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## COMPARATIVE CLINICAL STUDY ON THE ROLE OF SARPAGANDHA VATI AND JATAMANSI KWATHA IN THE MANAGEMENT OF PRE- OPERATIVE ANXIETY

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### Abstracts:

Even with modern advancement of instruments and procedures, the fear regarding the surgical procedures has not come down. Therefore, anxiolytics on pre-operative day and prior to surgery are important. Chittodvega explained in Ayurvedic classics can be correlated with pre operative anxiety. In this regard Sarpagandha and Jatamansi have been evaluated as Anxiolytic pre-operative medication. 30 Patients of 20–70 years of age group were selected and divided into 2 groups. Group-A received Sarpagandha vati 1gm previous day of surgery and on the day of surgery and Group-B received Jatamansi kwath 40 ml one day before surgery and on the day of surgery. Both the drugs are proved to be anxiolytic. When compared in between groups, Jatamansi kwatha showed better results than Sarpagandha vati in reducing the pre Operative anxiety. The drug Jatamansi is effective pre medication in comparison with Sarpagandha.

**Keywords:** Chittodvega, Poorva karma, Preoperative anxiety, Premedication, Preoperative preparation.

### INTRODUCTION:

For any surgical procedure there are three steps Poorva karma, Pradhana karma and Paschat karma. In Poorva karma related to Rogi Smbandhita, Chikitsa Sambandhita, Upakarna Sambandhita and Shalya Kaksha Sambandhita. Here a study has planned for Rogi Sambandhita Poorva Karma among that administration of pre operative medication. This helps in relieving the anxiety and other conditions.

Surgical patients have a high incidence of anxiety. Relief from anxiety is accomplished by pharmacological (i.e. administration of drug) and non-pharmacological (i.e. Psycho-therapy)

measures. In some cases, Psycho-therapy may be insufficient to allay the anxiety. Hence it is customary and traditional to administer anxiolytic medication, on this basis a study was conducted with indigenous drugs Sarpagandha and jatamansi in the present study.

Drugs like Sarpagandha and Jatamansi have shown anxiolytic effects, as some studies have revealed so as a part of continuation of study and to compare the efficacy of both drugs the study has been selected. This pre-operative anxiety can be correlated with Cittodvega (based on etymology and manifestations) a minor psychic disorder with various type of somatic manifestations. A wide range of psychiatric conditions have been described in Ayurveda. Primary psychological conditions caused purely by Manasa Doshas, i.e. Rajas and Tamas.

Anxiety is a universal experience, which has an important protective function in the face of danger. It becomes morbid when symptoms are out of proportion to external circumstances or if they persist long after a threatening situation has been averted. However, there is no clear distinction between the features of normal and pathological anxiety, but in pathological condition, the anxiety is the chief symptom and acting through the autonomic nervous system, produces all kinds of visceral symptoms. On the other hand Ayurveda has an age proved natural way for management of diseases. Acharyas have prescribed Medhya Rasayana treatment (mental health promoting) for the management of mental illnesses.

Considering all these points the present study entitled “comparative clinical study on the role of Sarpagandha vati and Jatamansi kwatha in the management of pre operative anxiety” selected.

#### **OBJECTIVES OF THE STUDY:**

- 1) To study the literature about Cittodvega in detail.
- 2) To study the literature about anxiety in detail.
- 3) Comparative study to evaluate the effect of Sarpagandha vati and Jatamansi kwath in the management of pre operative anxiety

#### **MATERIAL AND METHODS:**

**Source of data:** 30 patients are selected who are posted for elective surgery from shalyatantra I.P.D.

**Study design:** Single blind comparative clinical study with pretest-post test design.

#### **Method of collection of data:**

30 Patients are divided into 2 groups, with 15 patients in each group of either sex between age group of 20-70 years.

**Group A:** In this group, patients were given Sarpagandha vati 1gm previous day of surgery at 7 pm and 2 hours prior to surgery on the day of surgery.

