



Case Study

MANAGEMENT OF PRE-OPERATIVE ANXIETY THROUGH AYURVEDA DRUG- CASE SERIES

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ABSTRACT

Anxiety can be defined as unpleasant subjective sense due to dread over something unlikely to happen, such as standing at the point of death. It is mostly accompanied by physical symptoms i.e. restlessness, fatigue, problems in concentration, and muscular tension. So, in nutshell, Perioperative anxiety is vague, uneasy feeling, the source of which is often nonspecific and unknown to the individual but known to cause abnormal hemodynamics as a consequence of sympathetic, parasympathetic and endocrine stimulation. Thus causes more difficulty in general management during operative and postoperative period. This case series is comprised of three case of pre-operative anxiety which was posted for planned ano-rectal surgeries. At the time of hospital admission, level of anxiety was quite normal in all the patients, but by lapsing time and operative period come nearer they were feeling moderate to high level of anxiety due to various individual triggering reasons. For its management, Bramhyadi tablet (500 mg) was given in 2 doses- A night before OT, at morning on day of OT along with counselling. Here, preoperative anxiety was assessed by The Amsterdam preoperative anxiety and information scale, Hamilton anxiety rating, vital parameters and overall interview with patient in 5 phases: 1- At time of admission, 2- A night before OT, 3- At morning on day of OT, 4-1 hour after OT, 5-24 Hour after OT. Mental calmness, reduction in associated physical symptoms and stability in vital parameter were suggested positive influence of Bramhyadi tablet and counselling.

INTRODUCTION

Psychological health is too underrated and underestimated issues in community. Generally society don't consider psychological conditions as a health issue, they only see the psychic patient with hate or guilt. So, most of the people are afraid to share their psychological issues with physician as well as in society. Same situation is observed during preoperative period like if patient is feeling anxiety in preoperative period his/her relatives will scold them by saying negative words to them. So, further he/she will pretend to be like good though very anxious about procedure or anaesthesia. So, on operative table it became very difficult to calm the patient during

anaesthesia or complete procedure period if patient is awake and to overcome anxiety there may be a need to give sedative during operative period.

So, in general if Pre-operative anxiety is not managed preoperatively, can cause high rate of cardiac mortality, adverse effects during anesthetic induction and patient recovery which correlate with high postoperative pain, increased analgesic and anesthetic consumption, prolonged hospital stay, poor quality of life decrease satisfaction with perioperative care.

Management of pre-operative anxiety is in infancy till date; no definitive treatment is available to treat mental excessive thought causing anxiety as well presentation of physical symptoms as only sedation is not the treatment for it. There are too many pharmacological and non-pharmacological treatment approach for generalised anxiety disorders which have been claimed to be effective for management i.e. Music therapy, acupuncture, benzodiazepines etc. some of them were also tried for pre-operative anxiety also. But there is a still need to find some alternative which can calm the mental worries and tension.

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Ayurveda has classified management of pre-operative anxiety under chapter of "Purvakarma", in which all the therapeutic aspects i.e. *Mantra-Swastivachana*^[1] (chanting of auspicious hymns), *Ashwashana*^[2] (Counselling), *Archana*^[3] (Worshiping) etc. to calm the patient and make him/her comfortable with situation is mentioned in well manner. Also some *Medhya* drugs which can act directly on intellect were mentioned in *Unmad chikitsa* chapter.^[4] So, considering pre-operative anxiety as a temporary instable state of mind, *Medhya Rasayan* should be apply to that along with other parameters mentioned in *Purvakarma* chapter.

So, this case series present a cases of pre-operative anxiety treated with Ayurvedic combination of four different *Medhya Rasayan* and non-pharmacological therapy of 'Counselling'.

Case history and clinical findings

These three selected cases of planned operative of ano-rectal condition from indoor patient department (IPD) of ITRA hospital, Jamnagar having pre-operative anxiety signs and symptoms were managed by similar treatment protocol. Concise detail history of these three cases is mentioned below.

Case 1: 47 year old male patient posted for planned surgery on date 15th February 2022, Morning for perianal abscess. During preoperative preparation (14th February 2022, evening), patient was found very anxious about procedure as well about recurrence of perianal abscess or fistula-in-ano. Adding to this, his general hyperactive behaviour was also depicting moderate level of preoperative anxiety. By talking to him, it came to know that this is his second time operative procedure on same site which is due to recurrence of perianal abscess. Bad experience of pain episodes and decreased or somehow hampered general quality of life is pretending to be a leading cause in this case. Vitals were minutely altered as compared to at a time of first consultation. Patient doesn't have any other mental disorder or general systemic diseases. On preoperative assessment, Anxiety score measured by APAIS (The Amsterdam preoperative anxiety and information scale) was found

12 (Information desired anxiety-4; surgery related anxiety-6) and by Hamilton anxiety score (HAS) was found 18.

