Efficacy of Danger Ideation Reduction Therapy in Obsessive-Compulsive Disorder Washer with Poor Insight: A Case Study and Literature Review

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ABSTRACT

Obsessive-compulsive disorder (OCD) is characterized by obsessions and compulsions. Treatment usually consists of serotonergic medications along with exposure therapies. Danger ideation reduction therapy (DIRT) is an alternative therapy predominantly for washing compulsions and focuses on reduction of danger ideations. DIRT was tried on Ms. S. with a history of OCD for 15 years and improvement was noticed on Yale–Brown Obsessive Compulsive Scale, Padua Inventory, Hamilton Anxiety Rating Scale and Hamilton Depression Rating Scale after 15 sessions of DIRT though she was not fully symptom-free. Thus, DIRT was found to improve OCD symptoms and improved her insight into illness.

Key words: Danger ideation reduction therapy, nonexposure therapy, obsessive-compulsive disorder, poor insight, washing compulsion

INTRODUCTION

Obsessive-compulsive disorder (OCD) is characterized by repeated intrusive thoughts, impulses, or images followed by repeated actions that decrease the associated anxiety. The common practice to treat OCD is by serotonergic medications along with exposure and response prevention (ERP). Danger ideation reduction therapy (DIRT) is an alternative therapy developed by Jones and Menzies.[1] Danger ideations are believed to be more in OCD patients particularly with washing compulsions.[2] Thus, DIRT was formulated that specifically deals with danger ideations. No other biased reasoning (e.g., inflated responsibility) is dealt in this therapy.[3] DIRT consists of six main techniques and does not include any form of direct or indirect exposure or any sort of response inhibition.

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CASE REPORT

Index patient Ms. S, 32 years of age, married since 2003, Hindu and graduated in political science, belonging to middle socioeconomic family and mother of two children was brought to hospital by her husband (lawyer) and her brother with the complaints of excessive hand washing, thinking that she or any of her family members may catch up some disease with the duration of 15 years and was deteriorating for the last 5 years. She would wash hands when she touches door handles, taps, gas stove, or when her children or her husband or any other person comes home. The patient would make love to her husband only in bathroom and this was very disturbing to her husband. Her behavior was scaring family members as she would believe that houseflies would contaminate her home and thus would clean each and every place where she feels housefly might have contaminated. She started keeping all the doors and windows shut in summers to stop houseflies from coming inside. The patient had never visited any psychiatrist or psychologist for any pharmacotherapy or psychotherapy in the past. She was put on clomipramine and fluoxetine; and after 3 weeks of medications, she was taken up for psychotherapy and the dosage of medicines was kept constant during psychotherapy sessions.

Danger ideation reduction therapy
Therapy session started with the psychoeducation to the family and the patient regarding the illness and the treatment procedure. Initially, ERP was scheduled but due to her uncooperative attitude to exposure experiments along with poor insight, DIRT procedures were used.

The patient was given information that her anxiety is not really because of situations such as contaminated door knob but due to maladaptive beliefs that overrate the probability of infections. She was also told that she did not need to withdraw herself from doing what she used to but she has to consider the cognitions in contrary to what she believed and automatically behavioral change will follow. Similarly, she was told that she can avoid fearing stimuli if she wants to, in contrary to exposure procedures. The patient was currently staying with her father as conflict with her husband had escalated; and thus, she was technically away from different obsessive compulsive stimuli thus providing an ideal environment for DIRT procedures to work and also she was told not to indulge in any behavioral experiment to resist compulsion or check her OCD symptoms. The patient was not at all accepting that she had illness and was rationalizing her behaviors. A total of 15 therapy sessions were conducted at the frequency of twice a week over the period of 2 months.

Specifically, there was drastic improvement in her insight into illness after three therapy sessions. After ten sessions of therapy, she went back to her home and was able to report improvement.

Following DIRT components were incorporated in the therapy sessions with some modification as demanded by the situations.

Corrective information
Here, the patient is given corrective information regarding illness. Information regarding percentages of deaths due to contamination by touching different objects, etc., is also given. Number of deaths among people who are frequently in contact with dirt because of their occupational requirements, such as sweepers, was also discussed. The patient was also told that repeated hand washing can cause cracks in hands leading to many secondary infections.

Cognitive restructuring
With the help of principles of rational emotive behavioral therapy,[4] attempt was made to restructure the faulty cognitions of the patient. Her irrational beliefs regarding contamination were challenged and more rational and evidence-based cognitions were installed. Since the patient had poor insight, cognitive restructuring helped her to accept her illness and was motivated to go through treatment procedures.

The probability of catastrophe
This was described by Hoekstra.[5] The probabilities of every sequence of behavior are multiplied and thus presented to the patient that his or her estimates were too big and unrealistic. For example, “touching door knob,” this behavior was broken down into small behaviors and possibilities, for being contaminated was calculated, such as what are the chances that the hands of her son were contaminated with harmful bacteria, chances that bacteria get transferred to door knob when son touches it, chances that bacteria gets in contact with your hands, chances that it gets into your stomach, and chances that your body fighting mechanism fails in dealing with the bacteria. All the probability estimates given by the patient were multiplied to identify the estimate of illness that always comes to be lower than the initial estimates by the patient. Same was exercised for other situations in different sessions.

