Body dysmorphic disorder and facial aesthetic treatments in dental practice

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Key points

- Body dysmorphic disorder (BDD) is an under-diagnosed and under-treated psychiatric disorder and patients are likely to present to dental practices, especially those advertising themselves as 'aesthetic' or 'cosmetic'.
- The unwitting treatment of a patient with BDD to correct a perceived aesthetic flaw can have grave consequences for the patient and clinician
- BDD can quickly and predictably be screened for by using a validated questionnaire, such as the BDD Questionnaire and Dysmorphic Concern Questionnaire

Abstract

There is a relatively high prevalence of body dysmorphic disorder (BDD) and it is known that this patient group regularly and frequently visit dental practitioners, especially those who advertise themselves as cosmetic or aesthetic practices. The market for facial aesthetics is hugely increasing both generally and within dental practices making it ever more likely that dentists will encounter this patient group frequently. Moreover, due to the nature of their concerns individuals within this group are likely to have contact with dentists (or other medical professionals in the physical health field) prior to any contact with mental health professionals. The aim of this paper is to give an overview of the presentation of BDD, to discuss the changing climate of facial aesthetic treatments and to highlight a care pathway for general dentists. Identification of patients with potential BDD is far more predictable with the use of a validated questionnaire, and the BDD Questionnaire and Dysmorphic Concern Questionnaire are described. A flowchart approach for the management of patients requesting aesthetic improvements is presented as the ideal method for identifying, referring and managing the aesthetic treatment desires of potential BDD patients.

Introduction

It has featured in the news recently that the high street retailer Superdrug is to introduce tougher mental health checks, especially for body dysmorphic disorder (BDD), before performing cosmetic procedures in its 'Skin Renew Service'. This comes following criticism from Professor Stephen Powis, Medical Director of NHS England.[1]

Identification of patients with BDD presenting to a dental practice is essential prior to facial aesthetic treatment as this patient group often have unrealistic expectations and are therefore highly likely to be dissatisfied. The unwitting treatment of a patient with BDD could have devastating effects for both the patient and clinician. The prudent dental practitioner should be considering BDD in their patients who desire facial aesthetic treatments and what investigations should be performed prior to undertaking such procedures, to prevent inappropriate treatment of a patient with a recognised mental health disorder.

The aim of this paper is to provide a brief overview of BDD, an often overlooked diagnosis,[2] to show the available data on the huge volume of non-surgical facial aesthetic treatments being undertaken, which is continuing to increase, and to provide the general dental practitioner with a strategy to manage patients with this condition in primary care.

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Body dysmorphic disorder (BDD)

BDD, first described in 1980, is a relatively common and disabling mental health problem characterised by excessive and persistent preoccupation with perceived defects or flaws in one's appearance, which are unnoticeable to others.[3] In the most recent edition of *Diagnostic and statistical manual of mental disorders* BDD is included in the obsessive-compulsive and related disorders spectrum and has four criteria to support a diagnosis:

1. Preoccupation with perceived defects in physical appearance that are not observable or appear slight to others
2. Repetitive behaviours such as mirror checking and excessive grooming due to concerns with appearance
3. Preoccupation causing distress or impairment in social functioning
4. A preoccupation with appearance that isn't explained by concerns with weight in an individual with symptoms of an eating disorder.[4]

The cause of BDD is complex and multifactorial consisting of both genetic and a range of environmental factors. Twin studies indicate that genetic factors account for approximately 44% of the variance in BDD-like symptoms.[5] Higher than average levels of childhood maltreatment (up to 79%) are reported by patients with BDD.[6] Bullying has also been shown to be associated with BDD

and several studies have shown associations between self-reported appearance-related teasing and BDD symptoms, particularly when the teasing is by members of the opposite sex[7,8] A rare longitudinal study of environmental risk factors in BDD showed peer victimisation in school students was prospectively associated with the development of BDD symptoms 12 months later. This suggests that experiences of trauma and bullying specifically may play a causal role.[7]

Research indicates a high comorbidity between BDD and other mental health diagnoses including mood disorders and other anxiety-related disorders (eg, obsessive compulsive disorder, social phobia) and eating disorders.[9] Some individuals may also display little insight into others' view of their perceived flaws and hold beliefs about their perceived flaws to such a degree as to be seen as delusional, with the literature highlighting some potential overlap between these beliefs and those more indicative of a psychotic disorder.[10] Comprehensive mental health assessment is required to develop a clear picture of the nature of the concerns, a formulation of their development and maintenance and identification of appropriate treatment.

