Original article

Homoeopathy for Reducing Disruptive Behavioural Symptoms in Children with Conduct Disorder- A Case Series.

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Abstract

Background: Conduct disorder (CD) and associated antisocial behaviour is one of the most common behavioural problems in children and young people that lead to a considerable burden for the patients themselves, their families and society. There is a scarcity of literature on the effectiveness of homoeopathic medicines in childhood psychiatric disorders such as CD. **Summary of cases:** 10 children diagnosed as CD, five each from Child Psychiatry OPD and Peripheral camp at a Children's home were treated with individualized homoeopathic medicines. All the cases were assessed at baseline and successive visits with Conduct Disorder Rating Scale (CDRS)- Parent version and the results are summarized. There was a marked reduction of disruptive behaviour and an improvement in the general condition of the children. **Conclusion:** The analysis of 10 cases generates a shred of preliminary evidence for the usefulness of individualized homoeopathic medicines in the management of CDs. Studies with appropriate designs are indispensable to corroborate the evidence.

Keywords: Conduct disorder, Disruptive behaviour, Homoeopathy, Child Psychiatry, Conduct Disorder Rating Scale-Parent version (CDRS)-P

Introduction

Conduct disorder (CD) and associated antisocial behaviour is one of the most common mental and behavioural problems in children and young people [1]. CD is characterized by severe persistent patterns of aggressive and non-aggressive rule-breaking antisocial behaviours that lead to a considerable burden for the patients themselves, their family and society [2]. As per the tenth revision of International Classification of Diseases, there are basically 4 types of conduct disorders. Conduct disorder confined to the family context (F91.0), Unsocialized conduct disorder (F91.1), Socialized conduct disorder (F91.2) Oppositional defiant disorder (F91.3) [3]. It frequently co-occurs with attention-deficit/hyperactivity disorder (ADHD) and often leads to antisocial personality disorder in adulthood [4]. Prevalence of CD is between 5% and 10% in the industrialized western world. Children with CD are not a homogenous population, but present with variations in the age of onset, subtypes, prevalence of comorbidity, abnormal psycho social situations, symptom profile, symptom severity and functional levels of impairment. There is significant male dominance with boy girl ratio of 7.5:1[5].

The etiology of CD is complex and results from an interaction between multiple biological and psychosocial factors. Risk factors include male sex, maternal smoking during pregnancy, poverty in childhood, exposure to physical or sexual abuse or domestic violence, and parental substance use disorders or criminal behaviour [6]. As per ICD-10, conduct disorder (CD) is characterized by repetitive and persistent pattern of dissocial, aggressive or defiant conduct. In its extreme form, behaviour should amount to major violation of age appropriate social expectations with an enduring

pattern of 6 months or longer. If behavioural problems are characterized by argumentativeness, but absence of more severe dissocial or aggressive acts below the ages of 9 or 10 years, it is called oppositional defiant disorder (ODD) [3]. At least three symptoms should have been present in the past 12 months, with at least one present in the past six months to diagnose conduct disorder [6]. Other subtypes of CD which include aggressive/nonaggressive CD, reactive/proactive aggression, and physical/relational aggressions remain under investigation [7]. DSM-V criteria for conduct disorder includes 3 criteria- A) A repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated, as manifested by the presence of at least three of the 15 criteria in the past 12 months from any of the categories with at least one criterion present in the past 6 months; B) The disturbance in behaviour causes clinically significant impairment in social, academic, or occupational functioning; and C) If the individual is age 18 years or older, criteria are not met for antisocial personality disorder [8].

This disorder can be subtyped according to age at onset (childhood-onset versus adolescent-onset) and the presence or absence of callous-unemotional traits (deficits in empathy and guilt).[4] Conduct disorder is comorbid with many other psychiatric conditions including Attention-Deficit Hyperactivity Disorder (ADHD), Anxiety Disorders, Depressive Disorder, Substance Use and Somatization Disorder. Differential diagnoses include ADHD, Oppositional Defiant Disorder, intermittent explosive disorder, new onset of a Mood disorder or Psychotic disorder that precipitate excessive indulgence in negative behaviour and hostility toward others [9]. Prognosis is variable and depends on the presence of subtle psychiatric comorbidities and initiation of early interventions. There is evidence that treatment interventions might mitigate this progression and induce biological changes [10]. Management of CD primarily involves parent-based or family-based psychosocial interventions although stimulants and atypical antipsychotics are sometimes used, especially in individuals with comorbid ADHD [4]. There is limited evidence to support the treatment of conduct disorder and aggression with Risperidone and other antipsychotics but health care professionals are expected to weigh the medication's potential benefits against their adverse metabolic effects [11].

