IJFANS INTERNATIONAL JOURNAL OF FOOD AND NUTRITIONAL SCIENCES
ISSN PRINT 2319 1775 Online 2320 7876
 UGC CARE Listed (Group -I) Journal Volume 11, Iss 13, 2022

A CASE REPORT OF ADHD CHILD TREATED WITH POTENTISED HOMOEOPATHIC REMEDY- ZINCUM. METALLICUM

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ABSTRACT:

Attention deficit hyperactivedisorder (ADHD) is one of the common Neurodevelopmental child psychiatric disorders diagnosed among preschool and school children. The condition is characterized by Inattentive, hyperactive or impulsive and mixed type of presentation. Due to Covid pandemic and increased use of electronic gadgets the number of cases reporting has been increased. The misdiagnosed or untreated ADHD child may lead to many other adult psychiatric conditions.

Case Summary - A 09 years old boy reported with symptoms of increased irritability, restlessness, hyperactivity, poor concentration, temper tantrums, weakness, laziness, screaming at night and unhealthy hair since childhood, with history of frequent cold attacks, frequent infections, Anemic, reduced Serum Zinc level and Reduced serum ferritin level is presented here to portrait the impact of potentised Homoeopathic medicine Zincum. Metallicum(Zinc.M) along with Ferrum.Phosphoricum (Ferr.phos) in a child diagnosed with ADHD. The Homoeopathic similimum Zinc. M. prescribed in this case was based on both constitutional picture and as well as potentised micronutrient which may help in reduction of ADHD symptoms for children reporting with Zinc deficiency.

Keywords – Attention Deficit Hyperactive Disorder, Zinc.Metallicum, Ferrum. Phos, Micro nutrients, Homoeopathy, Potentised similimum.

1. INTRODUCTION:

Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopment disorder identified by consistent symptoms of inattention, hyperactivity or impulsivity characterized by poor concentration, weak memory, and failure to complete any task, distractibility, restlessness, fidgety, impatience etc., before 7 years of age resulting in impairment in school, social or occupational functioning[1]. ADHD is found comparatively more prevalent in young children with

7.6% between 3 to 12 years of age whereas in teenagers the distribution is 5.6%. The average prevalence of ADHD is calculated between 2 – 7%. [2]

The risk of ADHD parents has increased from 2 – 8 folds for their children to get diagnosed with ADHD and a similar frequency was observed in siblings with ADHD [3]. In a review study conducted by Faraone et al compiling 20 twin studies from different countries like Australia, European Union, Scandinavia and United States concluded that there are 76% possibilities of heritability of ADHD towards the offspring. The study also represent ADHD is the most heritable child psychiatry conditions among the others [4.] There are specific genes like DRD4, DRD5, SLC6A3, SNAP-25, and HTRIB plays a major role in etiology of ADHD demonstrated by the study conducted by Stephen.v. Faraone et al [5].

The growth and maturation of Prefrontal cortex (PFC), caudate or cerebellum was found to be slow compared to other parts of brain in ADHD children. The actions of neurotransmitters like dopamine and norepinephrine was found predominantly active in PFC and maintained by such neurochemicals. Additionally there are various neurochemicals that act conjointly with each other in PFC. The study conducted by Arnstein AF et al found that reduced action of dopamine and norepinephrine in ADHD children denotes the poor action methylphenidate, amphetamine, and atomoxetine which depends on the activity level of dopamine and norepinephrine in PFC. Hence the role of PFC and the neurotransmitters like dopamine and norepinephrine has the major role in the pathophysiology and pharmacological management of ADHD [6].

Studies also suggested that the majority of ADHD cases reported with various co morbidities are dye to emotional regulation factor and parenting style. Both possess inter related factor which may end in different childhood emotional and developmental disorders along with ADHD [7]. .

Eisenberg and Fabes proposed a model which categorized the temperament of children into three main types such as under-controlled, highly inhibited and optimally regulated. Optimally regulated children are found to be flexible, adaptive and managing emotions effectively, also tend to achieve greater social success. But the under-controlled children most often express imbalance in emotion regulation resulting in reactive aggression and impulsiveness. This aggression and impulsiveness were noticed high in ADHD children as hyperactive type. The third type highly inhibited children appears to be dull, sad, submissive, withdrawn and anxious with limited adaptability which may expressed as inattentive symptoms of ADHD[8.]