The reported adult point prevalence rates range from 0.7% to 5.8% depending on the population and criteria used.[11] In some settings rates are significantly higher with reported rates of 20–21% in rhinoplasty surgery, 13% in general cosmetic surgery, 11% in acne dermatology clinics, 10–11% in orthognathic surgery, 9–14% in cosmetic dermatology, 7–11% in general dermatology and 5% in orthodontics and cosmetic dentistry settings.[11]

Appearance concerns are centred on a range of areas many of which are within the remit of a dentist as part of a facial aesthetics treatment and in order of prevalence are: skin (70.9%), nose (49.4%), teeth (45.9%), general body build (43.0%), hair (41.9%), stomach (31.4%), eyes (29.7%), mouth (29.7%), breasts (28.5%), legs (28.5%), overall head (25.6%), cheeks (23.3%), eye brows (22.1%), waist (21.5%), genitals (19.8%), hips (17.4%), neck (14.5%) and ears (12.8%).[12]

Patients with BDD often possess unrealistic expectations about the aesthetic outcome of procedures and how the procedure may be a solution to problems in other areas of their life. For these reasons, they frequently experience subjective dissatisfaction that doesn't correlate with the objective outcome of the procedure[13,14]

Two similar studies have looked at patients with BDD seeking non-psychiatric treatment for their perceived defect. Crerand *et al.*[15] and Phillips *et al.*[16] interviewed 200 and 250 adult patients with confirmed diagnoses of BDD. 71.0–76.4% of patients had sought aesthetic treatment of which 86.4–90.0% of those received it. Each patient who wanted treatment tried to attain an average of 3.7–4.1 procedures. 79.4–86.4% of the desired procedures were received, averaging 2.9–3.3 procedures per patient. 7.6–12% of BDD patients had tried to attain treatment with a dentist and 73.7–79% of them had received treatment, seeing an average of two (±3.5) dentists for 12.5 (±20.5) appointments. Of 14 patients who enquired about injectable fillers, 13 had received them, and one patient sought and received Botox injections.[15,16]

In the dental setting an Australian practice-based study[17] found 4% of their 213 participants scored above the threshold suggestive of a diagnosis of BDD on a Dysmorphic Concern Questionnaire (DCQ) which was added to the medical history forms routinely completed. It was found that practices advertising as implant, cosmetic and prosthodontic specialists had higher proportions of patients scoring above this threshold than general dental practices, 16.7%, 13.8%, 13.7% and 6.6%, respectively. A Dutch cross-sectional study[18] similarly found that patients attending practices that advertised themselves as cosmetic dental clinics were more likely to have had previous cosmetic dental procedures (47.9%) compared with a reference sample (24.8%) and a significantly higher proportion of the cosmetic dental patients (9.5%) met two key screening criteria for BDD compared with the reference group (5.5%). Finally, a UK-based dental hospital orthodontic department reported 7.5% of their patient cohort scored above the threshold indicative of diagnosis of BDD when using a validated questionnaire compared to 2.86% of the general public.[19]

Outcomes for BDD patients following aesthetic treatments are mixed. One study reported only 3.6% improved overall BDD symptoms. Even though some patients reported that the perceived defect looked better they reported they did not worry less about it or worried that it would look worse again. Patients were generally still concerned about other body areas or developed new appearance concerns.[15] Another study corroborates this result with only 7.3% improvement in BDD symptoms following a procedure.[16] Some authors however, support the use of cosmetic treatment in BDD patients. Felix *et al.*[20] reported one-year post-operative data of 81% of patients with mild-to-moderate BDD experiencing full remission and 90% of patients being satisfied with their surgical outcomes.

BDD is an underdiagnosed and underreported psychiatric problem that will be seen with increasing frequency by aesthetic clinicians in the future.[2]

The climate of facial aesthetics in dentistry

In the context of BDD in dentistry, the focus of the discussion must relate to the current regulations of, and training requirements for, non-surgical procedures. Without understanding or knowledge of relative contraindications or underlying psychological issues, there comes a high risk of patient/public harm and the unwitting clinician will put themselves potentially at risk of litigation or professional sanctions.