Case 2: 35 year old male patient admitted to IPD, ITRA hospital for the planned surgical procedure for the management of 3rd grade Haemorrhoids. Patient was suffering from this compliant since 6 year so he was very frustrated about present condition and doesn't want to suffer this condition again in further time. Due to this kind of mentality, he found to be anxious about postoperative period, postoperative pain, and also about its recurrence. It is also found by history that patient had lost his mother and father in some surgical procedure itself. So he was more worried and tense about post-operative recovery. Patient doesn't have any other past surgical or mental history. General examination of patient revealed normal. Blood pressure and respiration 140/90 mm of Hg a day and 22 per minute respectively before operative was indicating anxious clinical picture which was 110/80 mm of Hg and 18/min previously. APAIS score was 15 and Hamilton anxiety rating was 22.

Case 3: 21year old female patient was planned for operative of haemorrhoids found to be severely anxious due to fear of surgery only as there is no any other relevant threatening At a time of OPD visit patient's general behaviour was mild anxious as she was repeatedly asking a various kind of questions like is it necessary to go for surgery, can't get cure with medication? When she was advised for surgery, she seems to be very nervous and feared. After proper counselling she got ready for operative and admitted in IPD for the same. But her fear about operation was not subsiding, she use to say that "will I ok after operation? Will any disaster happen during or after operation, I am getting very much fear about procedure as it's my first time that I am getting admitted in hospital." APAIS score was 17, Hamilton anxiety rating was 20. Vital were also very altered; BP-130/80, Respiratory rate-26, Pulse rate-88.

Physical symptoms observed in three cases are mentioned in table-1:

Table 1: Physical symptoms due to preoperative anxiety observed in three cases

Symptoms	Case 1	Case 2	Case 3
Anxious and depressed mood	Worries	Worries, Irritability, Depression	Worries, anticipation of the worst
Tension	Tension, inability to relax, restlessness	Tension, trembling, restlessness, inability to relax	Tension, startle response, Moved to tear easily, inability to relax, restlessness
Fear	Fear of recurrence	-	Fear of Death
Insomnia	Difficulty in falling asleep, excess Dreams of operation	Difficulty in falling asleep, broken sleep, fatigue on waking	Difficulty in falling asleep, broken sleep, night terror, night dreams

Somatic symptoms	-	Unsteady voice, feeling of weakness	Grinding of teeth, unsteady voice, weakness
Cardiovascular symptoms	-	-	Tachycardia
Respiratory symptoms	-	-	Chocking feelings
Gastrointestinal Symptoms	Borborygmi	Abdominal fullness, Borborygmi	Diarrhoea, Borborygmi
Urinary symptoms	Frequency of micturition	Frequency of micturition	-
Autonomic symptoms	Heaviness of head, burning in eyes, sweating	Tension headache	Head heaviness
General behaviour	Fidgeting, restlessness, strained face, furrowed brow	Fidgeting, Restlessness or pacing, Strained face	Fidgeting, restlessness, Strained face, sighing

Clinical assessment

Clinical symptoms of preoperative anxiety were assessed in total five durations by two aspects. In first aspect, patient was assessed by general behaviour and overall interview with patient. In second aspect, patient was assessed by scoring and vital assessment, The Amsterdam preoperative anxiety and information scale, Hamilton anxiety rating.

Management:

All patients' preoperative anxiety was managed by oral Ayurveda drug 'Bramhyadi tablet' along with counselling in preoperative period.

Oral intervention:

Patient was prescribed 2 doses of *Bramhyadi* tablet (500 mg): at night on a day before operative, at morning on same day of operative. As all three operative were planned for operative under spinal anaesthesia (Sadal block) and patient was kept NBM (Nil by mouth), Morning dose of drug was given with a sip of water only with the permission of Anaesthetic doctor.

Here, *Bramhyadi* tablet is a medicine which is made up of four hydro-alcoholic extract of four different plants i.e. *Bramhi*, *Jatamansi*, *Parsik Yavani*, *Ashwagandha*. Details of drug are mentioned in table-2.

Table 2: Ingredients of *Bramhyadi* tablet

Sanskrit name	Botanical name	Dose of extract	Remarks
<i>Brahmi</i>	<i>Bacopa monnieri</i> Linn. pennell.	150mg	Tablet of 500 mg was made from these 4 drug's Hydro-alcoholic extract in mentioned dose with the help of Automatic tablet making machine. There is no such classical reference for <i>Bramhyadi</i> tablet; it is made as a combined drug on the basic of individual drug's effect in experimental studies.
<i>Jatamansi</i>	<i>Nardostachys jatamansi</i> Dc.	150mg	
<i>Parsik yavani</i>	<i>Hyoscyamus niger</i> Linn.	50 mg	
<i>Ashwagandha</i>	<i>Withania somnifera</i> Dunal	150 mg	

Outcome measures and follow up

Overall outcome due to intervention and complete follow up during intervention is mentioned in table no. 3.