Attentional focusing
The patient was also given training to improve her attention so that she can have better control over her attention and can shift attention as per her will. She was taught to focus on numbers such as 1, 2, 3, and 4 while she breathes in and focus on word “Relax” while exhaling. She was told to practice same with closed eyes in a less distracted room with normal breathing at least
twice a day for 10 min. With practice, same exercise can be done in much noisier environment with eyes open to get same effects. In the beginning of every session, this exercise was done for 3–6 min.

Filmed interviews
The patient watches short interviews of people who readily get contaminated with dirt. The videos are around 10 min long and absence of diseases in people who work in such environments is also discussed. With our patient, she was though personally allowed to interview sweeper, gardener, and female attendant in the hospital. She was also shown few videos on OCD from YouTube. The interviews were penned down briefly so as to use this information in other sessions as well.

Microbiological experiments
This involves experiment where therapist will contaminate his one hand by touching things that usually patient thinks are contaminated (such as door

![Figure 1: Values on different measures that index patient scored pre- and post-danger ideation reduction therapy]

Table 1: Literature Review of studies on efficacy of DIRT on OCD predominantly with washing compulsions

| Authors and Year | No. of patients | OCD sx | Duration of illness | Previous therapies done | Tests used | Therapy sessions | Outcome | Improvement at Follow-ups |
|------------------|-----------------|--------|---------------------|-------------------------|------------|------------------|---------|--------------------------|
| Jones and Menzies (1997) | 5 | Contamination/Washing | >20 years | - | PI, MOCI, SRS | 6–10 1-Hr sessions | Improvement on all scales | Maintained at 3 mths f/up |
| Jones and Menzies (1998) | 11 Ex. G, 10 WL | Washing | - | -Medicines and Therapies currently | MOCI, SRS, BDI, LOI | 8 1-Hr group sessions | Sig. Improvement | Maintained at 3 mths f/up with more non sig. improvement |
| Krochmalik et al. (2001) | 5 | -Washing/Cleaning | >10 years | -At least 2 trials of Serotonergic Meds | PI, MOCI, BDI-II, 2 SRS | 9-14 weekly sessions | 4 of 5 patients improved | Maintained and further improved at 4-6 mths of f/up |
| Hambridge and Loewenthal (2003) | 1 (Case Study) | Washing & Checking | - | -For checking ERP was used -SSRIs | PI, FRS, SRS-A | Sessions for few months | Improvement was noticed | Maintained at 18 mths f/up |
| Krochmalik et al. (2004) | 11 DIRT | 11 ERP | - | Battery of 17 tests | 12, 1-Hr sessions | | | |
| O’Brien et al. (2004) | 1 | Washing | 4 years | ERP, SSRIs, | - | 16 sessions | | |
| Govender et al. (2006) | 1 | Washing | 15 years | ERP, PSAs, SSRIs | CAC, PI BDI, YBOCS, AC | 14 1-Hr sessions | | |
| Drummond and Kolb (2008) | 1 | Washing with AN | 19 years | ERP, SSRIs | YBOCS, PI, BDI, YBOCS, VOCI, BDI, | 12 I-Hr after that ERP for 12 weeks | Improvement noticed and ERP didn’t increase the benefits significantly | Maintained at 1 yr f/up |
| Jones et al. (2012) | 1 | Washing | 20 years | CBT | YBOCS, VOCI, BDI OCI, VMT | 12 weeks SA-DIRT | 20 1½ Hr DIRT session and Mem.ET | | |
| Babaei and Pourshahriari (2013) | 12 Ex. G and Con. G | -Washing-Memory Problems | - | - | | | | |

DIRT—Danger Ideation Reduction Therapy; OCD—Obsessive Compulsive Disorder; Sx—Symptoms; PI—Padua Inventory; MOCI—Maudsley Obsessive Compulsive Inventory; SRS—Self Rating Scale; Mths—Months; Hr—Hour; f/up—Follow-Ups; Ex. G—Experimental Group; WL—Waiting List; SSRIs—Selective Serotonin Reuptake Inhibitors; BDI—Becks Depression Inventory; LOI—Leyton obsessional inventory; Tx—Treatment; FRS—Frequency rating scale; SRS-A—Self Rating Scale for Anxiety; PSAs—Problem Solving Approaches; CAC—Compulsion Activity Checklist; YBOCS—Yale Brown Obsessive Compulsive Scale; AC—Activity Checklist; AN—Anorexia Nervosa; Con. G—Control Group; OCI—Obsessive-Compulsive Inventory; VMT—Veksler Memory Test; Mem. ET—Memory Enhancement Techniques; CBT—Cognitive Behavioral Therapy; VOCI—Vancouver Obsessional Compulsive Inventory; SA-DIRT—Self Administered-DIRT

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knobs) and other hand acts as control. Therapist’s fingers of both the hands are collected on agar plates and then cultivated in microbiological laboratory and results are discussed. This procedure was not done on index patient because of unavailability of such equipments in the hospital.