Non-surgical facial aesthetics treatments (for example, botulinum toxin injection and dermal fillers) have become commonplace within the dental community in recent years. Increased publicity on the high street and social media are likely to have played a role in the numbers seeking these treatments and the anecdotal corresponding increase in practitioners capitalising on the expanding market. The availability of data on the numbers of dental practitioners providing facial aesthetic treatments is elusive and data on non-surgical cosmetic treatments as a whole is not readily available in the public domain, being only infrequently reported by market analysts who have access to confidential commercial data. The market value of cosmetic procedures was published by Keynote Ltd[21] and estimated the cosmetics market value at £725 million in 2014 with it forecast to grow to £913 million in 2019. This growth is reflected globally; illustrated in the pharmaceutical company Allergan's annual reports which showed net international sales increasing from $1.97 billion in 2015 to $3.17 billion in 2017 for Botox. Figures on the volume of treatment are scarce; market research estimated non-surgical treatment numbers to account for 85.3% of all cosmetic procedures.[22]

The paucity of data mirrors the limited regulation that governs the UK cosmetic market. Currently there are minimal legal limitations on who can provide non-surgical procedures. Unlike the 1984 Dentists Act,

which defines procedures within the mouth as dentistry and only to be practised by dentists, the Medicines Act does not define what constitutes the practice of medicine.[23] As it stands, anyone (healthcare professional or not) can inject or provide non-surgical treatments without training in almost any environment, not necessarily a healthcare setting[21,22] The only legal limitation is that botulinum toxin is a prescription-only medication that must be prescribed by a healthcare professional qualified as an independent prescriber (eg, doctor, dentist, nurse with additional qualifications, etc). The prescriber, however, can delegate the physical task of injecting having assessed the patient.[21] Botulinum toxin (Vistabel) is only licensed for temporary improvement on vertical lines between the eyebrows, lateral canthal lines or forehead wrinkles where it has an important psychological impact,[24] therefore many cosmetic procedures are using the drug off licence, meaning responsibility for any complications lies with the prescriber.

The only real regulation over the industry comes in the form of the regulators of the individual professional bodies who can place sanctions over their respective registrants – the population of potential providers most likely to appreciate the risks and complications. Unlike non-dentists providing bleaching (which is classed as dentistry) who can be prosecuted under law by Trading Standards,[25] those practising non-surgical procedures do not fall under the jurisdiction of the General Medical Council or General Dental Council (GDC). In addition to the lack of legalisation, there is also a lack of regulation of the premises where cosmetic procedures are conducted outside of the medical sphere. In 2013 in response to the PIP implant scandal the Department of Health commissioned the Keogh report, a formal review on non-surgical cosmetic interventions.[22] This report highlighted major failings in the current regulations and protection of the public. Key recommendations included:

- Changes to legislation over dermal fillers making them prescription only medical devices
- Construction of a joint speciality committee to set up standards and certify trained clinicians
- Extending Health Education England's (HEE) mandate to develop appropriate accredited qualifications for providers
- Changes to the way non-surgical procedures can be advertised.

HEE has produced a framework for training and specified what qualifications and supervision should be required for operators to provide specific treatments.[26] The framework effectively prevents those without training or prescribing rights (ie non-clinicians) from injecting patients with fillers or botulinum toxin or working independently. Also in response to the Keogh report the Joint Council for Cosmetic Practitioners (JCCP) has been founded with support from all the major professional regulators.[21] A register of practitioners was constructed and fully opened in February 2018. However, is it still voluntary and only small numbers of anticipated providers have so far signed up.[27]

At present, there is still no change in legislation, which is a major rate-limiting factor in changing the regulation of non-surgical procedures and mandating the proposed training pathway. This is one of the key criticisms highlighted in a recent review of the implementations of the Keogh report, although an EU legislative change to make dermal fillers prescription only medical devices is planned in May 2020 (the influence of Brexit on the UK's regulation is not yet known).[21]

Until legislative changes occur dentists and dental care professionals will continue to be regulated by the GDC and should work within their competencies and professional codes of conduct. However, the GDC has stated that non-surgical procedures are out with the practice of dentistry and therefore registrants may be at higher risk of having their competency questioned in any case referred to the GDC.[28] There is also a need to check indemnity policies as some providers may not cover practitioners for non-surgical procedures due to the GDC's position statement. Further information is provided by the defence organisations.[28] Ultimately, ensuring adequate training and understanding the contraindications or challenges regarding underlying medical or psychological conditions is paramount to avoiding adverse outcomes both clinically and professionally.