**Group B:** In this group patients were given Jatamansi kwath 40 ml, previous day of surgery at 7 pm and 2 hours prior to surgery on the day of surgery.

**Inclusion Criteria:**

Age group between 20-70 years.

Patients undergoing elective surgeries like Inguinal, Inguino-scrotal, Laparotomy Anorectal procedures

**Exclusion Criteria:**

- Patients who have undergone any surgical procedure before.
- Patients having a history of HTN and DM
- Patients on anti-depressant & Anti psychotic treatment.

**Observation Period:**

Before surgery patients are observed for anxiety associated signs and symptoms. After administration of drug the observations were made at different intervals of time i.e. at ½ hour, 1 hour, and 1 ½ hour; and on the day of surgery. During surgery observations were not carried out.

**ASSESSMENT CRITERIA:**

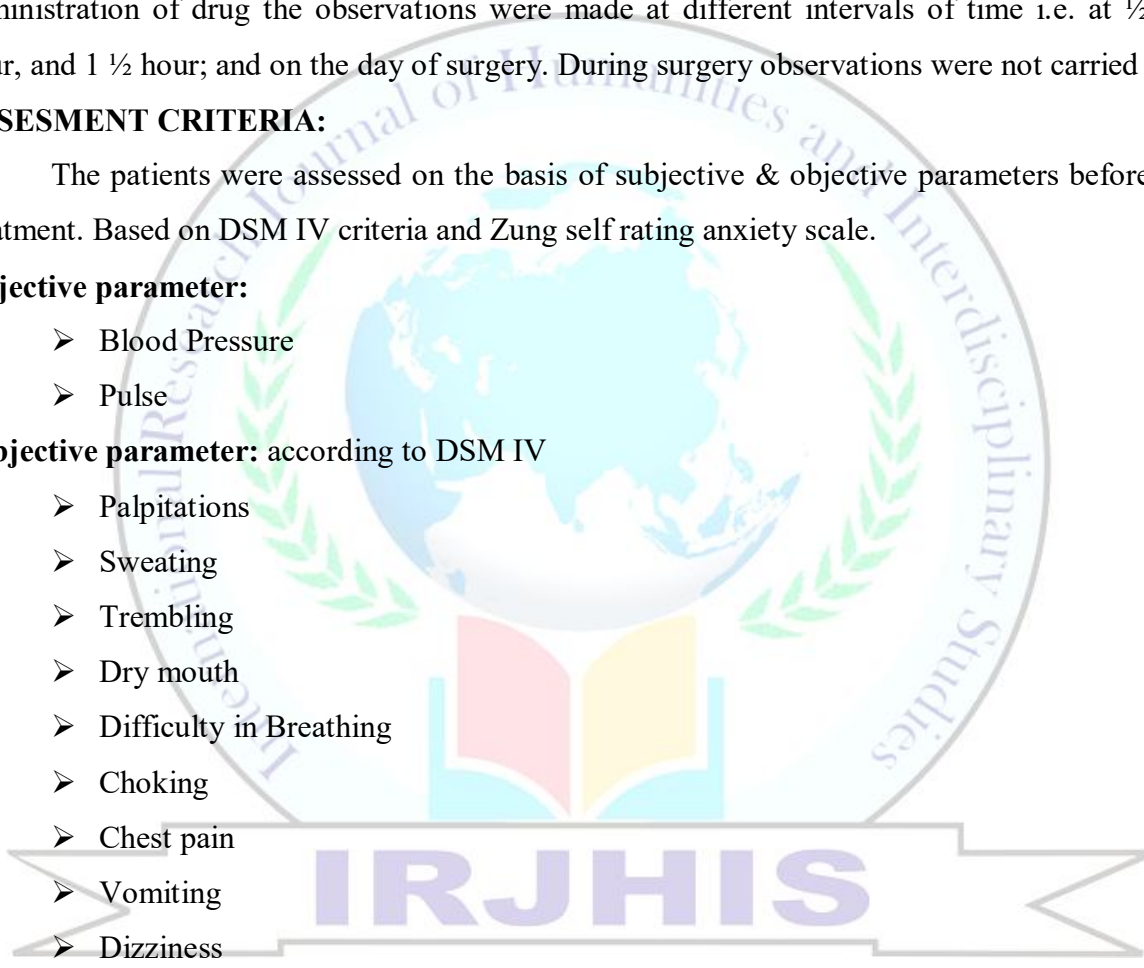
The patients were assessed on the basis of subjective & objective parameters before & after treatment. Based on DSM IV criteria and Zung self rating anxiety scale.

