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USE OF AVERSION THERAPY IN DISSOCIATIVE PSEUDO-SEIZURE PATIENTS

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Abstract
Background: psychological methods are less commonly used in treatment of psychiatric illnesses in hospital setup. In some psychiatric illnesses drug use has limiting effect in full cure of illness due to psychosocial dynamics associated with those illnesses.
Aim: In dissociative conversion disorder one theory states that primary gain is conversion of mental or emotional feeling into physical symptoms and secondary gain is any other external benefit from physical symptom occurred in primary gain. Like in a disturbed marital conflict wife develops episodic unresponsiveness (pseudo seizures) as primary gain and revived attention and care of husband due to this episodic unresponsiveness (pseudo seizures) as secondary gain. It is hypothesized that dissociative conversion reaction develops and become resistant by getting these two primary and secondary gains. Our study aim at providing unpleasant mild aversive electric current to the subjects along with standard pharmacotherapy to make patient condition to this painful stimulus and end their maladaptive behavior.
Material and Methods: Structured Clinical Interview for DSM-5 was used for making diagnosis and Dissociative Experiences Scale and Global Assessment of Functioning (GAF) for evaluating the response of treatment. Mild electric current (30 mili columb) was used in test group along with standard treatment group.
Results: In test group improvement in terms of Dissociative Experiences Scale and Global Assessment of Functioning (GAF) and number of episodes of unresponsiveness was better.
Conclusion: Use of mild electric current as aversive stimulus as compared to standard treatment group was found more affective mode of treatment
Keywords: dissociative, conversion, aversion therapy, pseudo seizures, electric current

Introduction

Conversion reaction (functional neurological mental disorder) is mental illness in which sensory and motor abnormality is seen without any focal physical or nervous system lesion. According to DSM 5 following diagnostic criterion are included[1]

1-one or more symptoms of altered voluntary sensory or motor functioning

2-clinical findings provide incompatibility between symptoms and recognized neurological condition

3- Symptoms not explained by other physical or mental condition

4-Symptoms producing significant distress in social, occupational or emotional and other area of functioning

Aversion therapy is a type of behavioral therapy that make patients give up their undesirable habit by causing them to associate it with a distressing event. This conditioning is meant to cause the patient to associate this stimulus with unpleasant type of sensations with the intention of stopping the targeted unwanted behavior. Aversion therapies can be of many types, like using unpleasant-tasting substances ie chili or denatonium benzoate on the fingernails to discourage nail biting[2]; pairing of some painful event with undesired behavior, pairing the use of an emetic substance with alcohol[3] or pairing unwanted behavior with electric shocks[4].

Pattern of use of aversion can be

1-Negative reinforcement (a.k.a. escape). In this type of reinforcement pattern aversion stimulus is removed after occurrence of the particular desired behavior. In the Skinner Box experiment, the aversive stimulus might be an electric current continuously inside the box; negative reinforcement would happen when the rat presses a lever to turn off the current. This is also known as escape learning[5].

2-Positive punishment ("punishment") when an aversive stimulus is provided to stop some undesired behavior. like in skinner box aversive stimulus will be a shot of current if

it goes to a particular chamber to stop rat entering in that specified box chamber [6].

It is evident from review of journals published in Indian Journal of Psychiatry (IJP) that only about 2% related to use of psycho-social methods of treatment, in comparison to 16% that are published in the British Journal of Psychiatry[7]. It signifies that most psychiatrist in India relay mostly on pharmacological methods of treatment and psychological methods to treat psychiatric illnesses are mostly ignored. This study was planned to incorporate psychological principals in treatment psychiatric illnesses with pharmacological treatment plans to maximize the treatment benefit[8].

Material and Methods

DSM-5 was used for making diagnosis and Dissociative Experiences Scale and Global Assessment of Functioning (GAF) and World Health Organization Quality of Life (WHOQOL)-BREF for evaluating the response of treatment. Mild electric current (30 mili columb) was used in test group along with standard treatment group.

DSM 5 criterion of conversion reaction was used including four criterion

A-One or more symptoms of altered voluntary sensory or motor functioning

B-Clinical findings provide incompatibility between symptoms and recognized neurological condition

C- Symptoms not explained by other physical or mental condition

D-Symptoms producing significant distress in social, occupational or emotional and other area of functioning

Global Assessment of Functioning, or GAF, scale is used to rate the seriousness of mental illness. It use to measure how much a person's mental illness symptoms affect his or her daily life on a scale of 0 to 100[9]. It is a continuous scale and measure psychological, social and occupational impairment due to mental illness. Physical and environmental functioning not rated on it.