Management of BDD in dental practice

Identification of patients with BDD in dental practice prior to beginning any form of facial aesthetic treatment is essential. Patients with BDD often have unrealistic expectations regarding cosmetic procedures and are thus dissatisfied regardless of the actual outcome[13,14] which can have devastating effects on the patient and clinician. Whether BDD reduces a patient's capacity to make an informed decision, and therefore affects the validity of any consent given to cosmetic dental treatment, is debatable, but is likely to be a very individual consideration for each patient. There have been recent legal cases in which the patient's ability to give consent has been brought into question due to a diagnosis of BDD.[14]

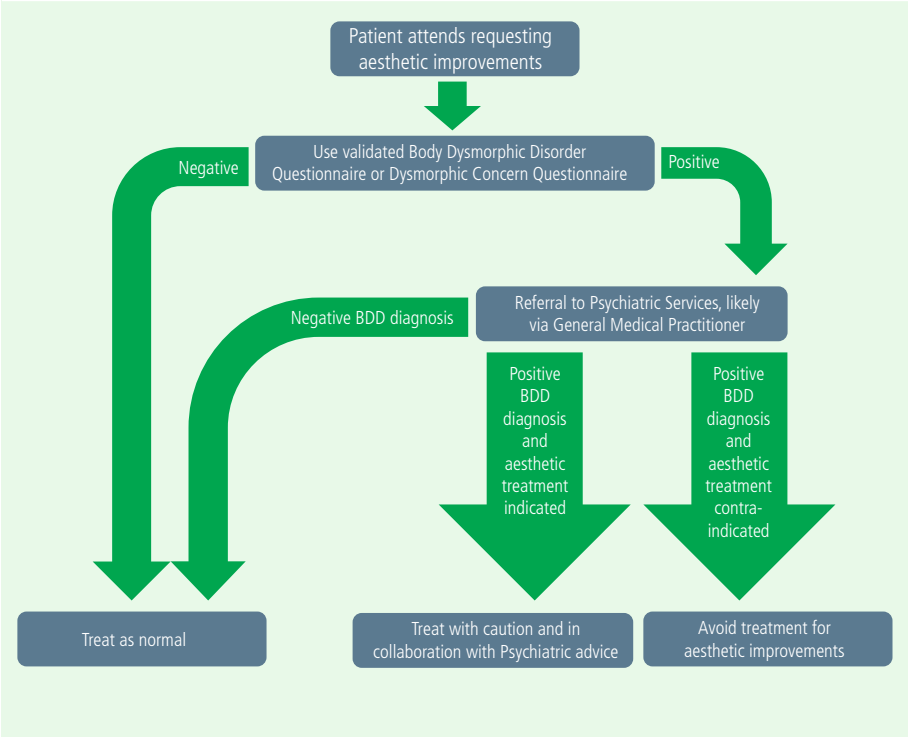
There are isolated reports of physical threats towards surgeons from patients with BDD and 10–40% of surgeons reported to have received threats of legal action from BDD sufferers[14,29]. It is important to consider these risks to the clinician; however, it is also important to emphasise that, based on the evidence, physical violence towards clinicians from patients suffering with BDD are exceptionally rare (and often complicated by other psychiatric conditions and confounding factors such as anabolic steroid use[30]); BDD patients are at far greater risk of harming themselves than others. A recent meta-analysis reported rates of suicidal thoughts ranging from 17–77% making these thoughts almost four times more likely in BDD compared to non-BDD sufferers, whilst rates of suicide attempts range from 3–63% with sufferers 2.6 times more likely to have attempted suicide than controls.[31]

There is currently controversy as to whether BDD is a contraindication to surgical and non-surgical cosmetic procedures.[32,33] Some authors[34] consider these patients totally unsuitable for cosmetic procedures but others feel those with mild-to-moderate BDD, no significant functional impairment, localised aesthetic concerns and realistic expectations may benefit from aesthetic procedures.[33,35]

Bouman *et al.*[32] conducted an online survey of 173 members of Dutch professional associations for aesthetic plastic surgery, dermatology and cosmetic medicine and reported that approximately two thirds of dermatologic surgeons considered BDD a contraindication for cosmetic procedures. These physicians argued that BDD is essentially an underlying unhappiness with the self, thus cosmetic procedures will yield little to no improvement.[32]

