Adolescent muscle dysmorphia and family-based treatment: A case report

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Article

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Abstract

A growing body of evidence suggests that the prevalence of male body dissatisfaction and muscle dysmorphia is rising. To date, however, there is no published evidence on the efficacy of treatments for muscle dysmorphia. We present the case of a 15-year-old boy who met full diagnostic criteria for muscle dysmorphia, whose symptoms were treated into remission with eating disorder-focused, family-based treatment. The age of this patient fell within the time period in which symptoms of muscle dysmorphia are most likely to develop and this case represents the first published case report of family-based treatment for muscle dysmorphia in this age group. Thus, this case report has important implications for clinicians considering treatment options for presentations of muscle dysmorphia when first presenting in adolescence. Implications for the development of treatment guidelines for muscle dysmorphia and for the diagnostic debate surrounding muscle dysmorphia are also discussed.

Keywords

Muscle dysmorphia, family-based treatment, eating disorder, muscularity, adolescence

Introduction

Current research continues to document an increasing level of body dissatisfaction among males, which is specifically oriented around muscularity, which in some instances may result in significant disturbances to quality of life and psychological functioning, in addition to a pathological desire for the acquisition of lean muscularity (McCreary & Sasse, 2000). Indeed, muscle dysmorphia is a relatively recently identified psychiatric condition that represents the pathological pursuit of muscularity and is inclusive of disordered eating and exercise-related practices that are oriented towards attaining greater muscularity (Murray et al., 2012a).

Muscle dysmorphia is characterised by an intensely distressing preoccupation that one is of insufficient muscularity (despite, in many cases, well-developed muscularity) and compensatory

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practices include fastidious exercise and dietary practices, which may come to take precedence over other important areas of life (Pope, Gruber, Choi, Olivardia, & Phillips, 1997). Due to the centrality of eating-related practices, similarities in shape and weight concerns (Murray et al., 2012a) and similar epidemiological features (Murray, Rieger, Touyz, & De la Garza Garcia, 2010), emerging research has advocated for the reconceptualisation of muscle dysmorphia as an eating disorder as opposed to a form of body dysmorphic disorder (in which eating pathology is not a diagnostic feature). In this sense, muscle dysmorphia and anorexia nervosa (AN) are thought to be conceptually similar and centrally feature both pathological eating and exercise practices, which are oriented towards diametrically opposed dimensional extremes of a spectrum of body image psychopathology towards muscularity and thinness respectively (Murray & Touyz, 2013). Furthering claims that muscle dysmorphia is conceptually similar to AN, a recent study found that a transdiagnostic model of the maintenance of eating disorders may be applied to account for the maintenance of muscle dysmorphia symptomatology (Murray et al., 2012b).

Crucially, both muscle dysmorphia and AN most commonly develop in the context of adolescence (Lock & Le Grange, 2013; Olivardia, 2001) and while empirical literature indicates that early intervention often equates to the most efficacious treatment outcomes, the relatively recent identification of muscle dysmorphia coupled with the relative paucity of those with the syndrome presenting for treatment has resulted in the absence of evidence-based guidelines for treatment. In stark contrast, a rich clinical history in the field of AN has allowed for the development of evidence-based treatment, which is directly oriented towards the treatment of adolescents; the period in which symptoms are most likely to develop (Favaro, Caregaro, Tenconie, Bosello, & Santonastaso, 2009).

The most widely advocated evidence-based treatment for adolescent AN is currently thought to be family-based treatment (FBT) (Le Grange, Lock, Loeb, & Nicholls, 2010; Lock & Le Grange, 2013), which centrally utilises parental resources to bring about nutritional rehabilitation in their child, ensuring compete cessation of all ecological and maintaining factors of AN, while siblings are encouraged to adopt a supportive stance (Lock & Le Grange, 2013). More specifically, FBT typically aims to encourage full parental authority around all food-based decisions until: (a) weight is restored; (b) all eating disordered behaviours are abated. Subsequent to this, a gradual transition towards the adolescent's management of eating and food-based decisions occurs, while ensuring no weight is lost and no disordered eating resumes. Further to this transition, the family typically aim to help the young person progress through general adolescent concerns, which may have been complicated by the presence of AN, such as individuation, separation anxiety, anxiety and depression.