The Psychopathology is categorized into two main dimensions such as Internalizing and Externalizing factors. Anxiety and depression are specifically associated with internalizing factors, where as ADHD and antisocial disruptive behavior is linked to Externalizing factors [9].

As per DSM V , diagnostic criteria persistent presence of six or more symptoms involving (a) inattention characterized by making careless mistakes, difficulty in completing tasks, poor listening, difficulty in organized work, forgetting things or daily events and easily distracted or

ISSN PRINT 2319 1775 Online 2320 7876
 UGC CARE Listed (Group -I) Journal Volume 11, Iss 13, 2022

(b) impulsivity or hyperactivity characterized by fidgety hands, running or climbing restlessly, increased talk, blurting out answers, difficulty waiting turn, interrupting others etc ., which results in impaired school, personal and occupational functioning. The symptoms should have originated before the age of 7 and noticed in minimum of two settings. The severity is marked by Mild, moderate and severe variety based on number and intensity of symptoms [10].

Conventional medicines like Methylphenidate and amphetamines are found to be efficacious for treating ADHD children who requires pharmacological intervention for long term [11]. ADHD is complex disorder and mostly accompanied with various issues and co morbidities. The chemical imbalance from neurotransmitters, dopamine and nor epinephrine were well balanced by stimulant medications like methylphenidate and amphetamines and Non stimulant medications like atomoxetine, α-2 agonists and bupropion. These medicines show high probability of abuse as well as unwanted drug effects. Hence the medicines were prescribed based on patient specific considering age, co morbidities, preference and drug interactions etc. The dosage is recommended to initiate in lower dose and gradually increasing based on the drug response [12]. There are few other medicines were also used, such as antipsychotics like Risperidone, Aripiprazole, antidepressants like Bupropion, mood stabilizers like carbamazepine against FDA recommendation for ADHD management [13].

Zinc stands one of the key element in rapid growth of brain, it also plays important role in emotional regulation. Zinc deficiency may lead to weakness, lethargy, slow learning, poor attention and forgetfulness. Many animal studies shows significant role of Zinc in the development of brain and emotional maturity [14 -15]. Severe Zinc deficiency during a child development may lead to disordered cerebellar functioning, deranged pattern of behavior and impaired emotional response [16].

Zinc was found as a vital co factor for the normal functioning of pathways using neurotransmitters, prostaglandins and melatonin. It also utilized as an important co factor in dopamine metabolism. Other than this zinc is necessary for many metal enzyme complexes, which is more available in brain and spinal cord, which in turn helps in development of brain in both structural and functional aspects. In ADHD the dopamine transporter is presented with a zinc binding site which blocks the transport resulting in poor attention and impulsiveness [17]. Due to the fact that dopamine transporter plays a central role in the pathogenesis of ADHD it is understood that zinc deficiency is highly related to the symptoms of ADHD in children [18].

Dopamine plays a very important role in the pathophysiology of ADHD and hormone melatonin has specific role in regulation of dopamine. Zinc plays a vital factor to metabolize both dopamine and melatonin. Even few minerals and vitamins are connected with symptomatology of ADHD; zinc plays a highly important role in the treatment of ADHD children. It is also suggested to analyze the Zinc level in before initiation of treatment which include psycho stimulants. A study

used Zinc sulfate as an adjuvant to methylphenidate resulted in early improvement of symptoms of ADHD[19].

The use of Zinc as a therapeutic management in homoeopathy was practiced since 19th century. The drug proving trials portrayed vast symptoms. Mind symptoms like fearfulness, easily excitable, impulsivity, restlessness, trembling movements, easily startled, sensitive to noise, inattentive, forgetful, sadness, lethargy, tendency to get spasms, lack of thought integration, easily angered, irritability, difficulty in understanding and comprehension etc., were recorded and clinically verified. Such presentations are most similar to the symptoms of ADHD children [20]. In addition to such presentation, the key symptom like restless feet is more marked in most of the cases. If the constitutional picture is presenting with restless legs the probability of curative action is increased [21-22].