**Objective parameter:**

- Blood Pressure
- Pulse

**Subjective parameter:** according to DSM IV

- Palpitations
- Sweating
- Trembling
- Dry mouth
- Difficulty in Breathing
- Choking
- Chest pain
- Vomiting
- Dizziness
- Fear of dying
- Chills
- Restlessness
- Parasthesia
- Depersonalization
- Difficulty in getting sleep



## **Result and Discussion:**

Student 't' test for unpaired data has been used for analyzing the data generated. P value <0.05 was considered as statistically significant.

Group A received Sarpagandha vati 1gm previous day and on the day of surgery orally, and group B with received Jatamansi kwath 40 ml orally previous day and on the day of surgery. On that basis the following results has been observed.

### **GROUP A SYMPTOMS:**

In group A at ½ hour there is no relief of symptoms, at 1hour no relief in symptoms, at 1½ hour significant relief in symptoms with „p“ <0.05, BS no significant relief in symptoms.

### **GROUP B SYMPTOMS:**

In group B At ½ hr there was no change in symptoms, at 1hr significant relief of symptoms with „P“ value <0.05, at 1½ hr significant relief of symptoms with P value 0.01, at BS significant relief of symptoms with the p value of <0.05.

### **GROUP-A MEAN ARTERIAL PRESSURE:**

The BP values in group A before administration of drug mean of MAP was 98.2 mm of hg, at ½ hr MAP 97.6 and it is insignificant, at 1hr MAP 96.8 and with p value <0.001 which is significant, at 1½ hr MAP 97.4 p value is <0.05 which is significant, at BS MAP 98.1 with p value <0.05 significant.

### **GROUP-B MEAN ARTERIAL PRESSURE:**

The BP values in group B has been observed as follows, before administration of drug mean of mean arterial pressure was 99.3, at ½ hr MAP 98.8 mm of hg which is insignificant , at 1hr MAP 97.18 it is and significant, at 1½ MAP 97 significant, at BS MAP 98.2 significant.

### **GROUP A PULSE RATE:**

The Pulse rate values in group A has been observed as follows, before administration of drug mean of mean pulse rate was 79.06, at ½ hr after administration of drug MPR was 75.6 significant, at 1hr MPR 75.6 significant , at 1½ MPR 74.53 significant, at BS MPR 78.53 insignificant.

### **GROUP B PULSE RATE:**

The Pulse rate values in group B has been observed as follows, before administration of drug mean of mean pulse rate was 77.6, at ½ hr after administration of drug MPR was 75.86 Significant, at 1hr MPR 74.6 significant, at 1½ MPR 73.86 significant, at BS MPR 76 insignificant.

## **DISCUSSION:**

### **EFFECT ON SYMPTOMS:**

In both groups to elicit the drug action on symptoms counseling done, before and after administration of drug at the interval of half hour, one hour, one and half hour and also on the day two hours before the surgery.

Table No.18 and 19 shows that the commonly seen symptoms of anxiety in the present study were fear, palpitation, sweating, dryness of mouth, restlessness, trembling and difficulty in getting sleep. Almost equal incidences of symptoms were seen in both groups.

In group A, on pre-operative day half hour and one hour after administration of drug Sarpagandha vati, there was no variation or reduction in symptoms, after 1 ½ hour mild reduction in symptoms and on the day of surgery no change in the symptoms were observed. So we can draw a conclusion that Sarpagandha vati 1 gm is insignificant in reducing the symptoms.