Patient was given in-written following: restructured cognitive contents, corrective information, interviews (written). So that, she can read, copy, and memorize same at least twice a day every day. In sessions whenever needed, she was helped in applying same principles in novel situations.

**DISCUSSION**

DIRT was primarily formulated for OCD patients predominantly with washing compulsion and very recently has been also devised for OCD patients with predominantly checking compulsion (DIRT-C). It has been found to be efficacious on chronic OCD patients that failed to respond to ERP and with poor insight. DIRT has been therapy of choice for people who do not want to undergo painful exposure therapies. It is a complete psychoeducational program that helps patient to understand and correct his or her false cognitive beliefs. Studies also show efficacy of DIRT over ERP and in treatment-resistant cases. A case study shows nonsignificant improvement in symptoms by ERP after DIRT. Table 1 shows the literature review of studies on DIRT in OCD with washing compulsions. DIRT has improved severity of symptoms in the index patient [Figure 1]; however, at the same time, it becomes difficult to say whether the benefits were solely due to psychopharmacology or DIRT or both. Practically, selective serotonin reuptake inhibitors (SSRIs) are to be augmented with psychotherapies, especially in cases that are of chronic in nature. Index patient improved from her OC symptoms but she was not completely symptom-free and same findings were reported by one more case study where patient recovered from severe OCD to moderate level of OCD. In the present case, reasons could be that protocol was not fully followed as one component was dropped completely due to obvious reasons and many changes were made in filmed interview component too. The second reason could be that index patient may need few more sessions of DIRT to recover or may be sessions of ERP for residual symptoms. At last, DIRT along with SSRIs was beneficial in index patient to a great extent, especially in the development of insight into illness though more researches need to be done to find out class of patients who can benefit from this therapy as well as efficacy of DIRT by including other forms of psychotherapies, especially in cases that are treatment resistant.

**CONCLUSION**

DIRT was found to be beneficial in OCD predominantly with washing compulsions and improved insight in the index case.

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**Conflicts of interest**

There are no conflicts of interest.

**REFERENCES**

1. Jones MK, Menzies RG. Danger ideation reduction therapy (DIRT): Preliminary findings with three obsessive-compulsive washers. Behav Res Ther 1997;35:955-60.
2. Jones MK, Menzies RG. The cognitive mediation of obsessive-compulsive handwashing. Behav Res Ther 1997;35:843-50.
3. Jones MK, Menzies RG. Danger ideation reduction therapy (DIRT) for obsessive-compulsive washers. A controlled trial. Behav Res Ther 1998;36:959-70.
4. Ellis A. Reason and Emotion Psychotherapy. New York: Stuart; 1962.
5. Hoekstra R. Treatment of Obsessive-Compulsive Disorder with Rational-Emotive Therapy. Paper Presented at the First World Congress of Cognitive Therapy. Oxford; 28 June, 02 July, 1989.
6. Vaccaro LD, Jones MK, Menzies RG, St. Clare T. Danger Ideation Reduction Therapy for Obsessive-Compulsive Checkers: A Comprehensive Guide to Treatment. Bowen Hills, QLD: Australian Academic Press; 2010.
7. Krochmalik A, Jones MK, Menzies RG. Danger ideation reduction therapy (DIRT) for treatment-resistant compulsive washing. Behav Res Ther 2001;39:897-912.
8. Krochmalik A, Jones MK, Menzies RG, Kirkby K. The superiority of danger ideation reduction therapy (DIRT) over exposure & response prevention (ERP) in treating compulsive washing. Behav Change 2004;21:251-68.
9. Drummond LM, Kolb P. Obsessive-compulsive contamination fears & anorexia nervosa: The application of the new psycho-educational treatment of danger ideation reduction therapy (DIRT). Behav Change 2008;25:44-50.
10. Hambridge J, Loewenthal M. Treating obsessive compulsive disorder: A new role for infectious diseases physicians? Int J Infect Dis 2003;7:152-5.
11. O’Brien M, Jones MK, Menzies RG. Danger ideation reduction therapy (DIRT) for intractable, adolescent compulsive washing: A case study. Behav Change 2004;21:57-65.
12. Govender S, Drummond LM, Menzies RG. Danger ideation reduction therapy for the treatment of severe, chronic & resistant obsessive-compulsive disorder. Behav Cogn Psychother 2006;34:477-80.
13. Jones MK, Harris L, Vaccaro LD. The efficacy of self-administered danger ideation reduction therapy for a 50-year old woman with a 20 year history of obsessive compulsive disorder: A case study. World Acad Sci Eng Technol 2012;67:592-7.
14. Babaei M, Fournahari M. The effect of danger ideation reduction therapy (DIRT) & memory reinforcement techniques on the memory of patients with obsessive compulsive disorder. J Behav Sci 2013;7:13-9.