



Case Study

## DISRUPTIVE MOOD DYSREGULATION DISORDER AND ITS AYURVEDIC MANAGEMENT - A CASE REPORT

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### ABSTRACT

Disruptive Mood Dysregulation Disorder (DMDD) is a condition in which children or adolescents experience ongoing irritability, anger, and frequent, intense temper outbursts. The symptoms of DMDD go beyond a "bad mood." DMDD symptoms are severe. Youth who have DMDD experience significant problems at home, school, and often with peers. They also tend to have high rates of health care service use, hospitalization, and school suspension, and are more likely to develop other mood disorders. The present case of a 13 year old girl has worsening of mood characterized by irritability, anger, harming parent, crying spells, poor self care, social withdrawal for 12 months. The symptoms were increasing progressively and which badly affected her daily routine activities and school life. Here had never been a distinct period lasting more than one day during which the full symptom criteria, for a manic, hypomanic or a depressive episode had been met. In Ayurveda, the condition was diagnosed as *Vathaja Unmada* with *Pithanubandha* based on the symptoms of irritability anger etc. The treatment protocol including *Snehapana*, *Virechana*, *Vasthi* and *Nasya* was administered. During the treatment period family therapy methods also administered. After the intervention the symptoms were improved.

### INTRODUCTION

Disruptive Mood Dysregulation Disorder (DMDD) is a condition in which children or adolescents experience ongoing irritability, anger, and frequent, intense temper outbursts. They are more likely to develop other mood disorders.<sup>[1]</sup> Disruptive Mood Dysregulation Disorder (DMDD) is a new diagnostic entity annexed in the depressive disorders' domain of the Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> edition - DSM-5. It is characterized by non-episodic irritability, defined as persistently negative mood, and severe temper outbursts, a condition of proneness to anger that is disproportionate to the situation, consisting of anger and rages manifested behaviourally and/or verbally.

Disruptive mood dysregulation disorder is common among children presenting to paediatric mental health clinics<sup>[2]</sup>. Prevalence estimates of the disorder in the community are unclear. Based on rates of chronic and severe persistent irritability, which is the core feature of the disorder, the overall 6-month to 1-year period-prevalence of disruptive mood dysregulation disorder among children and adolescents probably falls in the 2%-5% range. However, rates of DMDD are expected to be higher in males and school-age children than in females and adolescents<sup>[2]</sup>.

#### Ayurvedic View

Ayurveda embraces aspects of well-being of living creatures, physical, mental and spiritual health. It systematizes and applies the knowledge to restore this health and to cure disease through means of *Shodhana* and *Samana* treatments are explained in the classics, where there is function of *Manas* (mind) deranged, including *Dhee* (improving intelligence) *Budhi* (cognition) and *Smriti* (memory) <sup>[3]</sup>. Ayurveda not only deals with the techniques for the symptomatic relief but also covers various measures which eliminate the deep-rooted pathologies of the ailment.

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In Ayurveda, *Unmada* is a common entity which comprises a wide array of psychiatric disorders. According to Charaka, *Unmada* is the impairment in the psychological domains of *Manas*, *Budhi*, *Samjna*, *Jnana*, *Smṛti*, *Bhakti*, *Sila*, *Cestha*, and *Acara*<sup>[4]</sup>. The present case of disruptive mood dysregulation disorder presented with increased irritability and anger, harming parent, inability to do day to day works, decreased sleep, decreased appetite, and restlessness.

The case was diagnosed as *Unmada* because of the impairment in *Mano vibhrama*, *Buddhi vibhrama*, *Bhakti vibhrama*, *Sila vibhrama*, *Cestha vibhrama* and *Acara vibhrama* and a final diagnosis of *Vathaja Unmada with Pitha anubandha* was done based on the symptoms prominent in the subject. A *Sodhana* based treatment strategy was planned with *Snehapana*, *Virechana*, *Vasthi* and *Nasya* along with the internal administration of *Samanoushadhas*.

### Patient Information

A 13-year-old female, 2<sup>nd</sup> child of non-consanguineous parents, born on 36<sup>th</sup> week, with delayed milestones and started walking at the age of 1 year and 9 months. During the gestational period, her mother was under medication for hypothyroidism. After two days of delivery, due to poor lactation her mother showed hypoglycaemic symptoms and later after medication the symptoms improved. At the age of 3 years, they consulted an allopathic hospital, from there they took EEG and was diagnosed with absent seizures. Since then, was under valporate syrup and continued till 1 and 1½ years old. At the age of 6 years old, she again had seizures and showed variation in EEG and restarted valproate medicine.