Identification of BDD is a difficult task, a survey of the members of the American Society for Aesthetic Plastic Surgery showed that 84% of plastic surgeons had unknowingly operated on patients with BDD. However, clinicians are known to be inferior at screening for BDD compared with standardised surveys.[36] The

Fig. 1 Flowchart method for the management of patients requesting aesthetic improvements



gold standard for a diagnosis of BDD is the 24-question structured clinical interview which may take 15 minutes to several hours to complete and this makes it highly impractical in a busy clinical environment. It was also developed in the psychiatric setting and hasn't been validated in the cosmetic surgery setting.[36] Only two screening tools exist that have been validated in the cosmetic surgery setting, the BDD Questionnaire (BDDQ) and Dysmorphic Concern Questionnaire (DCQ)[37,38]

The BDDQ (Appendix 1, see online supplementary material) is a validated, self-administered, 12-minute duration screening instrument. The questionnaire was developed in the psychiatric setting but has been validated in a facial plastic surgery patient population. In the surgical setting the BDDQ is reported to have a sensitivity of 100% and specificity of 89%.[36,39,40]

The DCQ (Appendix 2, see online supplementary material) is a relatively complex psychiatric screening measure and it does not assess the severity or range of symptoms that are specific to BDD. It has seven questions, each with a variable number of points with a total score of 11 used as a cut-off point for suspicion of a BDD diagnosis. The DCQ is reported to have a sensitivity of 72% and a specificity of 90.7%.[16,41,42]

The National Institute for Health and Clinical Excellence has proposed five questions that may help the clinician recognise BDD:[43]

1. Do you worry a lot about the way you look and wish you could think about it less?
2. What specific concerns do you have about your appearance?
3. On a typical day, how many hours per day is your appearance on your mind? (more than 1 hour per day is considered excessive)
4. What effect does it have on your life?
5. Does it make it hard to do your work or be with friends?

The treatment of patients who are suspected of having BDD should be delayed until they have had a full mental health assessment and, if needed, treatment. Treatment for BDD usually consists of cognitive behavioural therapy and/or pharmacological therapy,[44] with the idea to understand the factors that have led to the patient's current difficulties. This approach aims to allow the patient and mental health professional to explore whether a cosmetic procedure would be effective. Following this approach would ideally help guide the dental surgeon to appropriate treatment, if any. This collaboration is currently used prior to bariatric surgery where psychological assessments are mandatory and in cases where it is deemed that disordered eating is symptomatic of a psychological issue, bariatric surgery may not be recommended on the grounds that it would not treat the underlying problem.[45,46]

A collaborative approach, such as that used in bariatric surgery, would require close communication between mental health and dental teams, something that can be difficult with both services financially stretched, but should be worked towards as a gold standard. The general dental practitioner should take confidence from the knowledge that awareness of BDD is increasing amongst patients and professionals. Many patients are likely to respond positively to a clinician's concerns for their holistic health and general medical practitioners are likely to take seriously a dentist's concerns, providing they have used a validated screening method. A sensitive conversation between the dentist and patient, underpinned by the use of appropriate screening measures and helpful open questions as noted, may also highlight broader concerns about patient mental health – wider than BDD – which can then be flagged accordingly to the patient's general medical practitioner.

Upon a positive diagnosis of BDD being made by a mental health team the prudent dentist would work closely with the mental health team to provide a holistic plan for the patient's operative and psychological needs, which would be heavily influenced by the patient's realistic/unrealistic expectations of the treatment outcome.

Conclusion

There is a relatively high prevalence of BDD and it is known that this patient group regularly and frequently visit dentists, especially those who advertise themselves as cosmetic or aesthetic practices. It is also known that the possible sequalae of treating the perceived aesthetic flaw of someone with BDD could range from trivial to exceptionally severe.

Identification of patients with potential BDD in a clinical setting is far more predictable with the use of a validated questionnaire. The BDD Questionnaire (BDDQ) (Appendix 1, see online supplementary material) and Dysmorphic Concern Questionnaire (DCQ) (Appendix 2, see online supplementary material) are both quick and reliable measures for identifying those patients who may have BDD and alert the clinician as to the inappropriate nature of treating these patients without the appropriate mental health assessment, definitive diagnosis and input into treatment planning decisions. A flowchart (Fig. 1) method for the management of patients requesting aesthetic improvements is ideal for identifying, referring and managing the aesthetic treatment desires of such patients.

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