Homoeopathy is an alternative system of medicine with potential role in Psychiatry. The database on studies of homoeopathy in psychiatry is very limited but results show some benefit [12]. There is an evidence base for proven effectiveness of Homoeopathy in some psychiatric disorders but to the authors' knowledge, no studies were conducted on CD. So, an exploratory case series is presented to assess the usefulness of homoeopathy in Conduct disorder.

METHODS

Ten cases, five each from Out-patient unit of National Homoeopathy Research Institute in Mental Health, Kottayam. and Peripheral camp at a Child Welfare Centre (Name of the place is not disclosed due to ethical reasons) diagnosed by psychiatrist as Conduct disorder are considered for the study. All the ten cases were assessed at baseline and on consecutive monthly visits with Conduct Disorder Rating Scale (CDRS)- Parent version by parents or care-givers of the children. The cases were taken in detail by post graduate scholars of Department of Psychiatry under the supervision of the faculty members. Free written Informed Consent was received from the parent or care givers and from the superintendent of the welfare Centre.

Information regarding the nature of disruptive behaviour, family dynamics and etiological factors was acquired from the parents and social worker of child welfare Centre respectively. Cases were analyzed as per homoeopathic principles and medicines were prescribed on the basis of totality of symptoms of each case. Individualized homoeopathic Medicines procured from HOMCO, Kerala were prescribed as a single dose of centesimal potency ranging from 30C to 1M at the baseline and repeated infrequently as and when there was no further improvement. A single dose of the indicated

remedy is dispensed to the child, with identical placebo for 1 month. Each dose consisted of 4 globules of 40 size saturated with the dilution of indicated remedy. Potencies ranging from 30 to 1M were administered at baseline and follow-up visits according to the susceptibility and response to medication. Follow up of the cases was assessed using Modified Naranjo criteria as proposed by Homoeopathic Pharmacopeia of United States clinical data working group [13] and high probability of causal attribution has been found. Refer to table no.3. The presentation of the cases is shown in table no 1. Cases no.1 to 5 in the table are taken from the Institute and cases no .6 to 10 are from the Child welfare centre. The indicated medicines which were prescribed are represented in figure no. 1.

Table no.1: Presentation of the Cases and First Prescription

Case No.	Presenting complaints	Past history	Family history	Physical generals	Mental generals	Baseline CDRS-P Score	Prescription
1	Disobedience, stealing tendency, mischievous, hurting tendency, Sibling jealousy, stammering	Epilepsy-6 months of age	Father-Alcoholism	Chilly, Thirsty, Desires meat	Restlessness, obstinate, Precocious	24	*Merc sol 30*
2	Anger on contradiction, hurting tendency, restlessness, cruelty towards animals, truancy, stealing tendency,	Bronchial Asthma-1 ½ year	Father-Alcoholism Mother-Gestational diabetes Discords between father and mother	Hot, thirsty, Constipated, Desires crispy food, aversion to milk	Sensitive to criticism, Hatred towards family	31	*Natrum mur 200*
3	Disinterest in going to school, tendency to tell lies, stealing money, obstinate, violent anger followed by weeping,	Complication after BCG Vaccine (Breathing difficulty)	Mother-diabetes, asthmatic Father-asthmatic	Hot, thirsty, desires salt	Reserved, introverted, Consolation aggravation	29	*Natrum mur 30*
4	Disobedient, destructiveness, hurting tendency, lazy to go to school, teasing everyone, violent anger, obstinate, frequent	Sexual abuse	Father-Smoking, dyslipidaemia	Chilly, Thirstless, desires meat, aversion milk	Reserved, sensitive, Ailments from sexual abuse	44	*Staphysagria 200*

	masturbation , pyromania						
5	Stealing tendency, tendency to tell lies, Disobedient, anger, Hurting tendency, secretive, laziness in studies, skipping school and hanging out with boys	Recurrent UTI	Father- allergy, hernia, Conduct issues in aunties, psychiatric problems in mother's family	Hot, thirstless, craves for ice creams+++, eggs, spicy food and dislikes fruits	Hurried, non-diligent, Desire for amusement, absent minded, precocious, cheerful	28	*Medorrhinum 200*
6	Temper tantrums, Impulsive, Disobedience , anger and irritability, hurting tendency, disrespectful, abusive words, restlessness,	Habit of smoking	Father- alcoholism, Mother- criminal. Father died due to head injury made by mother	Hot, thirstless, constipated , Desires candies, ice creams	Extroverted Artistic, Ailments from discord between parents	23	*Sulphur 200*
7	Shop lifting, hurting tendency, telling lies, forsaken, cruelty to animals, Homosexual activities	Sexual abuse	Father-died (due to accident) Mother- STD	Ambitherm al , thirsty, Desires pungent foods Sun aggravates headaches, lean and emaciated	Sensitive to criticism, hatred to offended people, Ailments from sexual abuse, consolation <	23	*Natrum mur 200*
8	Anger at least trifles, throwing things away, destructivene ss, abusive, impulsive, lack of interest in studies, stealing money, craving for smoking, hurting others, desire to see blood	Habit of smoking	Father- alcoholism, beats mother Brother- smoking	Ambitherm al, desires beef, pork, salty food, dark complexion	Hurried, revolting, disobedient, dominating, dictatorial,	22	*Merc sol 200*
9	Quarrelsome, disobedient, dominating,	Father compelled	Father – alcoholism	Hot, thirstless, desires	Ailments from domination,	24	*Lycopodium 30*