In homoeopathy the bio chemic remedies, usually marked as twelve tissue remedies has its action in the human body similar to the body's natural physiological chemistry. These remedies are directly transported through blood to the target site with minute potentised drug substance to initiate its action. The physiological action of ferrum tissue remedy plays vital role in improving general weakness, enhancing immune actions especially during an inflammation, improving blood cells in turn supporting oxygen carrying capacity [23].

Ferrum. Phos in its minute physiological dose helps in maintaining and restoring the equilibrium of iron molecules which strengthens the muscle fibres. It also enhances iron binding capacity thus preventing anemia and chlorosis. Its specific use is marked in children with debility, dull, listless, poor memory, inattentive and weak children. The action of remedy not only provides strength to the child physiological need but increases the general growth and development with improving appetite and bowel movements. The mind symptoms include delirium, over talkative, irritability, hyperactive, and dizziness during congestion [24].

2. CASE REPORT:

2.1 – Chief Complaints:

A 09 years old boy, reported at OPD with his parents for the complaints of poor in studies, easily distracted, poor attention and concentration with increased irritability, hyperactivity and restlessness. Parents noticed about his slow decline of marks and poor school performances. The behavioral problems was noticed since his childhood and increased since past 06 months. He also has complaints of losing body weight, frequent cold attacks, walking and screaming during sleep, weakness with laziness and unhygienic hair since childhood.

2.2. History of Present Illness:

Patient was observed to be hyperactive and restless child since his developmental stages. After the COVID pandemic and after online classes his behaviour and attention during any work was found to be significantly altered. At present after the initiation of partial offline or regular

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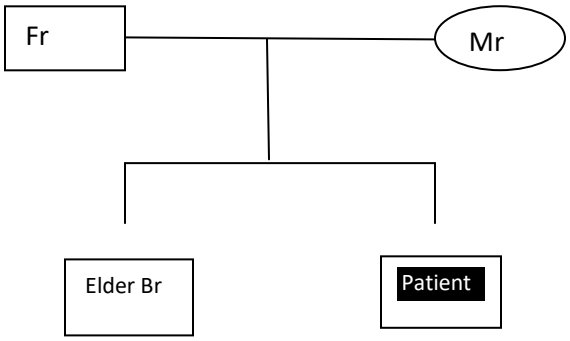
classes, teachers noticed the patient is hyperactive and restless at class. He uses to talk or answer back more than his age. Always intruding with other children works, poor concentration in class, not completing the class work, easily distracted for minor sounds, irritable when asked to wait for turn, temper tantrums, frequent fights while play times. The parents was informed by the school authority about his behavioral difference and advised for medical or behavioral therapies. Parents also noticed similar behavior at home and when moving to public places. Patient was found to be obstinate, screaming when not satisfied his demands and not willing to study and do his personal works. Patient also has complaints of weakness, anemia, mild weight loss, broken hair tips, bursting type of headache mostly at evening and tendency to catch cold and infections frequently. During his previous hospitalization (before 03 months) for severe LRTI, his blood reports showed mild to moderate anemia, Increased leucocytes and ESR levels, lower Zinc and lower ferritin. Since his childhood patient use to get frequent cold attacks.

2.3. Past History:

Recurrent attacks of fever, cold and coryza.
03 months before hospitalized for LRTI and taken antibiotic course for severe lung infection.
No history of Head injury or convulsions.
10 months before Covid positive (mild symptoms) – quarantine for two weeks
Frequent Complaints of cramps legs and muscle twitching at night. Anemic.

2.4. Family History:



Nuclear Family **,** Non Consanguineous parents.
Paternal Grandparents – Died due to aging.
Maternal Grandmother – DM and Depressive symptoms.
Maternal Grandfather – TB, Hypertension, Chronic smoker. Expired during age of 84 years.
Mother – Anemic during pregnancy, thyroid complaints, hypotension.
Father – Occasional Alcoholic, Bronchial Asthma, febrile convulsions during childhood.
Elder Brother – Healthy.

2.5. Physical Generals:

Appetite – Increased. Hurried eating.