Until 2 years ago, she was active and did household works. During covid pandemic, she was anxious and anticipated about being sick of Covid. Every phone call made her fear of covid positive report of her family. She stayed home with these apprehensive thoughts. During the same period, she attained menarche and showed some changes in her behaviour. Like constrain to bed for long time, crying spells and harm her parents. Also started binge-watching online class series without a break.

At one instance, in the absence of her mother, her neighbours caught a civet and kept in a cage at her house. After this incident she had disturbed sleep. Next morning, she woke up by crying that she has been bitten by that animal. Later, her parents took her to a hospital. But as there were no improvements in her symptoms, they shifted to NIMHANS. Even after the treatment for 30 days, there was only symptomatic relief. The symptoms reappeared after some days and presented with irritability, anger and disobedience.

### Family History

There is no history of psychiatric illness in her family.

### Clinical Findings

General physical examination -Heart rate -70 beats/ min, BP -80/50mm Hg, Respiratory rate - 14/min, Weight -25Kg, Pulse - 70/min

### Mental Status Examination

The patient was small in size according to age. She was not comfortable about the interview and was guarded to the queries. Eye contact was hesitant and rapport was established with effort. The psychomotor activity was slightly increased and her speech was hesitant and slow. The productivity was decreased and the tone was low. When assessed, the mood was found to be mixed, irritable and anxious, and fluctuations were present. The affect was congruent with the mood. The thoughts appeared to be no goal directed and she conveyed hopelessness speech. No perceptual distortions were elicited. She was conscious and oriented about the time, place and person. The attention, concentration, intelligence, reading and writing was intact and there was impairment in abstract thinking and judgement. The insight was graded as 1 as she was not aware of being ill.

### Lab Investigations

Blood and urine routine investigations were within the normal limits.

### Treatment History

At the age of 3, they started valporate syrup (continued 1&1½ years) and restarted valproate from 6. Took treatment from NIMHANS in 2022. Then they consulted a nearby hospital. Currently taking Ayurvedic medicines from there.

### Ayurvedic Clinical Examination

*Dasavidha pareeksha* was performed which led to the following observations. *Sareerika prakriti* was assessed as *Vatha pitha* and *Manasika prakriti* as *Rajasa Tamasa*. There were *Vata* predominant features such as restlessness, irritation and interrupted sleep, constipated bowel, less food intake were also evident. Association of *Pitha* predominant features such as increased anger, irritation, harming parent. There was involvement of *Rajo -tamo dosha* also in the pathology. She belonged to *Sadharana desha* and the *Kala* was *Sarath*. She was having *Avara satva* and *Abhyavaharana sakthi* and *Jarana Sakti* was also *Avara*. *Srothas* involved was *Manovahasrothas* and the precipitating factors of the disease were found to be *Ruksha alpa amla*, *Katu* and *Seetha ahara*, *Mano vyakulatha* and exposure to stressful situations lead to *Vata pitha dosha dushti*.

### Diagnostic Focus and Assessment

Considering the detailed history and mental status examination, the case was diagnosed as Disruptive mood dysregulation disorder (DMDD) as per DSM 5. The clinical presentation of disruptive mood dysregulation disorder must be carefully distinguished from presentations of other, related conditions, particularly pediatric bipolar disorder. In fact, disruptive mood dysregulation disorder was added to DSM-5 to address the considerable concern about the appropriate classification and treatment of children who present with chronic, persistent irritability relative to children who present with classic (i.e., episodic) bipolar disorder<sup>[2]</sup>. The assessments were done using Young Mania Rating Scale on 0th day, last day of *Nasya*, last day of *Pichu*.

