Pain and tenderness was completely reduced at the end of treatment. Throbbing pain which was present at the beginning was completely reduced at the end of 1st week as the purulent discharge decreased because of the shodhana properties of Lepa.

• Effect on Vrana Varna:- Change in colour occurred when dushta vrana got converted into shuddha, which was due to elimination of doshas out from the body. At the end of 7th day slough was completely reduced and colour of the floor becomes pinkish and healthy granulation tissue appeared.

• Effect on Vrana Strava:- At the end of 2nd week the purulent discharge from the wound completely stopped, this may due to the shodhan and ropan properties of lepa.

• Effect on Vrana Gandha:- Foul smell present at the beginning of treatment was completely reduced at the end of 1st week. The smell was present because of the pus and as the Vrana becomes shuddha it decreases.

• Effect on Vrana Aakriti:- On 14th day Vrana was completely healed, this may due to Vrana Ropan property of ghrut Lepa, which provide ideal environment for healing.

CONCLUSION:

Lajjalu Yashtimadhu kalka with Ghrut Lepa is the new substitute for Dushata Vrana. It does the action of Shodhan & Ropan. It is a simple O.P.D level procedure, relatively painless, can do without anaesthesia. lepai will remove unhealthy granulation tissue, so wound size will not increase. Patient is introduced of new technique in ayurved.

ACKNOWLEDGEMENT:

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COMPARATIVE ANTIMICROBIAL STUDY OF TAMRA BHASMA W.S.R. TO AMRUTIKARANA.

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2. Associate Professor, Dept. of Rasashastra & B. Kalpana, Shri Ayurved Mahavidyalaya, Nagpur.
3. Professor, Dept. of Rasashastra & B. Kalpana, Shri Ayurved Mahavidyalaya, Nagpur.

ABSTRACT:

Among all the ayurvedic medicines bhasmas are the unique preparations of metals and minerals which are used for the treatment of various ailments. Method of preparation of bhasma includes many procedures such as shodhana, marana etc. Tamrabhasma is one of these bhasma and used in many diseases like arsha, kushtha etc. most of these diseases occurs due to micro-organisms. To eliminate remaining doshas from tamrabhasma procedure of Amrutikarana is essential. Antimicrobial activity of tamrabhasmas was not increases or decreases after amrutikarana, there was antimicrobial activity present before and after amrutikarana. Amrutikaranan minimizes the adverse effects of tamrabhasma. In the present paper, an attempt is made to review the antimicrobial activity of tamrabhasma before and after amrutikarana.

Key words: Shodhana, Marana, Tamrabhasma, Amrutikarana, Antimicrobial activity.

INTRODUCTION:

Many ayurvedic medicines are prepared from the metals. Tamra is one of such metals, before taking for medicinal preparation tamra must be properly processed and detoxified. To make it for therapeutic use, tamrahass to pass through a series of pharmaceutical processes e.g. Shodhana, Marana etc. But sometimes the bhasma, although prepared carefully cannot get rid of properties or ingredients which prove harmful and toxic to the body. In such circumstances the bhasmas subjected to further processing termed as Amrutikarana. Tamra is considered as a toxic material and possess eight toxic properties which are known as Astadoshas Tamra. Amrutikarananais claimed to induce nectar like properties in a bhasmaby nullifying the trace impurities expected to be present in the bhasmas. The metal tamra is mentioned in Ayurveda with wide range of therapeutic utilities. Tamrabhasma having the properties like Saraka (purgative), Lekhana (scrap excessive fat), Ropana (wound healing. It is also widely used in treatment of various diseases like Parinamashula (peptic ulcer), Pandu (anemia), Arsha (haemorrhoids), Kushtha (skin disorders), Shwasa (dyspnea) etc. Most of these diseases are caused by micro-organisms, Hence, an attempt is made to evaluate the comparative antimicrobial study of tamrabhasma before and after Amrutikarana.
AIM AND OBJECTIVES:

- To carry out purification of the raw drugs – Parada (Mercury), Gandhaka (Sulphur) and Tamra (Copper).
- Preparation of Kajjali.
- To prepare tamrabhasma.
- To carry out Amrutikarana samskara of tamrabhasma.
- To study antimicrobial activity of Tamrabhasma before and after Amrutikarna.