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Thirst – 1 – 1.5 litres/day. Normal water.
Perspiration – Normal.
Craving – Nothing particular.
Aversion – Sugar +++
Sleep – Disturbed. Walking during sleep, Sudden screaming during sleep.
Dreams – Unremembered.
Thermal – doesn't want to fan, covering desire, drinks warm water, Intolerance to cold climate.
Tendencies – frequent infections, and delicate constitution

2.6. Personal History:

Birth History – Preterm baby with LSCS due to early rupture of membrane. LBW – 1.700 kgs weight. Neonatal jaundice. Kept in incubator for 1 week. Birth cry present and No other identifiable birth complications.
Immunization – As per schedule.
Developmental milestones – Early for walking and speech. Other developments on time
Behavior during childhood –Restless and hyperactive. Temper tantrums and obstinate in nature. Prefers group play and initiates fight most of the time.
School History – Average and lazy in studies, have friends towards elderly and poor interest in studies, active in sports and cultural activities.
Weak and emaciated build, frequent history of skin allergies, cold attacks and fever and easy disposition for minor illness. Frequent muscle cramps and twitching of leg muscles during night.

2.7. Mental Status Examination

Appeared as poorly built and moderately nourished, partially hygienic and groomed. Uncut nails with dirt. Maintained eye to eye contact. Restless and fidget movements over hands and legs, moving here and there, impulsive behavior. Over talkative and blurt out answer before the questions. Increased talk. Increased psychomotor activity. Irritable mood on slight contradiction. Racing thoughts with precocious talks. No delusional and perceptional behaviors. Rapid speech and intruding in other works. Poor attention span. Oriented about time, place and person. Concentration poor, easily distracted. Weak recent memory with poor recall. Could not complete digit span test and reverse counting. Test Judgment could not answer and poor Insight.

3. DIAGNOSIS -Attention Deficit Hyperactivity Disorder – Mixed type. (DSM- 5 – 314.01. ICD -10 Code - F- 90. 2)

Date	Symptoms	Medicine	Remarks
09/01/21 Reported with both parents.	Hyperactivity Inattention /concentration poor Easy distractibility Irritability	Zincum. Met - 30 /7d (One dose in	Weight – 20.600KGs Attention span – less than 03 minutes. Frequent fights in

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Baseline 1st Visit	Restlessness Poor Memory Weakness Laziness Somnambulism Screaming during sleep Headache Brittle hair	2 days) Ferr. Phos – 6x(Bio) (3-0-3)	school Poor marks and failed in all subjects. Physical generals – Good.
24/01/21 Reported with Father 2nd visit	Hyperactivity - Same Inattention /concentration poor – Same Easy distractibility - Same Irritability - Same Restlessness - Same Poor Memory – Same Weakness – Same Laziness - Same Somnambulism–on most of the days in a week Screaming during sleep – on most of the days in a week. Headache – on most of the days in a week Brittle hair - Same	Zincum. Met - 30 /7d (One dose in 2 days) Ferr. Phos – 6x(Bio) (3-0-3)	No other specific behavioural changes noticed. No other acute illness reported. Physical generals - good
13/02/21 Reported with father 3rd visit	Hyperactivity - Same Inattention /concentration poor – Same Easy distractibility - Same Irritability - Same Restlessness - Same Poor Memory – Same Weakness – Same Laziness – Mild improvement Somnambulism – 3-4 times in a week Screaming during sleep – around 4 times in a week Headache – 5-6 episodes of headache	Zincum. Met - 200 /3d (One dose in 5 days) Ferr. Phos – 6x(Bio) (3-0-3)	No other Specific behavioural changes noticed. No other acute illness reported. Physical generals - good