100-91	Superior functioning in wide range
90-81	Absent and minimal symptoms
80-71	Transient symptoms
70-61	Some mild symptoms
60-51	Moderate symptoms
51-41	Serious symptoms
40-31	Impairment in reality testing
30-21	Delusion and hallucination present
20-11	Some danger of self /other harm
10-01	Persistent danger of self/ other harm
0	Inadequate information

MICHELE A. PACKARD, suggests that

GAF Score 1 – 30 the patient is a candidate for inpatient care and need high level of psychiatric /psychological help

GAF Score 31 - 69 the patient is a candidate for outpatient care –for pharmacotherapy/psychotherapy

GAF Score 70 - > In most cases, no treatment is needed because the patient is functioning too well to be a candidate for any therapy.

If after getting treatment of one month GAF score of a patient become more than 70, it will be considered as improvement in our study

The World Health Organization Quality of Life (WHOQOL)-BREF

The WHOQOL-BREF has broad groups one is Overall quality of life (QOL) and other is General Health and 24 items divided into four major domains: Physical health domain comprising 7 items (DOM1), psychological health domain contains 6 items (DOM2), social relationships domain contains 3 items (DOM3) and environmental health domain contains 8 items (DOM4)[10].

Statistical analysis

Our research data was analyzed using graphpad instat and spss software. The Student t test was applied to derive statistical significance between compared groups. Division of study (50) and control group (50) was based on simple computer randomization.

Results

By using self-developed socio-demographic profile for data extraction table 1 is made by incorporating the data in appropriate classification module.

Table 1: Sociodemographic features

		Study group n=50	Control group n=50
Age (mean±SD)		23±6	24±7.2
Sex	Male	5(10%)	7(14%)
	Female	45 (90%)	43 (86%)
Religion	Hindu	40 (80 %)	41(82%)
	Muslim	9(18%)	8(16%)
	Other	1(2%)	1(2%)
Education	Illiterate	2(4%)	3(6%)
	undergraduae	32(64%)	30(60%)
	Graduate	6(12%)	7(14%)

GAF score of control group	Subject falling in GAF category	
	Before treatment 0 month	After treatment 1 month
100-91	0	0
90-81	0	5
80-71	0	8
70-61	1	9
60-51	6	5
51-41	11	6
40-31	12	8
30-21	18	9
20-11	2	0
10-01	0	0
0	0	0
Having score more than 70	0	13
Having score less than 70	50	37

2X2 contingency table	Outcome 1	Outcome 2	total
Group 1	0	50	**50**
Group 2	13	37	**50**
Total	**13**	**87**	**100**

Fisher's exact test-The two-tailed P value is less than 0.0001

GAF score of study group	Subject falling in GAF category	
	Before treatment 0 month	After treatment 1 month
100-91	0	0
90-81	0	5
80-71	0	13
70-61	1	19
60-51	8	5
51-41	10	3
40-31	13	2
30-21	12	3
20-11	5	0
10-01	1	0
0	0	0
Having score more than 70	0	32
Having score less than 70	50	18

2X2 contingency table	Outcome 1	Outcome 2	Total
Group 1	0	50	**50**
Group 2	32	18	**50**
Total	32	68	**100**

Fisher's exact test-The two-tailed P value is less than 0.0001

Study and control group treatment outcome compression after receiving treatment

	control	study
Having score more than 70	13	32
Having score less than 70	37	18

2x2 contingency table	Outcome 1	Outcome 2	Total
Group 1	32	18	50
Group 2	13	37	50
Total	45	55	100

Fisher's exact test-The two-tailed P value equals 0.0003.The association between rows (groups) and columns (outcomes) is considered to be extremely statistical ly significant.

World Health Organization Quality of Life (WHOQOL)-BREF scoring data

	Control group N=50	Study group n=50	P
Score on 0(mean±SD)	32±6	33±4	0.3292
Score on 1 month(mean±SD)	67±4	80±4	0.0001

Discussion

It is evident from study results on global assessment of functioning there is improvement after one month of treatment. If we compare control and study groups on global assessment of functioning we can see that improvement after incorporation of aversion therapy was more as compared to control group.

Comparison on world health organization World Health Organization Quality of Life (WHOQOL)-BREF scoring demonstrate the same finding that there is improvement after one month of treatment in both control and study group, and same time the improvement in study group receiving aversion therapy along with standard pharmacotherapy was more.

Conclusion

Aversion therapy when coupled with standard pharmacotherapy is more effective in treatment of conversion reaction related pseudo-seizures. It is than recommended to try as a non-harmful and cost effective way of treatment

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