An update on psychopharmacological treatment of Body Dysmorphic Disorder (BDD)

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Abstract

Background: Body Dysmorphic Disorder (BDD) is a common, often severe disorder characterized by appearance concerns and a preoccupation with thinking and behaviors related to this concern. Population-based investigations have found a prevalence of BDD of 1.5-2% in the general population. The first-line of treatment for BDD is usually Selective Serotonin Reuptake Inhibitors (SSRI) which often alleviates suicidal thinking, and act to protect against further aggravation of suicidal thinking. For delusions, antipsychotic treatment is usually required. This review provides an update on guidelines and pharmacological treatment studies of BDD including recommendations for management and treatment.

Material and method: A narrative review of the current literature.

Results: A presentation of guidelines, some key studies and recommendations for pharmacological treatment of BDD.

Conclusion: Only one placebo controlled efficacy trial has been done finding that fluoxetin is superior to placebo in treatment of BDD. Several open trials support this finding and a randomized trial have found SSRI to reduce time to relapse. Clinical experiences suggest SSRI may reduce risk of suicidality. In severe cases, add-on treatment of second generation anti-psychotics may alleviate psychotic symptoms.

Keywords: body dysmorphic disorder, diagnosis, treatment, medicines

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Abbreviations: BDD, body dysmorphic disorder; DSM-V, diagnostic and statistical manual of mental disorders, edition V; ED, eating disorders; OCD, obsessive-compulsive disorder; SSRI, selective serotonergic reuptake inhibitors

Introduction

Body Dysmorphic Disorder (BDD) is a serious health issue, classified according to DSM-V as an obsessive-compulsive-related disorders (OCRD)[1,2] and characterized by an overwhelming concern of perceived somatic defects that to other people appear slight or even nonexistent. In addition, a preoccupation with this perceived defect, typically accompanied by time-consuming behaviors such as repeated mirror-watching and ineffective attempts to 'improve' or "cover" the defect (i.e. usage of cosmetic products of several kinds), leads to significant distress and functional impairment e.g. high rates of occupational impairment, with avoidance behaviors leading to unemployment, social dysfunction and isolation.[3] BDD most commonly has an onset between 15 and 30 years of age and frequently, there is comorbid depression, anxiety, and sometimes also other OCRDs. A serious concern is that individuals with BDD often suffer an increased risk of suicide with rates of suicidal ideation ranging from 17%–77%, and suicide attempts from 3%–63%.[4–6]

The bodily areas in target of the preoccupations are the skin, hair, nose, eyes, eyelids, mouth, lips, jaw, and chin, although it may involve any part of the body, or multiple body parts at the same time. With regard to the obsessive thinking, this typically includes perceived or slight defects or flaws on the face, asymmetrical or disproportionate face or body features, including wrinkles, scars, thinning of hair, acne, vascular markings, and pallor, or ruddiness of skin texture.

Albeit BDD is common and a serious health threat, surprisingly little attention has been paid to recognition of the disorder, and to improving diagnosis, treatment and increase research and it is only through dedicated research to BDD, and not in the context of OCDR research, that our knowledge will increase to improve early identification and treatment. This review serves to put focus on what is known about treatment of BDD to date.

Clinical trials in BDD

There are few clinical trials that have been done in BDD and most have been open label trials. Only one of the trials have been a randomized, double-blind, placebo-controlled,[7] which included 67 individuals and showed that fluoxetine, a selective serotonin reuptake inhibitors (SSRI), was more efficacious than placebo. The open label trials all found that SSRIs are commonly effective in BDD.[8–11] In a blinded crossover trial found clomipramine, a serotonin reuptake inhibitor (SRI), to be more effective than desipramine[12] in BDD.

Since most patients with BDD receive pharmacotherapy of some kind[13] and since BDD is often chronic, thereby requiring long-term treatment,[13] it would also be important to investigate risk of relapse following discontinuation of efficacious medication in BDD. Phillips et al., investigated this in 100 BDD patients and found that continuation-phase escitalopram delayed time to relapse, and that fewer escitalopram-treated subjects relapsed than did placebo-treated subjects. The severity score of BDD significantly improved during 6 additional months of escitalopram treatment following an acute treatment response. In addition, more than one-third of escitalopram-treated subjects experienced further improvement.[3]

International guidelines for pharmacological treatment of BDD

According to NICE guidelines,[14] it states that for adults with OCD which includes BDD:

1. In the initial treatment of adults with Obsessive Compulsive Disorder (OCD), low intensity psychological treatments (including exposure and response prevention; ERP) (up to 10 therapist hours per patient) should be offered if the patient's degree of functional impairment is mild and/or the patient expresses a preference for a low intensity approach.

a. Low intensity treatments include: brief individual CBT (including ERP) using structured self-help materials brief individual CBT (including ERP) by telephone group CBT (including ERP) (note, the patient may be receiving more than 10 hours of therapy in this format).

b. Mild BDD: Adults with OCD with mild functional impairment who are unable to engage in low intensity CBT (including ERP), or for whom low intensity treatment has proved to be inadequate, should be offered the choice of either a course of an SSRI or more intensive CBT (including ERP) (more than 10 therapist hours per patient), because these treatments appear to be comparably efficacious.

c. Moderate BDD: Adults with OCD with moderate functional impairment should be offered the choice of either a course of an SSRI or more intensive CBT (including ERP) (more than 10 therapist hours per patient), because these treatments appear to be comparably efficacious.

d. Severe BDD: Adults with OCD with severe functional impairment should be offered combined treatment with an SSRI and CBT (including ERP).

The first steps in successful pharmacotherapy of BDD: Essential in successful treatment of BDD is to establish a proper rapport. As a psychiatrist, it is important to be prepared for asking questions about the patient's concerns and to provide a proper expression of empathy for the patient's suffering. Frequently, patients feel completely overwhelmed and hopeless and desperate about their symptoms, and to explain that there are reasons for hope is crucial in the first steps of establishing a therapeutic alliance with a patient.

Before initiating any treatment of any disorder, a comprehensive and thorough diagnostic work-up is required. This includes establishing trust, performing a medical interview, followed by a mental status examination, a somatic examination and making use of BDD diagnostic instruments a) to exclude other diagnoses and b) find support for the BDD diagnosis. There are no specific laboratory tests. Since the purpose of this review is to describe pharmacological treatment of BDD, a reference is made to other reviews dedicated to the diagnostic work-up.[15]

It is also equally important to educate the patient about what BDD is and what kind of therapeutic options there are for patients with BDD. Both written information but primarily describing what BDD is, how frequent it is, what it causes to patients, what the risks are with not treating BDD is part of a proper groundwork before initiating pharmacotherapy. Crucial is not to focus on how the patient looks. The patient's beliefs are the patient's own and they usually cannot be convinced otherwise. For example, expressing whatever opinion yourself may have on the patient's looks will lead to a risk of lack of trust which may continue and develop into an interruption in treatment both early but also later on. Regarding psychoeducation, it is helpful to present BDD as a disorder of perception, an exaggerated focus on details and repetitiveness in thoughts and behaviors. It is also essential not to encourage patients to engage in surgical or dermatological interventions. Usually, these treatments, including dental and other cosmetic treatments are never helpful to relieve the BDD concerns. Instead, it is appropriate to encourage patients to try medicines but also to become involved in cognitive behavioral therapy or similar approaches.

First line of treatment for BDD

SSRI medications are first line treatments for BDD, also delusional BDD. There are several randomized double-blind studies (Table 1) as well as NICE practice guidelines[14] and Cochrane review to support this approach.[16] SSRIs do improve symptoms of BDD such as depressiveness and core BDD symptoms, but not only that, also psychosocial functioning is improved by SSRIs. However, it should be recalled in this context that there is no approved treatment for BDD, which relate partly to lack of interest from Pharmaceutical industry and furthermore that BDD, in spite of being prevalent, is usually under-recognized and underdiagnosed. SSRIs are approved for obsessive-compulsive disorder (OCD), with which BDD shares some features such as the preoccupation of appearance concerns. SSRI treatments have, in both open-label and controlled studies, been shown to significantly alleviate BDD-related preoccupation, distress, and compulsive behaviors.[3,12,17] In addition, depressive symptoms, anger-hostility, somatic symptoms, anxiety, impairment in psychosocial functioning, mental health-related quality of life and BDD-related insights significantly improved in most of the studies.[3,11] A few studies did also explore the effects of SSRI on suicidal ideation finding that compared to placebo, it improved and provided protective effects against a worsening of suicidal ideation.[18]

Which SSRI to choose and dosing

There are currently no studies to indicate that any of the SSRIs are better and more efficacious than the other. Usually, escitalopram or fluoxetine are chosen since they are the most well studied SSRIs in BDD. In addition, they are usually well-tolerated, also at the dose level which is recommended for treatment of BDD. A second choice may be more noble SSRIs such as sertraline but also, especially when there is an insufficient effect of SSRIs, a switch to clomipramine may be explored as an alternative.