Although an increasing array of empirical evidence supports FBT as a first-line treatment for adolescent AN (Couturier, Isserlin, & Lock, 2010; Couturier, Kimber, & Szatmari, 2013), there are no evidence-based treatment guidelines for muscle dysmorphia. This problem is compounded by the lack of clarity surrounding the diagnostic understanding of muscle dysmorphia, making it difficult to identify which treatment modalities may be borrowed from in developing effective treatment interventions. Growing evidence that muscle dysmorphia may best be conceptualised as an eating disorder (Murray et al., 2010, 2012a) suggests that eating disorder interventions such as FBT may be appropriate for cases of muscle dysmorphia. Indeed, recent evidence that the transdiagnostic model of eating disorders accounts for a significant proportion of the variance in muscle dysmorphia symptomatology (Murray, Rieger, Karlov, & Touyz, 2012b) suggests that treatments designed to target eating disorder symptoms across diagnoses in adolescents (i.e. FBT) may demonstrate efficacy in the treatment of adolescent presentations of muscle dysmorphia.

However, no empirical evidence to date has documented the application of treatments known to be efficacious in the treatment of eating disorders in the context of muscle dysmorphia. The current paper presents the case of a 15-year-old boy who met full criteria for muscle dysmorphia (Pope

et al., 1997), whose symptoms were successfully treated into remission with an adapted form of FBT. This study was not supported by funding and informed consent for publication was provided by the parents, and as such, all family member's names and demographic details have been modified.

Case report

Johnny was a 15-year-old boy of European descent who resided at an all-male boarding school, visiting his family on most weekends and school holidays. Johnny initially presented for treatment alongside his mother, due to the reports she had received from Johnny's school about 'an increasing obsession with food and exercise'.

Assessment

Upon assessment, Johnny's mother reported how she had become concerned around school reports of his eating habits, which increasingly included 'cutting all particles of fat out of school-based meals', selecting (from a school menu) foods that he believed to be higher in protein and lower in calories, avoiding foods not deemed sufficiently high in protein and attempting to increase the frequency in which he ate (with the goal of increasing musculature). For instance, Johnny typically became anxious if he could not eat every 3 hours, worrying that he 'might not be feeding his muscles enough', and frequently excused himself from class to ensure protein intake.

Furthermore, Johnny also followed an intense exercise regimen, which involved lifting weights for 60–75 minutes every night, continuing to train during periods in which he was physically injured. His aim in undertaking this training regimen was to build muscularity and simultaneously shed body fat, which he stated obscured the visible appearance of muscularity. In addition, Johnny described a regimen of cardiovascular exercise in which he exercised for approximately 45 minutes each morning before school. He further undertook rugby training twice weekly and played in one game each week, although he did note that he now approached rugby training and games as a means of enhancing his physique, rather than focusing on his performance.

Alongside these behavioural features, Johnny reported intense muscular dissatisfaction, stating that his 'muscles weren't big or ripped enough', describing significant body shame and distress around potential exposure of his body. For instance, Johnny reported that he was not able to go to the beach with friends and reported intense discomfort when changing into his rugby kit before games. Johnny further reported engaging in compensatory behaviours to modify the visibility of muscularity, for instance, by applying dark make-up to the ridges of his abdominal muscles 'to make them look deeper and stand out more'. This caused Johnny significant embarrassment and precluded him from taking part in activities such as swimming at the beach with friends, although he stated that the discomfort of being 'not ripped enough' far outweighed his embarrassment around not being able to swim, concluding that the make-up was therefore worth applying.

In discussing the onset of his concerns around his muscularity, Johnny described experiences with bullying at school, in which he described himself as being at 'the bottom of the totem pole', which often resulted in him being picked on and 'feeling weak'. Furthermore, these experiences occurred in the context of an all-male environment at boarding school, characterised by differing rates of physical and muscular development among his peers, which often left Johnny comparing himself negatively with 'the more manly boys at school'. This is consistent with a recent body of evidence suggesting that muscle dysmorphia frequently develops in the context of feeling threatened in one's masculinity (Mills & D'Alfonso, 2007; Murray & Touyz, 2013), which may be compensated for by the acquisition of physical musculature; an overt sign of masculinity.