MATERIAL AND METHODS:

Raw materials were collected from local market and were authenticated form expert for their good quality. Shodhana, marana, amrutikarana all these procedures were done according to references mentioned in various text from rasashastra.

   Total 500 g of parada (mercury) taken for shodhana (purification). Daily 5 – 6 hours mardana (trituration) was done and same procedure was repeated for 6 days.

   Total 1000 g gandhaka (Sulphur) was taken for purification. Heated with goghruta and after melting poured through cloth into pot containing milk. Whole procedure was repeated for 7 times and thus gandhaka was purified.

   Shuddhagandhaka and shuddhaparada were taken into khalwayantra in equal quantity and mardana (trituration) was done till the formation of kajjali.

4. Tamrashodhana: It is done in two steps.
   a) Samanyakshodhanof tamra: (4) Rarsaratnasamucchaya 5/29.
      Tamrapatra were heated till it becomes red hot and dipped in Tilataila, takra, gomutra, kanji&kulatthakwatha sequentially. The procedure was repeated for 7 times for each media.
   b) Visheshshodhanof tamra: (5) Rasaratnasamucchaya 5/50.
      Coating of Nimbusawara and saindhavalavana was applied on samanyashodhittamrapatra and then they are subjected to heat till they become red hot and dipped in kanji. The whole procedure was repeated for 8 times.

   Samanya and visheshshodhittamra (copper) were taken and subjected for puta (bhasmikarana process). Total 12 putas were given to tamra according to the reference and bhasma was obtained.
6. **Amrutikarana of tamrabhasma:**

Prepared tamrabhasma was taken and mardana (trituration) was done with panchamruta (mixture of godugdha, goghruta, dadhi, gud & honey) and half part gandhaka. Total 3 putas were given for the process of amrutikarana.

7. **Antimicrobial study:**

The antimicrobial study of tamrabhasma was done by Agar diffusion method. Both the samples of tamrabhasma i.e. with and without Amrutikarana were subjected for antimicrobial study. Antimicrobial activity was done on selected four organisms namely *Escherichia coli, Staphylococcus aureus, Streptococcus pneumoniae, Klebsiella pneumoniae* in three different concentrations i.e. 2.5%, 5%, 10% by Agar diffusion method.

**OBSERVATIONS AND RESULTS:**

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Analytical test</th>
<th>Before Amrutikarana</th>
<th>After Amrutikarana</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Loss on drying (LOD)</td>
<td>2.8 %</td>
<td>3 %</td>
</tr>
<tr>
<td>2</td>
<td>Loss on ignition (LOI)</td>
<td>97.98 %</td>
<td>57.68 %</td>
</tr>
<tr>
<td>3</td>
<td>pH Value</td>
<td>5.6</td>
<td>4.8</td>
</tr>
<tr>
<td>4</td>
<td>Total ash</td>
<td>98.15 %</td>
<td>58 %</td>
</tr>
<tr>
<td>5</td>
<td>Acid insoluble ash</td>
<td>0.24 %</td>
<td>0.30 %</td>
</tr>
<tr>
<td>6</td>
<td>Water soluble ash</td>
<td>0.68 %</td>
<td>0.80 %</td>
</tr>
<tr>
<td>7</td>
<td>Quantitative estimation of Mercury</td>
<td>0.025 %</td>
<td>0.05 %</td>
</tr>
<tr>
<td>8</td>
<td>Quantitative estimation of Sulphur</td>
<td>0.0032 %</td>
<td>0.004 %</td>
</tr>
<tr>
<td>9</td>
<td>Quantitative estimation of Copper</td>
<td>98.42 %</td>
<td>59 %</td>
</tr>
</tbody>
</table>