In group B on pre-operative day there was no reduction in symptoms at an interval of ½ hour and 1½ hour. There was significant reduction of symptoms seen in at an interval of 1 hour and on the day of surgery. In group B symptoms like restlessness, dryness of mouth, difficulty in getting sleep and palpitation showed reduction in the symptoms. There was no reduction in the symptom of fear in all patients of both the groups.

#### **EFFECT ON MEAN ARTERIAL BLOOD PRESSURE:**

Blood pressure recorded before and after administration of drug at the interval of half hour, one hour, one and half hour and also on the day two hours before the surgery.

Table No. 20-21 shows a gradual decline in mean arterial pressure after administration of Sarpagandha vati and Jatamansi kwatha. In group A significant reduction blood pressure was observed after one hour and 1 ½ hour while there was no reduction of blood pressure at ½ h and on the day of surgery.

In group B there is significant reduction of blood pressure seen at 1 hour, 1 ½ h and on the day of surgery.

There is a slight rise in blood pressure immediately before surgery in both groups. However the rise in the blood pressure is more in group A when compared with group B. It shows that the rise of blood pressure in preoperative patients was because of anxiety.

#### **EFFECT ON MEAN PULSE RATE:**

Pulse rate recorded before and after administration of drug at the interval of half hour, one hour, one and half hour and also on the day two hours before the surgery.

It is observed that at an interval of ½ hour, 1 hour and 1 ½ hour there was a significant reduction in pulse rate in group A but no reduction of pulse rate on the day of surgery.

In group B significant reduction of pulse rate observed at an interval of 1 hour and 1½ hour after administration of drug and on the day of surgery, but no reduction of symptoms at ½ hour interval after administration of drug.

Increased pulse rate in pre operative period, Sarpagandha shown action on previous day but no effect on the day of surgery. But in Jatamansi group reduction of pulse rate observed in previous day and on the day of surgery. There was mild fall in pulse rate in the post operative period in both

the groups. This shows that tachycardia before surgery was due to anxiety, which was more relieved in both groups.

#### **MODE OF ACTION:**

Jatamansi consists of madhura and tikta rasa, sheeta veerya and bhootagna prabhava. Madhura rasa have predominance of pruthvi and jala mahabhoota. Because of this bhoutic component of drug ally the pitta and vata and due to its snigdha and sheeta veerya increases kapha. Tamo guna of kapha dosa induces sleep intern reduces the anxiety. Lastly we can presume that anxiolytic property of Jatamansi is due to guna and panchbhoutic constituent.

Sarpagandha: It acts as Nidrajanaka. It reduces Mastishka Uttejana and reduces anxiety symptoms including blood pressure. Alkaloid like – Reserpine proved to reduce elevated blood pressure.

By over all observations and results one can conclude that, even though both Jatamansi and Sarpagandha are proved as anxiolytic, among the efficacy in reducing the anxiety, Jatamansi drug has showed better results.

#### **Conclusion:**

- Anxiety is physiological at times pathological entity also.
- Surgery is a complex procedure needs attention at every level for better outcome.
- Preoperative anxiety is a clinical condition which requires pharmacological intervention apart from reassurance.
- Chittodvega explained in Ayurvedic classics clinically correlates with preoperative anxiety.
- The signs and symptoms of preoperative anxiety can be identified from the day before surgery until completion of surgery.
- Both Sarpagandha and Jatamansi showed statistically significant anxiolytic effect as per DSM IV.
- Anxiolytic effects were seen at 1 hour and 11/2 hour after administration of drug in both groups on previous day of surgery.
- On previous day, Jatamansi showed more anxiolytic activity than Sarpagandha.
- On the day of surgery, Jatamansi administration showed reduction in pulse rate, symptoms, where Sarpagandha administration shown insignificant effect on pulse rate and symptoms.
- This study reveals that Jatamansi kwatha has better anxiolytic activity than Sarpagandha Vati in pre-operative anxiety status.
- Similar studies with more groups, control and placebo will add more data to the study of Ayurvedic preoperative anxiolytics Jatamansi and Sarpagandha.

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