	argumentative, lack of interest in study, abusive on anger, increased sexual activity stealing money	him to take alcohol	Mother- psychiatric illness, cancer	sweets, warm food and drinks, lean thin built	haughty, soft on superiors and hard on inferiors		
10	Abusive, disobedience, destructiveness, craving for smoking, lazy to study, stealing tendency, homosexual relation,	Physical abuse	Father- Aggressive behaviour Mother- STD	Ambithermal	Ailments from domination, desires travel, loves nature, Artistic	20	*Carcinosinum 1M*

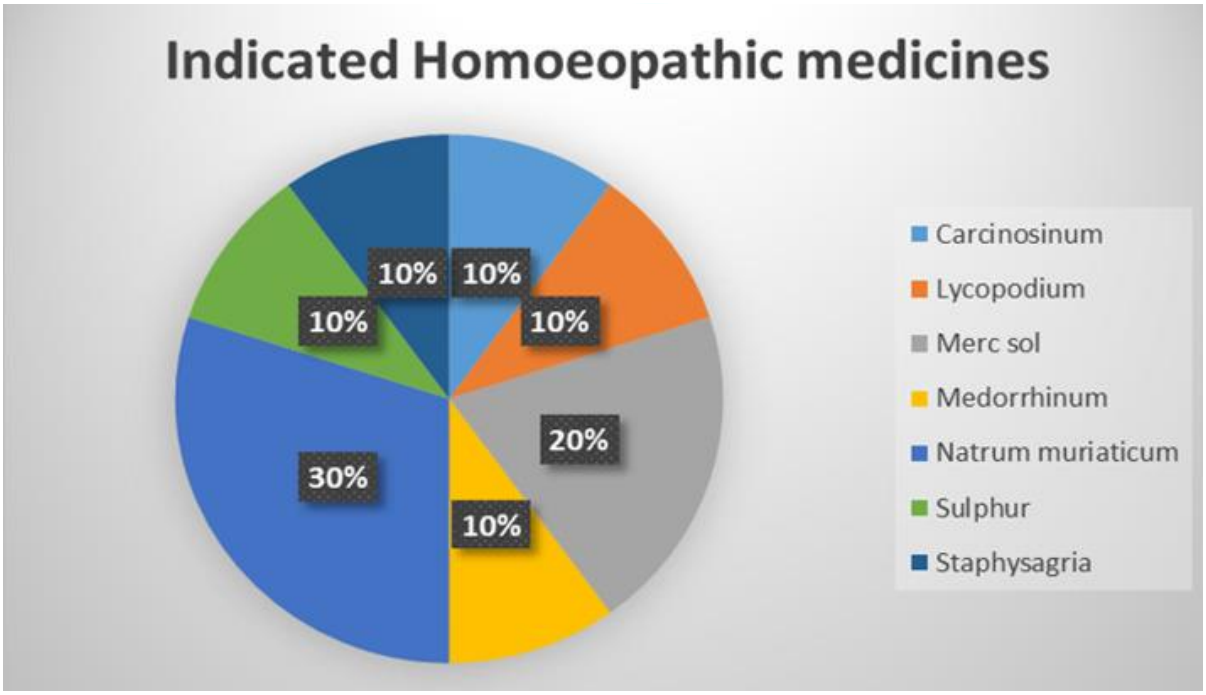

Figure 1 – Homeopathic medicines

Results

The mean age of children (n=10, 9-male, 1-female) in years is 13.8 years. Homoeopathic aggravation was not found in any of the cases. The follow up of cases is shown in Table no.2 Two cases have been discussed below to show the presentation, problem definition, case formulation, analysis of symptoms, basis for prescription, follow up and outcome.