**Table No. 1:**

**Showing observations during tamrabhasma preparation.**

<table>
<thead>
<tr>
<th>Sr.No</th>
<th>Procedure</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Parada shodhana</td>
<td>500 g</td>
<td>455 g</td>
</tr>
<tr>
<td>2</td>
<td>Gandhakashodhana</td>
<td>1000 g</td>
<td>940 g</td>
</tr>
<tr>
<td>3</td>
<td>Kajjali preparation</td>
<td>450 g Parada + 450 g Gandhaka</td>
<td>855 g</td>
</tr>
<tr>
<td>4</td>
<td>Tamrashodhana</td>
<td>600 g</td>
<td>510 g</td>
</tr>
<tr>
<td>5</td>
<td>Tamramarana</td>
<td>300 g</td>
<td>228 g</td>
</tr>
<tr>
<td>6</td>
<td>TamraAmrutikarana</td>
<td>100 g</td>
<td>86 g</td>
</tr>
</tbody>
</table>
Observations-Antimicrobial study:

Table No. 3:
Observations of antimicrobial activity of tamrabhasma.

<table>
<thead>
<tr>
<th>Date</th>
<th>Name of Organism</th>
<th>Concentration</th>
<th>Zone of Inhibition observed</th>
<th>Date of Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-09-17</td>
<td>TamraBhasma with Amrutikarna</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>E. coli</em></td>
<td>2.5%</td>
<td>13.88 mm</td>
<td>22-09-17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5%</td>
<td>17.26 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>21.29 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>S. aureus</em></td>
<td>2.5%</td>
<td>20.06 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5%</td>
<td>23.88 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>28.43 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>S. pnemonie</em></td>
<td>2.5%</td>
<td>13.95 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5%</td>
<td>15.51 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>18.99 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>K. pnemonie</em></td>
<td>2.5%</td>
<td>10.06 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5%</td>
<td>12.84 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>17.48 mm</td>
<td></td>
</tr>
<tr>
<td>22-09-17</td>
<td>TamraBhasma without Amrutikarna</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>E. coli</em></td>
<td>2.5%</td>
<td>20.09 mm</td>
<td>23-09-17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5%</td>
<td>22.40 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>25.68 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>S. aureus</em></td>
<td>2.5%</td>
<td>13.85 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5%</td>
<td>15.74 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>17.85 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>S. pnemonie</em></td>
<td>2.5%</td>
<td>14.17 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5%</td>
<td>16.16 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>18.77 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>K. pnemonie</em></td>
<td>2.5%</td>
<td>13.46 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5%</td>
<td>15.21 mm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10%</td>
<td>18.88 mm</td>
<td></td>
</tr>
</tbody>
</table>

DISCUSSION:

- Anti-microbial study of tamrabhasmas was done of both the samples i.e. tamrabhasma with amrutikarana and tamrabhasam without amrutikarana.
- The Antimicrobial study was done to see whether there is the change in antimicrobial activity after the process of amrutikarana.
- The antimicrobial study was done by Agar Diffusion method.
- Both the samples (with and without amrutikarana) have significant antimicrobial activity on all the micro-organisms i.e. on *Escherichia coli*, *Staphylococcus aureus*, *Streptococcus pneumoniae*, *Klebsiella pneumoniae*.
- There is no significant difference in the value of pH, LOD, acid insoluble ash, water soluble ash before and after amrutikarana.
- But there is the difference in the value of LOI, total ash, and elemental assay before and after amrutikarana.
CONCLUSION:

1) Though, it is simple process of bhasmamaking but it involves many processes like shodhana, bhavana, marana, amrutikarna etc.

2) The bhasmaformed in this study was odourless, smooth and fine to touch and had passed all the ayurvedic parameters.

3) The organisms which are selected for antimicrobial activity, are causative organism for Parinamashula( peptic ulcer), Pandu (anemia), Arsha(haemorrhoids), Kushta(skin disorders), Shwasa(dyspnoes) etc.

4) Tamrabhasmawithout amrutikarana has more antimicrobial activity in all concentrations i.e. 2.5%, 5%, 10% on Escherichia coli than other remaining three microbes.

5) On Escherichia coli, Streptococcus pneumoniae, Klebsiella pneumoniaetamrabhasma without amrutikaranahas more antimicrobial activity than the sample with amrutikarana.