Based on Ayurvedic understanding of psychological impairment of mental factors such as *Mano vibhrama* (dysfunction at the level of thinking, critical thinking and analysis), *Buddhi vibhrama* (lack of concentration, false decision making,

misinterpretation of things, delusions), *Bhakti vibhrama* (change in desires and likes), *Sila vibhrama* (change in behaviour, habits, emotions), *Cesta vibhrama* (improper mannerism/gestures) and *Acara vibhrama* (change in daily routine and hygiene) the disease was diagnosed as *Vataja Unmāda* with *Pitha anubandha*. Considering the typical features of *Rodhana (v)*, *Asyath Henagama (v)*, *Ajasramadanam (v)*, *Alpa smriti (v)*, *Krodha (p)*, *Abhidrava (p)*, *Alpa nidratha (p)*, *Asahishnuta (p)*, *Arochaka (k)*, *Alpehara (k)*, *Asahishnuta (p)*.<sup>[5]</sup>

### Management as per the Initial Assessments

The following internal medications were administered:

1. *Shankupushpi Churna*<sup>[6]</sup> + *Sarpagandha*<sup>[7]</sup> + *Gokshura*<sup>[8]</sup> – 1gm each – twice daily, before food
2. *Shankapushpi*<sup>[6]</sup> + *Vacha*<sup>[10]</sup> + *Amaya*<sup>[11]</sup>– 2.5gm – twice daily, after food
3. *Kalyanaka gritha*<sup>[16]</sup> -10ml at bed time

**Table 1: Treatment Procedure**

Procedure	Duration	Medicines	Rationale	Observation
<i>Sirolepa</i>	7 days	<i>Guduchi churna</i> <sup>[12]</sup> + <i>Musta</i> + <i>dhathri</i> <sup>[13]</sup>	Pacify the aggravated <i>Vata pitha doshas</i>	No change in anger and irritability
<i>Rukshana</i>	2 days	<i>Pippalyasava</i> <sup>[14]</sup> 15ml bd <i>Shaddharanam</i> <sup>[15]</sup> 1-0-1	<i>Rukshana</i> , <i>Srothosodhaka</i> , <i>Agni vardhaka</i>	Irritability present
<i>Snehapana</i>	7 days	<i>Kalyananaka gritha</i> <sup>[16]</sup> <i>Mahathikthaka gritha</i> <sup>[17]</sup> (3:1) (Starting dose 20ml till <i>Samyak snigdha lakshana</i> )	<i>Snehana</i> <i>Vata- Pitta hara</i>	Improvement in irritability
<i>Abhyanga ushmasweda</i>	3 days	<i>Dhanwantaram taila</i> <sup>[18]</sup>	<i>Dosha vilayana</i>	Improvement in irritability and anger, improvement in fatigue
<i>Virechana</i>	1 day	<i>Avipathi Churna</i> <sup>[19]</sup> (15gm at 7am in lukewarm water)	<i>Srothosuddhi</i> , <i>Indriya suddhi</i>	Improvement in irritability and anger, improvement in fatigue
<i>Snehavasthi</i>	7 days	<i>Sneha vasthi- panchagavya ghritha</i> <sup>[21]</sup> (100ml)	<i>Agni Sthapanam</i> , <i>Agni Vardhana</i> , <i>Mana budhi prasadana</i> , <i>Indriya Prasadana</i>	Patient comfortable
<i>Nasyam</i>	5 days	<i>Ksheerabala101</i> <sup>[22]</sup>	<i>Uthamanga shudhi</i> , useful <i>Vata dushti</i> , calm the mind and sleep	Irritability, and restlessness increased, crying spells increased
<i>Pichu</i>	5 days	<i>Shankapushpadi thaila</i> <sup>[24]</sup>	Improve memory, relax the mind, <i>Vata samaka</i>	Irritability reduced

**Table 2: Scores on Assessment**

Scales	Initial assessment	Last day of <i>Nasya</i>	Final day assessment
Young mania Rating scale	21	22	12

At the time of discharge following medicines were prescribed

1. *Sarpagandha*<sup>[7]</sup> + *Gokshura*<sup>[8]</sup> + *Shankupushpi churna*<sup>[6]</sup>- 2.5gm bd with warm water
2. *Swetha Sankupushpi*<sup>[6]</sup> + *Vacha* + *Amaya* -2.5gm, in night, before food
3. *Kalyanaka gritha*<sup>[16]</sup> – 10ml, bedtime
4. Geniekot syrup -5ml bd, after food