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	Brittle hair– Same		
28/02/21 Reported by father 4th visit	Hyperactivity - Same Inattention /concentration poor – Same Easy distractibility - Same Irritability - Same Restlessness – mild improvement Poor Memory – mild improvement Weakness – Same Laziness – Mild improvement Somnambalism – 3-4 times in a week Screaming during sleep – around 3-4 times in a week Headache – less than 5 episodes in a week Brittle hair– Same	Zincum. Met - 200 /3d (One dose in 5 days) Ferr. Phos – 6x(Bio) (3-0-3)	No other Specific behavioural changes noticed. Mild Heat rashes due to sun exposure. Advised for home or native treatment. Physical generals - good
13/03/21 Reported by father 5th visit	Hyperactivity – Mild improvement. Inattention /concentration poor – Same Easy distractibility – Mild improvement. Irritability - Same Restlessness – mild improvement Poor Memory – mild improvement Weakness – Same Laziness – Moderate improvement Somnambulism – 3 times in a week Screaming during sleep – around 3 times in a week Headache – less than 5 episodes in a week Brittle hair – mild improvement.	Zincum. Met - 200 /3d (One dose in 5 days) Ferr. Phos – 6x(Bio) (3-0-3)	No other abnormal behavioural changes noticed. Heat rashes - recovered. No other acute illness reported. Physical generals - good

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28/03/21 Reported with both parents 6th visit	Hyperactivity – Mild improvement. Inattention /concentration poor – Same Easy distractibility – Mild improvement. Irritability – Mild improvement Restlessness – Mild improvement Poor Memory – Moderate improvement Weakness – Mild improvement Laziness – Moderate improvement Somnambulism – 3 times in a week Screaming during sleep – around twice in a week Headache – less than 3 episodes in a week Brittle hair – Moderate improvement.	Zincum. Met - 200 /3d (One dose in 5 days) Ferr. Phos – 6x(Bio) (3-0-3)	No other abnormal behavioural changes noticed. Cold and coryza. Cough with scanty expectoration since 2 days with less severity. Advised for native treatment. Physical generals - good
10/04/21 Reported with both parents 7th visit	Hyperactivity – Moderate improvement. Inattention /concentration poor – Mild improvement. Easy distractibility – Mild improvement. Irritability – Mild improvement Restlessness – Moderate improvement Poor Memory – Moderate improvement Weakness – Marked improvement Laziness – Moderate improvement Somnambulism – twice in a week Screaming during sleep – around twice in a week Headache – less than twice in a week with less intensity. Brittle hair – Moderate improvement.	Zincum. Met - 200 /2d (One dose in 7 days) Ferr. Phos – 6x(Bio) (3-0-3)	No other abnormal behavioural changes noticed. Recovered from Cough, Cold and coryza without pharmacological support. Physical generals - good

25/04/21 Reported with both parents 8th visit	Hyperactivity – Moderate improvement. Inattention /concentration poor – Moderate improvement. Easy distractibility – Moderate improvement. Irritability – Moderate improvement Restlessness – Marked improvement Poor Memory – Moderate improvement Weakness – Marked improvement Laziness – Marked improvement Somnambulism – twice in a week Screaming during sleep – around twice in a week Headache – less than twice in a week with less intensity. Brittle hair – Marked improvement.	Zincum. Met - 200 /2d (One dose in 7 days) Ferr. Phos – 6x(Bio) (3-0-3)	No abnormal behavioural changes noticed. Studies improved. Passed in all subjects. No episodes of fever, cold and coryza. No other acute illness reported. Physical generals – good. Weight – 22kgs Hb – 11gm%
08/05/21 Reported with both parents 9th visit	Hyperactivity – Marked improvement. Inattention /concentration poor – Marked improvement. Easy distractibility – Marked improvement. Irritability – Moderate improvement Restlessness – Marked improvement Poor Memory – Marked improvement Weakness – Marked improvement Laziness – Marked improvement Somnambulism – once in a week Screaming during sleep – Absent. Headache – once in a week with less intensity. Brittle hair – Marked improvement.	Zincum. Met - 200 /1d (EMES) Ferr. Phos – 6x(Bio) (3-0-3)	No abnormal behavioural changes noticed. Self-reading newspapers and novels. Following orders and completing minor works or tasks at home. No other acute illness reported. Physical generals – good