6) But on the microbe Staphylococcus aureus tamrabhasma with amrutikaranashows more percentage of zone of inhibition. Means after amrutikaransample has more antimicrobial activity on this specific microbe after the amrutikarana

7) From this study we can conclude that, antimicrobial activity of tamrabhasmawas not increaes or decreases after amrutikarana, there was antimicrobial activity present before and after amrutikarana.

8) The value of LOI, total ash decreases after the amrutikarana and also there is decrease in the percentage of copper in bhasma after the amrutikarana.

9) Thus, after the amrutikarana the above analytical parameters values decreases significantly hence amrutikarana minimizes the remaining doshas from tamrabhasma and also shows some changes in antimicrobial activity.

10) Amrutikaranaminimizes the adverse effects of tamrabhasmadue to the properties of panchamrutai.e. amrutikaranahelps in decreasing the ashtadoshasof tamrabhasma. Due to these all changes there was change in antimicrobial activity of tamrabhasma after amrutikarana.

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महागाई नियत्रणासाठीच रेपो दरात वाढ

आगामी काळात विकासदर मंदावण्याची लक्षणे असतल्याचे जागतिक आधिक विश्लेषक करणारी संस्था नामुसेच मदतीचे असून एप्सिलॉल्ट जुन या तिमाहीत श्रेष्ठ विकासदर वाढल्या असताने तो आणखी वाहणाचा आशावाद निम्नाने अत्यंत होता. पण नामुसेच मदतीचे, व्यवस्था दुसऱ्या तिमाहीत भारतात केवळ ७.२ टक्के विकासदरावर समाधान मानावा लागणार आहे. भारतातील विविध क्षेत्रातील उद्योगात कमाव पातळीवर असून त्यात आणखी वाढ होणार वाळ नाही. त्यामुळे उद्योगात कमी होऊ शकते. नोटबंदी व GST चे परिणाम आता संपुंसक आत्मच्या समजाले जात असून बंकांचे आरोग्य मात्र चोंगळे नसाळ्यामुळे ब्रांडवर पुढेरकार परिणाम होणार आहे. त्याचा उद्योगांचा उत्पादकतेच मोठ्या प्रमाणस्थलावर परिणाम असूयास व जीवनात उत्पादकतेवर परिणाम संधीतस्ते. परिणामी निर्यातीवर परिणाम होणार असून विकासदर पसंदावाचा शक्तीत मुळे व स्वाभाविक ते दर महागाई पाहता X म्हणून बंकांनी १ ऑगस्ट रोजी पाहला विज्ञान वाढलिंग. यापूर्वी मात्र व्यापार वाढविण्याची आवश्यकता भासाव्य पडती केली असेल संख्येच मागणात आहे.

X म्हणून बंकांचे गठनार्थ उत्तरम यांच्या अभ्यस्त हालाळ सहा सदस्यीय पत्थरनाव समर्थन समस्तीने कृपया उत्पादनांना दीपावली हमी भावावील वाळ, सातवा वलन आयोग, भविष्यातील महागाईवर दिवळ राहणार असल्याने कारण जाणेचाची माहिती किरकोट किमतीवर आधारित महागाईचा दर १.४६ टक्क्यावर जुन महिन्यात ५ टक्क्यावर पोहचला आहे. त्याविषयी कमकुठ रुपये व वामुळे चलण वाढ होणारीशक्तीत असताने हा रेपो दर ६.२५ वर्ष ६.५० टक्के करणार्य आता आहे. तर रिक्स्स रेपो दर (६.२५) पण पात तक्का वाढविण्यात आला.

X म्हणून बंकाच्या पत्थरणाव आधिक सट्टे बंकांनी तेडीवीर व्यापार वाळ केली आहे. काही त-नांबर मते रिक्स्स बंकांच्या या थोरणमुळे उद्योगांचा वाळ असलेल्या उत्पादकतेला व्यापारवाहीले खिच वस्थावीणी शक्तीत आहे. आता व GST व नोटबंदीतूनु उद्योगे सावलरे असून लवकर व्यापार वाढल्याने उत्पादकतेच मोठ्या शक्तीत होऊ शकतो. सर्वप्रथम आपण रेपो रेट व रिक्स्स रेपो रेट मध्ये काय ते जागून घेऊन त्याने रेपो रेट मध्ये काय?