## DISCUSSION

As the patient presented with the features of *Vata pradhana pitha dushti*, the treatment was planned accordingly to bring the *Doshas* to normalcy. The patient was administered orally with a combination of *Swetha Sankupushpi*, *Gokshura* and *Sarpagandha*. *Swetha Sankupushpi* is a proven anti-stress and anxiolytic drug.<sup>[6]</sup> *Sarpagandha* had proven sedative action which is capable of reducing the excessive anxiety and irritability<sup>[7]</sup>. *Gokshura* was selected due to its *Kapha hara*, *Deepana*, *Bhedana* and *Hrdya* properties<sup>[8]</sup>. The combination as a whole is a psycho stimulant medicine in the conventional practice

Another combination of *Yashti* and *Amaya* was also administered orally. The *Yashti madhu* is predominantly *Pittahara*<sup>[10]</sup>. *Amaya* has proven anti-depressant and anxiolytic activities<sup>[11]</sup>. The treatment procedures were started with *Sirolepa* with *Guluchi*, *Dhathri* and *Mustha churna* mixed with buttermilk for 7 days. It helps to provide nourishment to the scalp and pacify the aggravated *Doshas*. *Guduchi* is one among the four *Medya Rasayan* where its *Swaras* is to be administrated for all the benefits of *Rasayana*. Its *Rasa* is *Tikta*, *Veerya* is *Ushna* and *Vipaka* is *Madhura* and the *Guna* includes *Laghu* and *Snigdha*. It balances *Tridosha* in the body.<sup>[12]</sup>

*Amalaki* is effective broad-spectrum antioxidant and free radical scavengers, helping to reduce disease and slow down the aging process<sup>[13]</sup>. *Rukshana* was done to manage the *Ama avastha* and to improve the *Agni* of the patient<sup>[14,15]</sup>. *Shodhanartha Snehapana* was done with mixture of *Kalyanaka gritha* and *Mahathikthaka gritha* indicated in *Unmaada*. As the patient had *Vatha pitha* predominant features, *Kalyanaka* and *Mahathiktaka gritha* was selected for *Snehapana* considering the *Vatha pitha hara* nature<sup>[16,17]</sup>. The *Snehapana* was administered for 7 days. On the next three days *Abhyanga* and *Ushma sweda* was done with *Dhanwantharam taila*<sup>[18]</sup> in order to bring about the liquefaction of *Doshas*. Next day *Virechana* was administered with the *Avipathi churna* 15gm with lukewarm water<sup>[19]</sup>. Properly administered

*Virechana* brings about *Srothosuddhi*, *Indriya vishuddhi* and also increases the *Agni*<sup>[20]</sup>.

After the *Samsarjana krama* the appetite increased and there was improvement in the social behaviour, sleep and speech. But the informant reported that irritability was persisting and considering the *Pitta dosha* predominance, *Snehavasthy* with *Panchagavya ghritha* was opted in order to address the *Vatha* which is the controller of mental functions and one of the important remedy for the treatment of disturbed *Vatha*<sup>[21]</sup>.

*Panchgavyaghritha Tridoshasamana* which pacifying *Vata* and it is *Medhya*. It is *Srotoshodhaka* and which enhances *Agni* and *Oja*<sup>[22]</sup>. After 7 days *Snehavasthy*, *Nasya* was administered with *Ksheerabala* 101 *Avarthi thaila* which is effective in increased *Vata dushti* and which is also useful to calm the mind and sleep<sup>[23]</sup>. During *Nasya* patient showing increased irritability and restlessness then *Shankhapushpadi thaila pichu* was done, which is mentioned in *Bhaishajya Ratnavali Balaroga chikitsa* and which help to improve memory and intelligence in children.<sup>[24]</sup> After 5 days of *Pichu* patient became stable.

## CONCLUSION

Studies indicate that DMDD constitutes a more significant risk factor for the development of unipolar disorder than for bipolar disorder. To date, no specific diagnostic tools have been developed for this diagnosis. Since this disorder has a wide range of comorbidities, the treatment focus tends to be on treating the comorbidities and includes medicines and therapies. In Ayurveda adopting treatment principle not only *Sarira* but *Mana* also. *Sarira* and *Mana* has a inseparable relation that why we adopting *Yuktivyapasaraya chikitsa* for *Sarira* and *Satwachaya* for mind and vice versa. In this present study we adopted *Snehapana*, *Virechana*, *Vasthy*, *Nasya* procedures *Sirolepa*, *Abhyanga*, *Pichu* and family therapy.

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