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12/06/21 Reported with both parents 10th visit	Hyperactivity – Marked improvement. Inattention /concentration poor – Marked improvement. Easy distractibility – Marked improvement. Irritability – Marked improvement Restlessness – Marked improvement Poor Memory – Marked improvement Weakness – Nil Laziness – Marked improvement Somnambulism – Absent Screaming during sleep – Absent. Headache – once in the last month with less intensity. Brittle hair – Marked improvement.	Sac. Lac Ferr. Phos – 6x(Bio) (2-0-2)	No abnormal behavioural changes noticed. Self-reading newspapers and novels. Following orders and completing minor works or tasks at home. No other acute illness reported. Physical generals – good
10/07/21 Reported with both parents 11th visit.	Hyperactivity – Marked improvement. Inattention /concentration poor – Marked improvement. Easy distractibility – Absent Irritability – Absent Restlessness – Absent Poor Memory – Marked improvement Weakness – Nil Laziness – Marked improvement. Somnambulism – Absent. Screaming during sleep – Absent. Headache – Nil Brittle hair – Marked improvement.	Sac. Lac Ferr. Phos – 6x(Bio) (2-0-2)	No abnormal behavioural changes noticed. No complaints from school. Improved in studies. No other acute illness reported. Physical generals - good
14/08/21 Reported with both parents 12th visit	Hyperactivity – Absent. Inattention /concentration poor – Marked improvement. Easy distractibility – Absent Irritability – Absent Restlessness – Absent Poor Memory – Marked	Sac. Lac Ferr. Phos – 6x(Bio) (2-0-2)	No abnormal behavioural changes noticed. Improved in studies. No complaints from school. Attention span –

	improvement Weakness – Nil Laziness – Marked improvement. Somnambulism – Absent. Screaming during sleep – Absent. Headache – Nil Brittle hair – Marked improvement.		more than 15 – 20 minutes. No other acute illness reported. Physical generals – good. Weight – 24.500 kgms Hb – 12.2%

Table – 01: FOLLOW UP:

4. DISCUSSION

A 09 year old boy reported with hyperactivity, poor attention and temper tantrums along with frequent cold attacks, infections, reduced hemoglobin level and brittle hairs.With the available information the case has been taken in depth following homeopathic case taking methods. The available information was recorded in the standard case record. The information from both the parents were verified and found reliable to arrive at the totality. The case has been worked out for analysis and evaluation of symptoms following homoeopathic principles. After analysis and evaluation of the case , the individualistic behavioral symptoms like easily irritability,poor concentration, hurried while eating, walking during sleep, screaming during sleep, hyperactive, aversion to sugar, splitting of hair, bursting type of headache, emaciated build and delicate constitution with tendency to get recurrent infections were considered for repertorisation (Fig 01). The symptoms were converted to reportorial rubrics and repertorised using RADAR 10 software and arrived at group of indicated medicines like Zincum. Metallicum, Lycopodium, Phosphorous, Sulphur, Sepia, Calc.carb etc (Fig – 02). Along with Materia Medica reference the individualistic & holistic symptomatic pattern were compared and found Zincum. Metallicum could be the appropriate constitutional remedy. Based on totality, Zinc. Met – 30/7doses (Once in 02 days) along with Ferr. Phos – 6x (Biochemic tabs) were prescribed on first prescription. During prescription, a group of symptoms had been considered for assessing follow up improvement. The symptoms are Hyperactivity, Inattention /concentration poor, Easy distractibility, Irritability, Restlessness, Poor Memory, Weakness, Laziness, Somnambulism, Screaming during sleep, Headache , Brittle hair. The follow up symptoms were checked in each prescription on scheduled intervals and the details were mentioned in follow up table – 01. Along with the individualistic symptom assessment through follow up the ADHD disease symptoms were assessed in every visit using Connors Abbreviated rating scales (CARS). The potency, repetition and reduction of repetition of medicine have been adopted pertaining to the improvement of behavioral symptoms as well as scores of CARS.