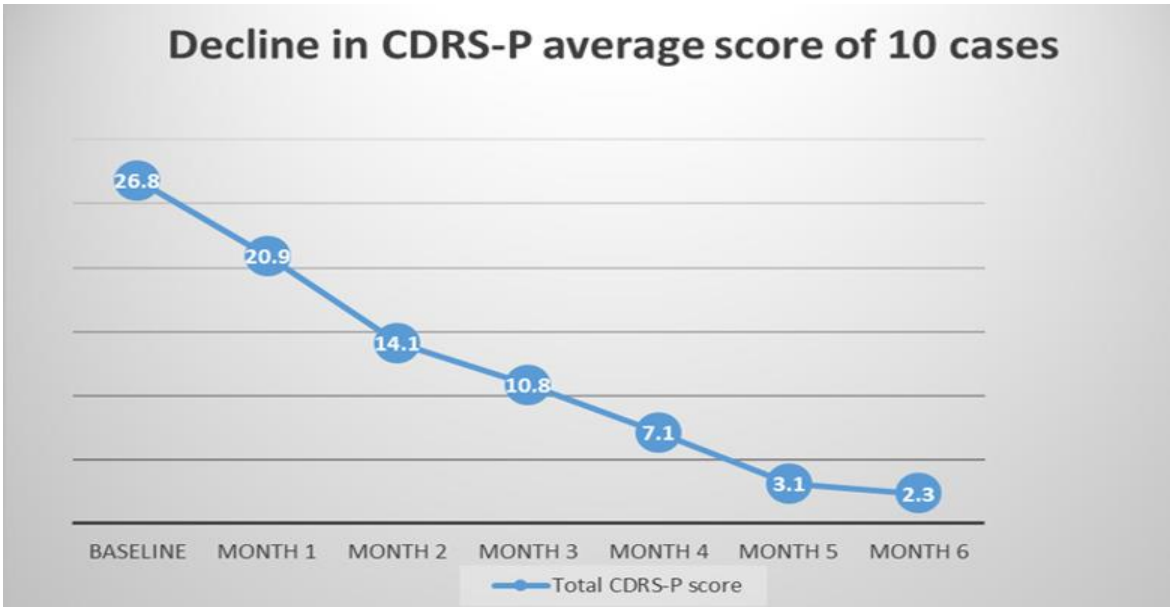

Figure 2 - Changes in CDRS-P average scores

Case Vignette 1

Master AR, 15 years male was brought to CWC by police as he is aggressive, rebellious and repeatedly involved in street fights. He had tendency to steal, tell lies and tendency to hurt others physically. He had violent anger and spoke violently to even superiors. He is the only child to his parents who come from a poor socio-economic background. Father died when he was 9 years old and mother was working as maid and thus, he was left alone at home, when he was 12 years old, the child was sexually abused by a man who used to give him money and forced him for oral sex and other unnatural sexual practices. He developed hatred towards men but suffered silently. The child didn't complain to mother for fear of being punished. He becomes angry at trifles, uses vulgar language during anger and destroys things during outbursts. He showed aggressiveness and cruelty towards animals. After coming to Children's home, he was defiant, aggressive and created problems every now and then. He had hurting tendency towards other boys and forced the younger kids into homosexual activities. The child was handled patiently and gently reproached by the supervisor and care-takers in the CWC. But he is sensitive to criticism and least consolation would aggravate his mental condition. He complained of headache on exposure to sun heat and a low backache. He desired pungent foods and thermals were not specific. He is very introverted and hardly spoke anything except physical complaints. He was biting nails often during the interview. Most of the information is collected from the care-givers. The totality of symptoms was erected according to Kent's method and repertorized with Synthesis treasure edition 2009V in RADAR OPUS. (Refer figure no.3, Repertorial Chart-1) Single dose of *Natrum mur 200* was given based on the totality. The follow up visits, the lad showed reduction in disruptive behaviour and relief of physical symptoms.