रेपो रेट मध्ये काय:

दरोज्या व्यवहारशास्ती बंकांना मोडका रक्षके प्रगन फर्जीत सक्रिय असते. ही गरज पूर्ण करणासाठी भारतीय X म्हणून बंक देशातल्या बंकांना अल्प मुदतीच कर्ज देते हे कर्ज देताना जो व्यापार आकारला जातो त्याला रेपो रेट मध्यत. रिक्स्स बंकांनी बंकांना कमी व्यापारकर्ते कर्ज मिळवते तर बंकांच्या मध्ये कमी व्यापारी कर्ज देताने कर्ज देतात. यावत रिक्स्स बंकांनी व्यापार वाढवायले जातो प्राणांचा जास्त व्यापारने कर्ज उपलब्ध होते.
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المؤلفون

الدكتور محمد عبد القادر
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الدراسة

تهدف هذه الدراسة إلى مراجعة الأدلة التي تدعم نظرية التحليل النفسي في تطبيقها على الوضع الاجتماعي والاقتصادي في المنطقة العربية. وتوضح الدراسة مدى تأثير هذه النظرية على تحسين مستويات الجودة في الحياة والصحة الوظيفية.

المقدمة

تتطور المجتمعات العربية بشكل كبير، حيث تشهد المنطقة تغييرات كبيرة في الوضع الاجتماعي والاقتصادي. يتغير العالم العربي بإعادة التشكيل السياسي والنفسي، حيث تشهد الجوانب المختلفة من الحياة تغييرات كبيرة. يتغير العالم العربي بإعادة التشكيل السياسي والنفسي، حيث تشهد الجوانب المختلفة من الحياة تغييرات كبيرة.

المنهج

تهدف الدراسة إلى مراجعة الأدلة التي تدعم نظرية التحليل النفسي في تطبيقها على الوضع الاجتماعي والاقتصادي في المنطقة العربية. وتوضح الدراسة مدى تأثير هذه النظرية على تحسين مستويات الجودة في الحياة والصحة الوظيفية.

النتائج

تظهر الدراسة أن التحليل النفسي يمكن أن يساعد في تحسين مستويات الجودة في الحياة والصحة الوظيفية، حيث تظهر الأدلة أن التحليل النفسي يمكن أن يساعد في تحسين مستويات الجودة في الحياة والصحة الوظيفية.

المستقبل

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الخلاصة

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الآراء الحرة

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التعليمات

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Заключение

На основании проведённого исследования можно сделать вывод, что трансформационный подход может быть полезным инструментом для улучшения качества жизни и профессионального здоровья. Он предлагает фундаментальные направления, которые могут быть применены для достижения целей.

Библиография

Для получения более подробной информации о проведённом исследовании рекомендуется обратиться к литературе, которая обсуждается в статье. Это включает основные источники, которые были использованы в процессе работы.

Дата получения

25.08.2021

Комментарий

Данный текст представляет собой исследование, которое проводилось в регионе, где проживает значительное количество жителей. Это позволяет сделать выводы, которые могут быть полезными для корректировки действий в данной области.
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भारतातील काल्या पेशाचे स्वरूप

i के मच्छ मोज
uskt hi iklapch महाविद्यालय, नांदेड.