There is currently no dose finding studies in BDD. However, clinically it is well-established that to be able to relieve patients from BDD-related symptoms, much similar to treatment of OCD, higher doses than what is standard for treatment of depression is required. Sometimes, double or triple the standard anti-depressive dose is required with SSRIs for treatment of BDD, and more occasionally, patients may benefit from normal doses of SSRI.

Usually, a standard titration rate may be adopted, and it is only in the very advanced and intensively ill patients that a more rapid up titration of the SSRI dose may be recommended. That means that in usual, it takes at least 2 to 3 months to reach an appropriate BDD dosage level with SSRIs. And it is wise to recall that BDD in principle in the majority of cases requires high to very high doses of SSRIs. Thereby, a treatment failure or inadequate response to one of

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recommended SSRIs, at a dosage level which is twice as high as the anti-depressive should not discourage the psychiatrist and the patient to try even higher doses.

When introducing the patient to pharmacological treatment with SSRIs, it may be proposed to try this medication for a period of time in order to have the patient consider whether this is something for him/her to approve for his/her BDD symptoms. In these kinds of situations, usually at least 3 months of treatment should be described as the basis for exploring effectiveness of SSRIs in BDD. In fact, beneficial is to aim for at least 4 months if the patient is able to agree to this.

Table 1 Examples of clinical trials in adult individuals suffering from BDD[1]

Study Drug	Design	Sample Size	Duration of exposure, Mean Dose (mg/day)	Results*	References
SRI or SSRI as Monotherapy					
Clomipramine vs. desipramine	R, DB, controlled, CO, MTA	n=29	16 weeks (8 weeks on each medication)	Clomipramine more effective than desipramine; response rate 65% vs. 35%	Hollander E et al.[12]
			CMI: 138±87		
			CMI: 147±80		
			12 weeks		
Fluoxetine ine vs. placebo	R, DB, PC parallel group trial, ITT	n=67	77.7±8.0	Fluoxetine more effective than placebo; response rate 53% vs. 18%; effect size: d=.70	Phillips KA et al.[7]
			CMI: 138±87		
			CMI: 147±80		
Escitalopram vs. placebo	Initially open-label trial with escitalo pram; responders to open-label treatment were randomized to double-blind continuation treatment with escitalopram vs. placebo for 6 months, ITT	n=100 in open label phase; 58 in DB phase	14 week open label phase	Open-label trial: BDD symptoms improved; 67% of subjects (ITT) and 81% PP.	Phillips KA.[17]
			26.2±7.2	Time to relapse longer with escitalopram than placebo	
			6-month randomized phase	Relapse proportions: 18% for escitalopram vs. 40% for placebo.	
			28.7±4.6	In continuation phase, BDD improved in escitalopram-treated subjects; 36% of subjects further improved.	
SRI Augmentation Studies					
Pimozide vs. placebo	R, DB, PC ,parallel-group trial, ITT	N=28	8 weeks	No differences	Phillips KA.[19]
			2mg		

*Studies used a definition of treatment response set to at least 30% or higher in the total score of the primary outcome, which most often was BDD-YBOCS (if not otherwise mentioned).

Abbreviations: BDD-YBOCS, yale-brown obsessive-compulsive scale modified for body dysmorphic disorder; DB, double blind; ITT, Intent to Treat; MTA, minimum treatment analysis; PC, placebo controlled; PP, per protocol; R, randomized; SRI, serotonin reuptake inhibitor; SSRI, selective serotonin reuptake inhibitor

[1]Clinical trials with memantine, oxytocine and d-cycloserine has also been done, according to clinicaltrials.gov (19 November 2019).

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Table 2 Clinical experience with dosing of Selective Serotonin-Reuptake Inhibitors and tricyclic antidepressant as first-line treatment of BDD

Medication	Starting Dose*	Common maximum dose	Occasional maximum Dose**
SSRI			60
Citalopram (Celexa)	20	40	120
Escitalopram (Lexapro)	10	30	450
Fluoxetine (Prozac)	20	60	100
Fluvoxamine (Luvox)	50	200	400
Paroxetine (Paxil)	20	60	
Sertraline (Zoloft)	50	200	250 ***
Dibenzazepine-derivative tricyclic antidepressant			
Clomipramine (Anafranil)	25		150***

*After initiation, follow dose escalation scheme according to prescription guidelines

**According to the American Psychiatric Association's *Practice Guidelines for Obsessive-Compulsive Disorder*

***Blood sampling for plasma levels of clomipramine and metabolite, desmethylclomipramine should be monitored (measured 12 hours after dosing; aim at <500ng/mL to minimize risk of adverse events)

SSRI augmentation strategies

In quite a few of instances, an augmentation strategy may be indicated. Especially in cases where there have been suicidal ideations or depressive symptoms, or delusions, a combination of SSRI and other pharmacotherapies may be indicated. According to US recommendations, buspirone to be added to SSRIs may be well-tolerated and an appropriate choice for many patients with BDD. A few studies have indicated that adding buspirone to SSRIs may further improve the efficacy and reduce BDD-related symptoms.