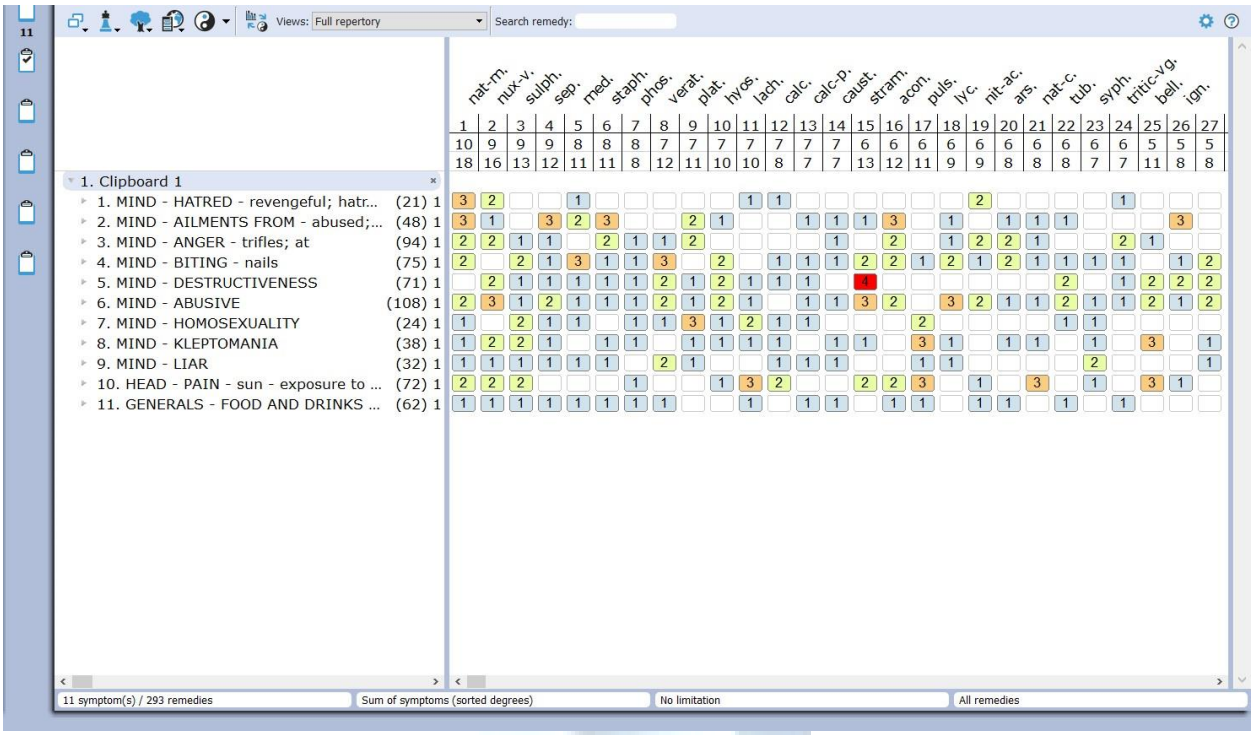

Figure 3 – Repertorization

Case Vignette 2

Ms. A S, a 15 years female, was brought by parents to OPD of National Homeopathy Research Institute in Mental Health with complaints of tendency to steal money and things, telling lies frequently, having multiple love affairs and physical relationships, laziness in studies, uncontrolled anger, physical restlessness, disobedience and scholastic backwardness. Complaints started since the age of 9 years, when parents found that she was stealing money from the father's purse occasionally and telling lies and arguing when questioned. She stole many things from friends and neighbours like books, pens, money, valuables etc. She started dating boys since her teenage and was involved in sexual activities with them and with some other men also. When father came to know, he punished her severely but she became more adamant, defiant and showed extra-punitive anger. She dislikes advices and is easily provoked by reprimands. She engraved the name of a guy on her forearm. Basically, she is an intelligent girl but she is lazy to study. There are frequent complaints from teachers regarding her academic performance and behaviour. She had a history of chronic coryza, was hyperactive in childhood and is still physical restlessness with habit of biting nails. There is a family history of psychiatric problems in mother's family and conduct problems in father's sisters. Thermally, she is very hot, craves for ice creams+++, eggs, spicy food and dislikes fruits. The girl was expressive during case taking and admitted all the history narrated by the parents without any feeling of shame or guilt. A dose of *Medorrhinum 200* was prescribed based on the totality of symptoms (Refer Figure no.4-Repertory Chart no.2) and family history. In the follow up visits behavioural symptoms with old symptom i.e Coryza reappeared. Same medicine was allowed to continue its favourable effect. The girl showed improvement in obedience reduction in aggression and immoral activities, with no tendency to steal or lie, and improved in academic performance also.