प्रस्तावना :
काल्या पेशाचा जन्म हा भ्रान्तचारातून (भ्रष्ट आचरणातून) होत असतो. देशातील भ्रष्टचार हा काही नवीन विषय नाही. इ. स. पू. ४ थ्या शतकातील कॉटल्यापासून ते आपूर्तिकातील काल्या गुड्या मिळाल पर्यंत सर्व आर्थिक विचारवंतानी सार्वजनिक कर्मचारी कसे भ्रष्टचार करताना काल्या पेशा मिळाच्यात यावर भाष्य केले आहे. कॉटल्या यांनी आफल्या 'अर्थशास्त्र' या प्रथांतरीन प्रश्नानातले भ्रष्टचाराचार कसे नियंत्रण देखील केलेले आहे. कॉटल्या भ्रष्टचाराचे स्वरूप सांगताना असे महणतात की, "पाण्यातील मासा पाणी पितो का नाही हे संगण जसे अशक्य आहे तसेच प्रशासनातील कर्मचारी हा भ्रष्टचार करीत नाही असे म्हणने असाध्य आहे." डिनवल कोम्पनन, आर्ट क्रेड, लंबिले सोइंड्स वा विचारवंतांच्या माते भ्रष्टचार हा वाईट राजकारणाचे लक्षण आहे. त्यामुळे देशाचा आर्थिक विकास मंदवातो. भ्रष्टचारातून मोठ्या प्रभावात काळ्या पेशा निर्माण होऊन सांगतात आणि अर्थबळ निर्माण होतो. सर्वांचे न्यायालंबाचे माजी न्यायाधिकार एच. आर. खेन्नी यांनी महत्त्वापणे, "भ्रष्टचार आर्णु काळ्या पेशा यांचा जबरदस्त संबंध आहे. हे दोघेही एकमेकास पूरक घटक आहेत. भ्रष्टचाराचे संमाजाचा कर्मसंगतीसारखे प्रसारले आहे." त्यामुळे सामाजिक भ्रष्टचाराचे समृद्ध उच्चाटन -सत्यास्थित देशाचा विकास होणे असाध्य आहे. अर्थशास्त्र-आ. आर. जेन्वाय यांनी सन १९६२ मध्ये असे म्हटले होते की, "भारतात्या प्रगतशील अवस्थेला काळ्या पेशा हा मामे पैच जाऊ शकतो.

प्रस्तृत संघ प्रबंध हा पूर्णी उद्योगे समोर ठेवून लिहून आलो आहे.

आंशिक उदेश :
1) भारतातील काल्या पेशाच्या स्वरूपाच्या अभावाच अध्याय करणे.
2) भारतातील काल्या पेशाच्या प्रभावाच्या अभावाच अध्याय करणे.
3) काळ्या पेशाच्या भारतीय अर्थव्यवस्थेच्या होणार्या परिणामाचा अभावाच अध्याय करणे.
4) काळ्या पेशा कडी करणारसाठी सरकारने केलेल्या प्रवत्तनाचा अभावाच अध्याय करणे.

संज्ञोनाची गृहिते :
1) भारतात काळ्या पेशाचे प्रभाव वाढत आहे.
2) काळ्या पेशाचे प्रभाव कडी करणार असारखे ठरत आहे.

संशोधन पद्धती :
अशा प्रवर्तकाच्या प्रश्नाची दृष्टीकोण सांगीत सामूहिक वापर करणार्या आलेला आहे. या संशोधनासाठी विविध समित्यांचे अहवाल, मासिके, मंत्र तसेच वर्तमान पत्राचे आधार घेणार आलेला आहे.
भारतातील काय्य