There is as yet only one double-blind, randomized, placebo-controlled tired of augmenting SSRI treatment with an antipsychotic, in this case, pimozide in a mean dosage of 2 mg per day.[19] The including criteria was that the patient with BDD had not responded to SSRIs after 12 weeks of appropriate dosing of a monotherapy. The primary reason that pimozide was used was that it had been indicated for somatic delusions, including BDD. However, it had never before been tried appropriately. The other reason is that pimozide usually is effective as an augmenter to SSRIs in the treatment of OCD. Pimozide turned out to be more efficacious than placebo as an add-on to SSRI although the effect size was rather small.[19] Later case series and clinical experience indicate that adding on olanzapine or quetiapine or even aripiprazole to SSRIs may be helpful in instances where SSRI as monotherapy is providing an insufficient response.[20,21]

Several other pharmacotherapies have been suggested such as the previously described clomipramine, but also venlafaxine and levetiracetam.[12,22–24] In the acute phase and where symptoms are very severe, benzodiazepines may be tried in the short term. It is however important not to prescribe these medications, for the longer term, due to tolerance development and dependence.

Treatment of severe BDD with delusions

There are rather few studies that have explored the effects of treatment directed at delusions in BDD, but the studies done have consistently found that patients with delusional BDD benefit from SSRI as monotherapy, and that both delusional BDD patients and non-delusional BDD patients responded equally well to SSRIs.[11,25] Should this be insufficient, standard treatment for delusions would include the addition of antipsychotic medicines, and in view of the benefits of SSRIs, one may argue that anti-psychotic medicines acting on serotonergic receptors such as quetiapine and olanzapine would be first choice.

Hurdles to treatment

Several studies have revealed that BDD often is undertreated with pharmacotherapy. In a study by Phillips, only 20% of all included had received BDD-focused treatment despite a majority of the patients believed that BDD was their major problem.[6] Other studies have also indicated an inadequate dosing and inappropriate selection of medical treatments for BDD.

One reason for this may be that many patients wait for long times before they seek help with BDD related issues. One study investigating reasons for this found that patients were too ashamed (frequency 34%), believing that only plastic surgery or dermatologic treatment would help (32%), or had a feeling that a clinician would not understand their appearance concerns (21%), or fear of side effects of medication (13%), or simply not feeling ready for treatment of BDD (7%), or lacking access to specialized care (6%;).[27] This study by Buhlmann[27] was an Internet survey of 172 individuals with self-reported BDD, while an observational naturalistic study by Phillips et al.[26] including interviews with 151 individuals diagnosed with BDD found that the primary reason for not having been treated with pharmacotherapy was that they had never been offered this treatment in spite of a proper diagnosis of BDD. Under diagnosing of BDD is a major issue as well as not offering proper treatment when BDD is being diagnosed.

Combining SSRI with cognitive behavioral therapy

Usually, medication is combined with some form of supportive or better cognitive behavioral therapy for BDD. In milder cases of BDD, both CBT alone while also SSRI alone may be equally effective. However, in moderate to severe BDD, pharmacotherapy is essential both to enable psychotherapeutic interventions but also to alleviate the often devastating symptoms of BDD and the risk of suicidal ideation.

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Conclusion

1. The following treatment recommendations should be considered for BDD.
2. Establish a proper rapport with the patient.
3. Provide psycho education both in written and verbal form.
4. Explain the effects and side effects of various treatment options with pharmacotherapy.
5. First line of treatment is SSRIs.
6. A titration phase of at least 3 up to maybe 4 or even longer months is usually required since dosing for BDD is usually similar to treatment of OCD, more than double the standard anti-depressive doses using SSRIs.
7. A treatment trial of 3 to 4 months is recommended before switching to other treatment options. For severe BDD including delusions, a combination of SSRI with antipsychotics in a low dose, or buspirone may be tried.
8. A continued treatment, sometimes for several years, is common when treating BDD.

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Conflicts of interests

The authors have no conflicts of interest to declare.

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