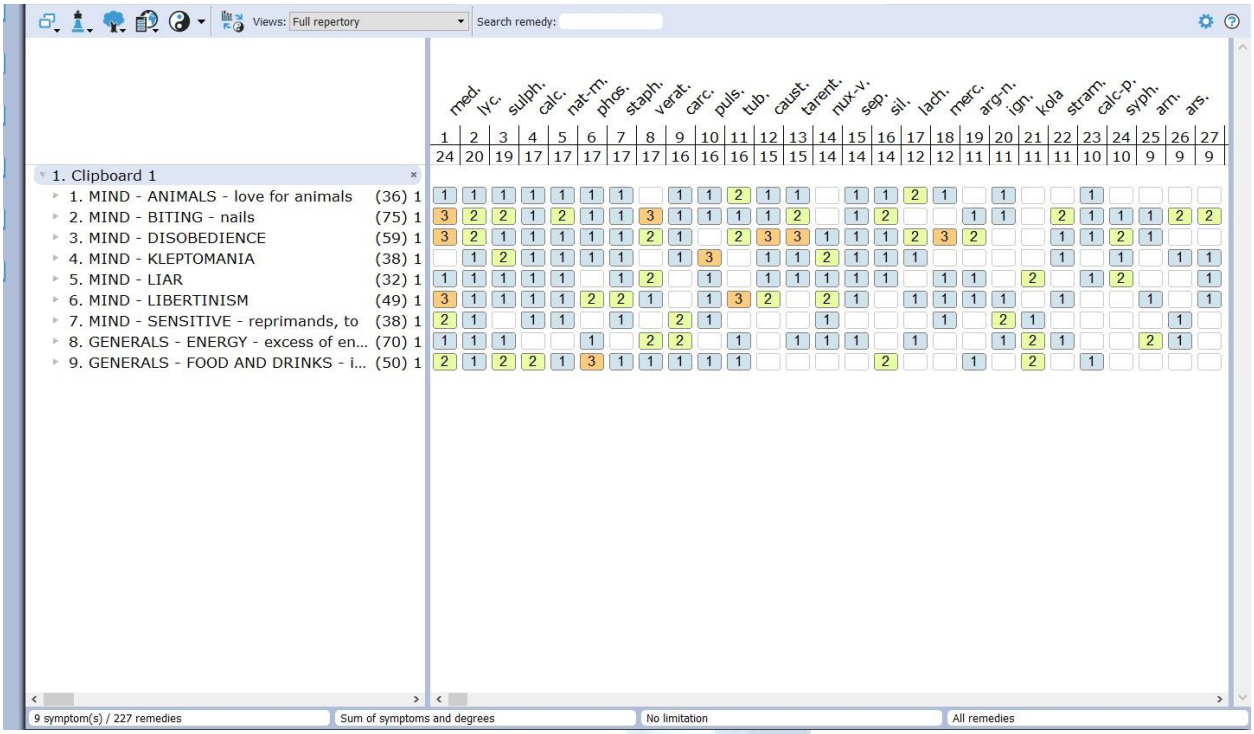

Figure 4 – Repertorization

Table no.2- Follow up of cases

	Baseline Rx	FU1	RX	FU2	RX	FU3	RX	FU4	RX	FU5	RX	FU6	RX
P1	Merc sol 30	MI	SL	MOI	SL	SQ	Merc 30	MOD	SL	MOI	SL	MKI	SL
P2	Natrum Mur 200	MI	SL	MKI	SL	MKI	SL	MI	SL	MKI	SL	MKI	SL
P3	Natrum Mur 30	MI	SL	MOI	SL	MOI	SL	MOI	SL	MKI	SL	MKI	SL
P4	Staphysagria 200	MOI	SL	MOI	SL	SQ	Stap200	MI	SL	MKI	SL	MKI	SL
P5	Medorrhinum 200	MI	SL	MOI	SL	SQ	Med 200	MKI	SL	MKI	SL	MKI	SL
P6	Sulphur 200	MI	SL	MI	SL	MOI	SL	SQ	Sul200	MKI	SL	MKI	SL
P7	Natrum Mur 200	SQ	NM 1M	MOI	SL	MKI	SL	MKI	SL	MKI	SL	MKI	SL
P8	Merc sol 200	SQ	MS 1M	MI	SL	MI	SL	SQ	MS 1M	MOI	SL	MOI	SL
P9	Lycopodium 30	MI	SL	MOI	SL	MOI	SL	MOI	SL	SQ	Lyc 200	MOI	SL
P10	Carcinosinum 1M	MOI	SL	MI	SL	MOI	SL	MKI	SL	MKI	SL	SQ	Carc 1M

Abbreviations: P-Patient, Rx-prescription, FU- follow up, MI-Mild improvement, MOI-Moderate Improvement, MKI-Marked Improvement, SQ-Status quo (Improvement assessed on the basis of CDRS-P scale) , SL-Sac lac. MS-Merc sol, NM-Natrum mur, Stap-Staphysagria, Med- Medorrhinum, Sul- Sulphur, Lyco-Lycopodium, Carc- Carcinsoinum.

Table no.3: Follow up of the cases assessed using Modified Naranjo criteria as proposed by HPUS clinical data working group