Table no 3: Improvement in scoring of Preoperative anxiety and vital parameters

Assessment	1 At time of admission	2 A night before OT	3 At morning on day of OT	4 1 hour after OT	5 24 Hour after OT
Case 1					
HAS	14	18	10	10	10
APAIS	6	12	8	6	6
Blood Pressure (mm of Hg)	120/80	130/80	120/90	112/70	120/78
RR (Per minute)	19	21	19	21	21
Pulse (Per minute)	76	80	73	60	59
Case 2					

HAS	10	22	10	10	10
APAIS	6	15	7	6	6
Blood Pressure (mm of Hg)	140/98	140/80	120/70	110/80	130/90
RR (Per minute)	18	20	18	20	20
Pulse (Per minute)	78	76	76	80	84
Case 3					
HAS	12	20	10	10	10
APAIS	6	17	8	6	6
Blood Pressure (mm of Hg)	118/90	130/90	100/70	104/70	100/70
RR (Per minute)	18	22	18	18	18
Pulse (Per minute)	84	94	80	80	78

Change in General attitude and behaviour:
(Observation of morning on day of operative)

Case 1: No fidgeting, patient feels very calm, no worries, no facial straining, no thought about operative procedure as well of anaesthesia

Case 2: Completely relieved from stress which was found on earlier day, feels very light and worry free, no facial strain and no fidgeting

Case 3: No fidgeting and no stress in mind, feeling very calm and no restlessness, no other physical symptoms related to anxiety

Among three patients only one patient complained of insomnia, other 2 patient's sleep was not disturbed. Blood pressure was altered in two patients, which was settled to normal on day of operative. Tachycardia was noted in only one patient (Case 3), but on operative day it was about to normal, although not completely normal. Respiratory rate was also found to be much normal on day of operative in all three patient. General attitude also became too calm and relaxed irrespective of various medical events going around them. They all were found to be mighty to tackle such kind of threatening events. Symptomatic severity was also seen decreasing as per APAIS and Hamilton anxiety rating. Anxiety was caused by threat of procedure in two patients and in one patient; it was caused by bad memory of past operative procedure and fear of recurrence. By assessing post-operative recovery time, it was observed not too much delayed in all three patients.

DISCUSSION

Preoperative anxiety is completely subjective feeling which can lead to many operative complications if not tackled. Generally, patients try to avoid expression of their anxiety due to fear that operation will be cancelled. So, sometime final diagnosis can be made upon patient's general behaviour, facial expression and vital parameters and also can avoid subjective bias or novelty effect. So, general attitude and vital parameters can be considered as an objective assessment parameters for

better evaluation. In this study both qualitative and quantitative assessment was done to note a remarkable impact of therapy.

In Qualitative assessment, in three of them it was noticed that they were pretty cool and calm kind by general attitude after treatment, also Quantitative parameters were came nearer to normal limits which depicts normality of physical events as well. These positive impacts on both assessments are indicating active influence of treatment modality.

Each ingredient of *Bramhyadi* tablet were claimed to be anxiolytic by various preclinical study.^[5,6,7] These all drugs are categorised under '*Medhya Rasayan*', which are beneficial for *Medha-intellect*: a seat for *Prajna, Dhi, Dhriti* and *Smurti* by acting on the Hypothalamus pituitary adrenal axis (HPA axis) & normalizing the secretion of neurotransmitters such as dopamine, serotonin, acetylcholine & also they can improve the mental functioning.^[8] Thus, stimulation to *Medha* will also do uplifting and promotions of intellectual component like catecholamines which are responsible of mental instability. Major advantage is this drug can be used in such patients which are contraindicated for benzodiazepines as there were no any side effects noted till date.

In case of management of such eventual mental condition, the goal of therapeutic approaches is to help them understand why they feel the way they feel, what the triggers are, and how they might change their reaction to them. Also it's a training which teaches practical techniques to help reframe their negative thinking and ultimately change their behaviors.

Here, additional therapy '*Counselling*' was introduced to these cases which will help to reduce mental haziness. Counselling is such kind of convicting therapy helping to boost mental control over events by managing and altering patterns of upsetting thoughts, feelings and behavior.^[9] The premise of counselling is that thoughts-not current situation-affect what is feeling and subsequent behavior. So, this therapy will

identify and understand negative thinking and ineffective behavior patterns and replace them with more realistic thoughts and effective actions and coping mechanisms. Counselling will replace “black and white” thoughts with the more realistic perception which will help in coverage of negative thoughtful mind and will ultimately help in reduction of anxious behavior.

Main drawback can be defined as such kind of therapy should never be thought of as a quick fix. It's a process that might be unique to each individual. Total spent time and the needed type of therapy depends entirely on the type of anxiety and the severity of one's symptoms.

Limitation of present study is whole study is based on subjective criteria so, chances of subjective bias are meant to be more common.

CONCLUSION

In these patients, *Bramhyadi* tablet along with counselling had a positive influence to the preoperative anxiety looking at the reduced score on the anxiety scale, normal vital parameters and general attitude-behaviour of the patient.

Together with supportive evidence of the literature, daily use and implementation in practice is recommended in particular in anxious patients after clinical trial. For patients with contra-indications to benzodiazepines it would be a good alternative.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient has given his consent for his clinical information to be reported in the journal. The patient understand that his name will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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