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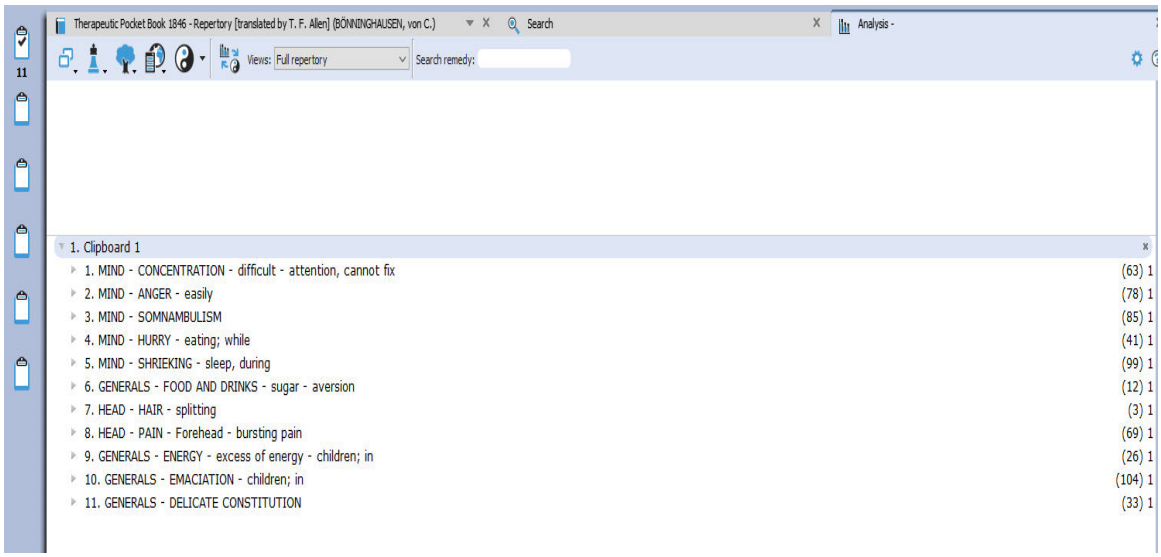

Figure 01 – Totality and Rubrics selected.

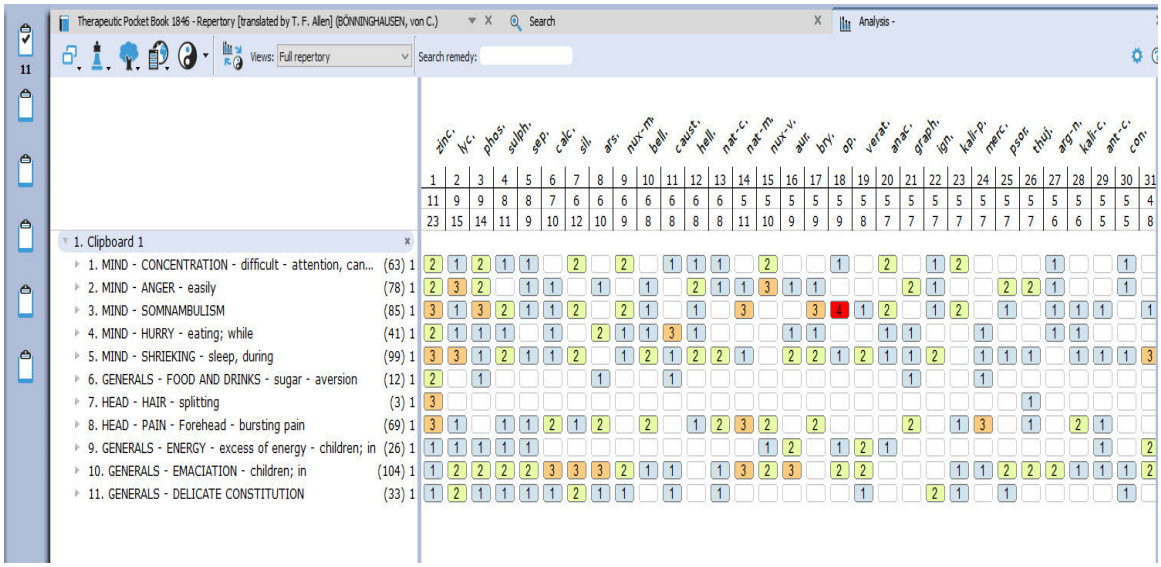

Figure 02 – Repertorisation Table with most indicated medicines.