No	**Please answer the following questionnaire and give the pertinent score** **Yes**	**PT 1**	**PT 2**	**PT 3**	**PT 4**	**PT 5**	**PT 6**	**PT 7**	**PT 8**	**PT 9**	**PT 10**
1	Was there improvement in the main symptom or condition for which the Homoeopathic medicine was prescribed?	+2	+2	+2	+2	+2	+2	+2	+2	+2	+2
2	Did the clinical improvement occurred within the plausible timeframe relative to the drug intake?	+2	+2	+2	+2	+2	+2	+2	+2	+2	+2
3	Was there an initial aggravation of symptom?	0	+1	+1	0	0	0	+1	0	+1	+1
4	Did the effect encompass more than the main symptom or condition?	+1	+1	+1	+1	+1	+1	+1	+1	+1	+1
5	Did overall wellbeing improve?	+1	+1	+1	+1	+1	+1	+1	+1	+1	+1
6A	Direction of cure: did some symptoms improve in the opposite order of the development of symptoms of the disease?	0	0	+1	0	+1	+1	0	0	+1	+1
6B	Direction of cure: did at least two of the following aspects apply to the order of improvement of symptoms? -from organs of more importance to those of less importance? -from deeper to more superficial aspects of the individual? -from the top downwards?	0	+1	+1	0	0	0	0	+1	0	0
7	Did "old symptoms"(defined as non-cyclical symptoms that were previously thought to have resolved) reappear temporarily during the course of improvement?	+1	0	0	+1	+1	0	0	0	+1	+1
8	Are there alternate causes(other than the medicine) that- with a high probability-could have caused the improvement?	+1	+1	+1	+1	+1	+1	+1	+1	+1	+1
9	Was the health improvement confirmed by any objective evidence? (Lab tests, Clinical observation etc.)	0	0	0	0	0	0	0	0	0	0
10	Did repeat doing , if conducted, create similar clinical improvement?	+1	+1	+1	+1	+1	+1	+1	+1	+1	+1
	Total	9	10	11	9	10	9	9	9	11	11

Discussion

Conduct disorder is more common in boys than girls, and the ratio could range from 4:1 as much as 12:1 [14]. In the present study the ratio of male: female is 9:1 which is similar to the available literature. The average age of onset of disruptive symptoms in these cases is 10.1 years. Early onset of conduct disorder in childhood years could lead to worse prognosis of the condition [14]. In this case series although many cases showed early onset, yet there was good improvement showing the potential utility of homoeopathy.

Poverty in childhood, exposure to physical or sexual abuse or domestic violence, and parental substance use disorders or criminal behaviour are considered as risk factors for CDs in children. [15] The current cases shown risk factors such as sexual abuse (2 cases), Domestic violence (3 cases),

substance use disorders in parents (6 cases) and criminal behaviour in parents (1 case). 3 cases showed multiple risk factors.

A study conducted on a sample of 521 middle school students (51.6% male) to test whether substance use in 8th and 9th grade increased risk of conduct disorder and depression symptoms underscored the unique contribution of substance use during early adolescence to the development of conduct disorder symptoms by late adolescence [16]. It is observed that 3 out of 10 children in the current cases also have associated substance abuse at a very early age.

Children of parents with substance abuse disorders have higher rates of conduct disorder, smoking, and drug use and lower overall functioning than children of parents with no history of psychiatric disorders [17]. In the current study 6 out of 10 cases showed either past or family history of Substance abuse. Hence, it is understood that measures should be taken to prevent substance abuse use in order to reduce the prevalence of CDs.

Pharmacological agents are adjuncts in treatment for acute crisis intervention and short-term management and non-pharmacological management such as Contingency management programs (CMP), Cognitive behavioral skill training, parent management training (PMT) has been the mainstay of treatment in managing the CDs. The CMP s involve- Setting behavioral goals that slowly shape a child's behavior in specific areas of interest, monitoring systematically whether the child is achieving these goals, positive reinforcement in taking steps in the direction of reaching these goals, and Penalty for undesired behavior [18].

The Conduct Disorder Rating Scale (CDRS) provides valid measures of CD in children and is well suited to observational and clinical studies of CD. The CDRS-P is a Likert-type scale with scores ranging from 1-4 which measures CD in line with conceptualizations as described in the DSM-IV. The fifteen symptoms used in the scale are taken directly form the DSM definition of CD [19]. Contrary to what is usually expected the CDRS-p scores of children at stable home environment were higher than those at the Children's home, but improvement in these cases was remarkable as compared to the other children, which might be due to available family support by love, empathy and giving medicines regularly.

A series of three cases of Conduct disorder which have been treated exclusively with individualized homoeopathic medicines without any supportive therapies are reported and outcome of homoeopathic treatment shows a positive role of homoeopathy [20]. The remedies used in the cases were S*tramonium, Natrum muriaticum and Pulsatilla.* Constitutional medicine were complemented with anti-miasmatic remedies like *Carcinosinum*, underscoring the miasmatic approach to root cause removal rather than superficial behavioural modification Homoeopathic medicine can be well integrated with non-pharmacological intervention for long-lasting improvement.

Literature suggests medicines like *Hyos., Nux vom., Bell., Stram., Sulph., Tarent., Staphy., Plat., Lach., Verat.* to be probably indicated in CD based on symptomatology [21]. In the current case series, it is found that different remedies are indicated which emphasizes the need for strict individualization as per homoeopathic principles in every prescription as each child is unique in presentation. Remedies like *Carcinosinum, Natrum mur, Staphysagria* which are indicated in the current cases underscores the importance of understanding underlying mental state of children like rejected feeling, repressed and suppressed emotions which is vital for treatment and management. Longitudinal assessment of cases is necessary to find out the long-term results and any relapses of behavioural issues after homoeopathic intervention.