'गर मागांने केलेल्या व्यवहारात, (प्रश्नावरून) निर्माण -सलेला काळ्या पैसा अधिकतरपणे उद्योक्तस आणला जात नाही. तसेच कर अधिकयोजसून तो लपबून ठेवला जातो आणि राष्ट्रीय उपषार्य आकडेवारीत त्याची नंद होत नाही म्हणून अशा अनुशीलन केला. पैसा काळ्या पैसा असेल म्हणतात.' देशातील काळ्या नेत्याचे प्रमाण वापरले की समाजाच्या डॉक्टर्स स्वरूपातील अत्यंत असे व्यवहार केले जातात. ज्याची उद्दिष्टे ही प्रमाण सामाजिक उद्धेक्षांस विसंगत असतात. पैनवानी आणि डायडेटात्वर प्रवंद खर्च, जमीनी, इमारती आशा सारखी मालमता गोटा करणे, सोने-चांदी, दगडागपणे याद पैसा गुंतवणे असे या व्यवहाराचे स्वरूप असते. हा पैसा उपयोग कार्यक्रमच साधविल्या जात नाही. 'पेंशनल इंस्टिट्यूट ऑफ पब्लिक फायन्सन्स ऑफ पॉलिसी' या संस्थेने व्यक्त केलेल्या अंदाजांनुसार भारतात सन १९६०-६१ मध्ये एकूण राष्ट्रीय उपषार्य ६.५% एवढे काळ्या पैसाचे प्रमाण होते. ते १९७५-७६ मध्ये ११.४% १९७१-७३ मध्ये २०% १९७३-७४ मध्ये २०% १९७७-७८ मध्ये ५०.६% एवढे काळ्या पैसाचे प्रमाण होते. त्याच पैशा इंडेंस्ट्रीमध्ये हच प्रमाण ८% एवढे होते. म्हणजेच इतर देशांत तुलनेत भारतातील काळ्यापैसाचे प्रमाण जास्त आहे. देशातील हा काळ्या पैसा उपयोग कार्यांसाठी वा जास्त नाही. "त्यामूळे देशाचा प्रमाणीत अडचार निर्माण -सला आहे. हा काळ्या पैसा भारतातील न केंद्रकं. भारतीयपणे जिहेच ही वेकोमं यांच्याही मोठ्या प्रमाणात काळ्या पैसा ठेवल्या जातो. "

स्सस वेकच तम २००६ च्या आधवाणुसार त्याप्रथमकेस जगातील विविध देशांच्या ठेवलेल्या ठेवी जाहीर केल्या. त्यामध्ये खाळील देशांचा सर्वाधिक ठेवी होता:

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<td>100</td>
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<tr>
<td>चीन</td>
<td>96</td>
</tr>
</tbody>
</table>

बरील आकडेवारीत्तुल असे दिसून येते की, जगातील इतर देशांमध्ये भारतातील विस्स वेकच्या सर्वाधिक (२४५५ बिलियन डॉलर) ठेवी होता. विशेष म्हणजे हा सर्व ठेवी व्यायामी ही आहे. म्हणजे इतर वेकच्या ही बंद काळांचा प्रकार व्यायाम देत नाही. भारत सरकारने सन २००६-०७ मध्ये जमा केलेल्या राजा (३,०९,५५५ कोटी रु.) पेशांच्या जास्त आहे. इतर वेकच्या ही रक्कम वंदेशी कराच्या २३ पट आहे. ही रक्कम भारतातील वापर आणि अन्यांच्या प्रत्येक भारतीयांना५,००० रु. मिळविली. तसेच हा ठेवी वेकचे वेकमं गट्या तर भारतीय विकासात्मक कार्यांसाठी प्रमाणात वापर होऊ शकतो.

एव. आर. खडा यांनी महत्त्वप्रमाणे, 'काळ्या पैसाची कुठीही नंद ठेवली जात नाही. त्यामूळे जेव्हा भारतातील काळ्यांचा वापर होईल तेथे साहजीक क्षेत्र काळ्या पैसाची वापर होईल.' आणि विश्वविद्यालयांसाठी 'भारत भाष्यप्रमाण भ्रष्टाचार आहे त्यामूळे भारतातील काळ्या पैसाची मोठी वाह -सली आहे.' भारतातील स्वतंत्रत्रांतर मोठ्या प्रमाणात भ्रष्टाचारातून व
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C = M + D - A

where, C महणजे व्रष्टाचार (Corruption), M महणजे गैर माणूषिक अवलंब (Mystification), D महणजे अधिकारांचा गैर वापर (Discretion), A महणजे उत्तरदायीत्व हिंन (Accountability)

या सूचनेच्या ज्या देशामध्ये गैर माणूषिक अवलंब असते तर अधिकारांचा गैर वापर घसरतो. अधिकारांचा गैर वापर केल्याचा प्रदर्शन असताना त्या देशामध्ये व्रष्टाचारांचे प्रमाण अधिक असते व अशा देशामध्ये काळ्या पेशेचे प्रमाण अधिक असते.
काल्याव पेशाच्या निमित्तीचे मार्ग:

भारतामध्ये अर्थात जनांना कांता पेसा मिळवला जातो, ल्यावमध्ये प्रामुख्याने तुवडा असलेल्या वस्तूंशी साखऱ्यांच्या करण, सरकारामुळे ठरून दिलेल्या किमतीपेक्षा चक्को किमतीला वस्तूंशी विक्रीकरण, कर चुकवण्यासाठी उपत्ति लपवणे, मालमत्तेचा खरेदी-विक्री व्यवहार अथवूनु तयार करण, नौदणी व मुरातक शून्य काढविने व भांडवली लाभलबून कर चुकवणे, सोने-चांदी, जडवाहिताने खरेदी, सोसरी, मृदाूणात वेडमध्ये गुंतवणूक, उद्योग व्यापारात गुंतवणूक, खिची मूल्यातिवर ठेवू, लाख येणे अशा अवघ्य व्यवहारला काळ्या पेसा निमित्त करतो. व हाच काळ्या पेसा समांतर अर्थ्यव्यवस्था निमित्त करतो. भारतामध्ये रोक्त मार्केटमध्ये पेसा गुंतवण्यासाठी काळ्यांतो कडक नियम नसल्यामूळे मोड़प्रमाणेत शोर बाजारात काळ्या पेसा गुंतवण्यात येतो.

काळ्या पेसा कमी करण्यासाठी सरकारी उपाय:

काळ्या पेशामूळे राष्ट्रीय साथन सामूहिक गैर्यापार होतो तसेच विश्वसनीय वाढ, नैतिक मूल्यांचे अ-थितन, राजसतळ भ्रष्टाचार, नियोजन कार्यक बाधा आणि असे धातक परिमाण उद्भवत. ल्यावाच्या सरकाराने काळ्या पेशाच्या नवनुवाच्या व्यवसायासाठी अनेक कंपनी स्थेत स्थापित करून योजना राबवलया. सन १९५४, १९६५, १९७२ १९९७-१८ मध्ये अशा योजना सरकाराने राबवलया. यातून सन १९९७-१८ मध्ये ८३,३००० कोटी रु. एवढा काळ्या पेसा अधिकृत क्षेत्रात आला. या हाच प्रमाणे सरकाराने काळ्या पेशाच्या नवनुवाच्या व्यवसायासाठी सन १९७२ मध्ये १००० रु. मूल्याच्या चलती नोट राहू केल्या. त्याच प्रमाणे करण्याचे दरात घट, कर पहढी सुधारणा, धाळसर, दंडमाफू मोठी अशेविन योजना राबवून काळ्या पेशाचे प्रमाण कमी करण्याच्या प्रयत्न केला गेला.

**अध्य.**

काळ्याची देशाबाहेरील काळ्या पेसा बाहर काळ्यावासाठी सरकाराने प्रयत्न केले आहेत. त्याना नार्याची यश आलालेच आदेश आहेत. देशात काळ्या पेशाचे प्रमाण जास्त असलेले ता काळ्या पेसा बाहर काळ्यांना सरकाराचा अर्थक होत असे किंवा तशी सरकाराची तयारीदर्दिल विद्यांे प्रमाणे करणे आहेत. काळ्यांना स्वतः कंपनी अनेक मोठी राजकारणी व्यक्तिकांची खाली आहेत. त्यामुळे त्या प्रमाणेत त्या आडकून पेसा आणा साधनांची तयारी दिसत नाही. वेळितिः अन्यान्याने (२००७) महत्त्वपूर्ण प्रमाण करतात. ५६० संसद सदस्यांची १४ संसद सदस्य (१२०) हे कोणतया न कोणत्या बलात्कार, भ्रष्टाचार यासारख्या गुण्डांमध्ये अडकतले आहेत. त्यामुळे कमी जन लोकपाल बीत आणण्याचा तयार दिसत नाही.

**अध्य.**

5) India Today, 10 Janu. 2011.
6) ज. प. रा. कृतकार, भारतीय अर्थ्यव्यवस्था, विद्या कुमस पवित्रसार, ऑरंगाबाद.

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