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The impact of ADHD symptoms was assessed by Connors Abbreviated Rating Scale - CARS) at baseline and on every visit. (Table 2)

		Items												
Serial. No.	**Date**	**Restless and overactive**	**Excitable, impulsive**	**Disturbs other children**	**Fails to finish things - short attention**	**Constantly fidgeting**	**Inattentive, easily distracted**	**Demands must be met**	**Easily frustrated**	**Cries often and easily**	**Mood changes quickly and**	**Temper outbursts**	**Explosive and unpredictable**	**Total**
01	09/01/21	3	3	3	3	3	3	3	2	1	2	2	2	**30**
02	24/01/21	3	3	3	3	3	3	2	2	0	2	2	2	**28**
03	13/02/21	3	3	3	3	3	3	2	2	0	2	2	2	**28**
04	28/02/21	2	2	3	3	2	3	1	2	0	1	1	2	**22**
05	13/03/21	2	2	2	2	2	3	1	2	0	1	1	2	**20**
06	28/03/21	1	2	2	2	2	2	1	1	0	1	0	2	**16**
07	10/04/21	1	2	2	2	2	2	1	1	0	1	0	1	**15**
08	25/04/21	1	1	2	2	2	2	1	1	0	0	0	0	**12**
09	08/05/21	1	1	1	1	2	2	1	1	0	0	0	0	**10**
10	12/06/21	1	0	0	1	0	1	0	0	0	0	0	0	**03**
11	10/07/21	0	0	1	1	0	1	0	0	0	0	0	0	**03**
12	14/08/21	0	0	1	1	0	0	0	0	0	0	0	0	**02**

Table 2- Connors Abbreviated Rating Scale - CARS

The strategy of improvement of behavioral symptoms and scores of CARS has been depicted in Table 01 and Table 02 respectively. Zincum. Metallicum was prescribed with the indications of Irritability, poor attention, Hyperactivity, increased muscular activity, emaciated, weak delicate constitution, frequent cold attacks, bursting type of headache and brittle hair 25 -26. The previous investigational reports pertaining to increased ESR, Leucocytes, reduced hemoglobin, Reduced Zinc and Reduced ferritin level were also considered for assuming it to be poorly nourished. Based on biological understanding, Zincum. Metallicum was considered as potentised micronutrient support and Ferrum. Phosphoricum was prescribed as a biochemic tablets to enhance the hemoglobin and ferritin level which could help in the improvement of general immunity of the child and in turn behavioral changes also. As expected the behavioral problems of ADHD was found to be reduced, improved hemoglobin level(12.2 gm.%), weight gain and tendencies of frequent infections, brittle hairs, headaches and cold attacks were also reduced after 12 visits of follow up with 08 months medication which indicates a positive results. The Zinc. Metallicum acts as constitutional remedy as well as physiological action and Ferrum. Phos act as Bio chemical support for improving hemoglobin and ferritin level 24During the treatment period, Zinc. Metallicum was prescribed in periodic intervals in 30 & 200 potency along with Ferrum. Metallicum – 6x Bio chemic on every visit. On assessing the follow up symptoms, the ADHD symptoms as well as general condition of the child were improved well, with corresponding reduction in score of CARS. i.e – Baseline score of 30 reduced to 02 at the last follow up. The improvement after the prescription also supports evidence that potentized homoeopathic medicine prepared from mineral kingdom, such as Zinc and Ferrum has influence similar to micronutrients and blood proteins which probably provided a better improvement.

5. CONCLUSION:

ADHD is the most frequently diagnosed clinical condition in child psychiatry. The number of cases reported was significantly increased after COVID pandemic. The untreated ADHD child may end up in isolation, low self-esteem, depression, early substance abuse, conduct disorder ending in anti-social behavioral activities. Various research studies portraits poor definitive treatment outcome due to its multidimensional etiological factors as well as difficulties in arriving the individualistic treatment methodology. This case represents a novel method of homoeopathic prescription considering constitutional rubrics as well as the micronutrient contents of the potentised medicinal substance resulted in overall improvement of the case. The output suggests that there may be stimulating action of immune system triggered by similar potentised medicines. It is also warranted to explore the probability through a large population studies with biochemical analysis.

6. ACKNOWLEDGEMENT:

I truly acknowledge my patient and his parents for providing reliable information and strict adherence to treatment for a period of more than 11 visits (08 months), I also acknowledge my

senior faculties, colleagues and all my PG scholars of NHRIMH, kottayam for their continuous support and encouragement.

7. ETHICAL CONSIDERATION:

Patient assent and parents written Consent has been owned for sharing the clinical information without any personal identification.

8. FUNDING:

Nil

9. CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

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