This case series highlights that Individualized homoeopathic constitutional miasmatic remedies act well even in cases with genetic predispositions and clears the internal morbific dyscrasias. The results have to be corroborated with well-planned studies with appropriate study designs.

Conclusion

This case series generates preliminary evidence for utility of homoeopathic treatment in reducing disruptive behaviour in children with Conduct disorders. Our results provide support for future pragmatic research to provide more precise estimates of treatment effect. This may open an avenue for the implementation of homoeopathy in public health programs related to behavioural issues of children.

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REFERENCES

[1] Sagar R, Patra BN, Patil V. Clinical Practice Guidelines for the management of conduct disorder. Indian Journal of Psychiatry. 2019;61(Suppl 2):270-276.
[2] Buitelaar JK, Smeets KC, Herpers P, Scheepers F, Glennon J, Rommelse NN. Conduct disorders. European Child Adolescent Psychiatry. 2013;22 Suppl 1:S49-S54.
[3] World Health Organization, 2007: ICD Classification of Mental and Behavioural Disorders (10thed) Delhi, A.I.T.B.S. Publishers& Distributors, 266-272.
[4] Fairchild G, Hawes DJ, Frick PJ, et al. Conduct disorder. Nature Reviews Disease Primers. 2019;5(1):43. Published 2019 Jun 27.
[5] Jayaprakash R, Rajamohanan K, Anil P. Determinants of symptom profile and severity of conduct disorder in a tertiary level pediatric care set up: A pilot study. Indian Journal of Psychiatry. 2014;56(4):330-336.
[6] Lillig M. Conduct Disorder: Recognition and Management. American Family Physician. 2018;98(10):584-592.
[7] Patra S. Nosology and subtypes of conduct disorder. Indian Journal of Psychiatry. 2018;60(2):253-254.
[8] American Psychiatric Association. Diagnostic and statistical manual of Mental Disorders (5th ed.) (DSM-V Arlington, V.A, APA, 2013.
[9] Loeber R, Keenan K,Interaction between conduct disorder and its comorbid conditions: Effects of age and gender. Clinical Psychology Review,Volume 14, Issue 6,1994,Pages 497-523,ISSN 0272-7358

[10] Junewicz A, Billick SB. Conduct Disorder: Biology and Developmental Trajectories. Psychiatric Quarterly. 2020;91(1):77-90.
[11] Loy JH, Merry SN, Hetrick SE, Stasiak K. Atypical antipsychotics for disruptive behaviour disorders in children and youths. Cochrane Database of Systematic Reviews. 2017;8(8):CD008559. Published 2017 Aug 9.
[12] Davidson JR, Crawford C, Ives JA, Jonas WB. Homeopathic treatments in psychiatry: a systematic review of randomized placebo-controlled studies. Journal of Clinical Psychiatry. 2011;72(6):795-805.
[13] Lamba CD, Gupta VK, van Haselen R, et al. Evaluation of the Modified Naranjo Criteria for Assessing Causal Attribution of Clinical Outcome to Homeopathic Intervention as Presented in Case Reports. Homeopathy. 2020;109(4):191-197.
[14] Patra S. Nosology and subtypes of conduct disorder. Indian Journal of Psychiatry. 2018;60(2):253-254.
[15] Mohan L, Yilanli M, Ray S, Conduct disorder Treasure Island (FL): StatPearls Publishing; 2020 Janhttps://www.ncbi.nlm.nih.gov/books/NBK430685
[16] Wymbs BT, McCarty CA, Mason WA, et al. Early adolescent substance use as a risk factor for developing conduct disorder and depression symptoms. Journal of Studies on Alcohol and Drugs. 2014;75(2):279-289.
[17] Merikangas KR, Dierker LC, Szatmari P Psychopathology among offspring of parents with substance abuse and/or anxiety disorders: a high-risk study. Journal of Child Psychology and Psychiatry 1998 Jul;39:711–20.
[18] Sagar R, Patra BN, Patil V. Clinical Practice Guidelines for the management of conduct disorder. Indian J Psychiatry. 2019;61(Suppl 2):270-276.
[19] Waschbusch, D. A., & Elgar, F. J. (2007). Development and validation of the conduct disorder rating scale. Assessment, 14(1), 65-74.
[20] Moorthi SK, Radhika P, Homoeopathy for conduct disorders: A case series, Homoeopathic links, 17 June 2021, DOI: 10.1055/s-0040-1721472
[21] Gnnanaprakasham M, Brundha S. Homoeopathic portrait of conduct disorder. International Journal of Homoeopathic Sciences 2021;5(1):221-226