In formally indexing the symptom severity of Johnny's concerns, Johnny completed the Muscle Dysmorphia Disorder Inventory (MDDI; Hildebrandt, Langenbucher, & Schlundt, 2004), which measures three core components of muscle dysmorphia symptomatology: drive for size; appearance intolerance; functional impairment (Hildebrandt et al., 2004). At assessment, Johnny's full-scale MDDI score was 59, comprising a drive for size score of 22, an appearance intolerance score of 18 and a functional impairment score of 19, indicating advanced muscle dysmorphia symptomatology comparable to clinical samples of men with muscle dysmorphia (Murray et al., 2012a).

Treatment

The treatment was conducted over a period of 10 sessions, spanning a total of 7 months. The treatment programme was largely consistent with the core tenets of the family-based approach to the treatment of AN (Lock & Le Grange, 2013), in that Johnny's parents were encouraged to directly intervene in symptom maintenance. For instance, parental intervention was required to ensure that Johnny did not scrutinise and specifically select foods that he deemed high in protein and low in calories. Johnny's parents deemed it necessary to deconstruct his fear of some foods not sufficiently high in protein and low in calories by temporarily exerting full parental control over his school- and home-based meals to ensure that no meals or food types were avoided and that he was exposed to feared foods. To this end, Johnny's parents were present to ensure rigorous and non-critical meal supervision at both home- and school-based meals, ensuring that no disordered eating behaviour (including attempting to cut the fat out of meats and placing protein powder on his meals instead of salt) was allowed to prevail.

A similar level of parental authority was required in limiting exercise practices, in that Johnny was temporarily not allowed to exercise until his parents were confident that his fear of some foods had abated and that he was not driven towards compensation (via exercise) after eating these foods. Close correspondence was warranted between Johnny's parents and the school, who agreed to carry out his parent's behavioural strategies at school, including supervised time after meals and ensuring that he was temporarily not allowed to participate in school sports or use the gym facilities. This was initially met with strong resistance and therapeutic efforts were made to align Johnny with the support of his siblings and favoured housemates, with his parents noting a gradual reduction in distress over time.

Upon Johnny's parents becoming more confident that his eating and exercise-related practices no longer displayed characteristics of disordered eating, a gradual transition took place, in which Johnny was gradually granted more ownership of his ongoing recovery. During this period, Johnny had not displayed resistance around any of his parent's food choices for some time and had stopped asking questions about exercise, stating that he 'just wasn't that bothered any more'. This transition first focused on Johnny adopting more control over his food choices, with his parents observing rather than controlling. Subsequent to this, Johnny was gradually reintroduced to an exercise regimen, although he only decided to return to rugby-based exercise and decided against lifting weights individually.

In discussing his wider adolescent and developmental challenges (as is common in phase 3 of eating disorder-focused FBT), it emerged that Johnny had for some time 'really missed his family' following a family holiday. In describing the transition back to boarding school, Johnny stated that he realised how isolated he was from his family, stating in particular that he missed his father. In response to this discussion (and similar sentiments from Johnny's elder sister), Johnny's parents decided to sell their family home and move the family closer to where the children went to school, which meant that Johnny could live at home and would no longer board at school. During this

period, Johnny maintained control of his eating and exercise behaviour without the re-emergence of any symptoms and reported an increased sense of closeness within his family.

At discharge, Johnny's parents reported that they had not detected any disordered eating for several months and further noted that Johnny's mood had improved significantly upon living in the family home. At discharge, Johnny's score on the MDDI was 10 (drive for size = 4, appearance intolerance = 3, functional impairment = 3), indicating a significant reduction in symptomatology by the end of treatment.

Discussion

This case report documents the treatment of an early-onset adolescent presentation of muscle dysmorphia and the first known application of FBT to muscle dysmorphia symptomatology. While preliminary, the nature of symptom resolution in this case suggests that FBT may hold some efficacy in the treatment of adolescent muscle dysmorphia, in line with ongoing research demonstrating efficacy in the treatment of adolescent AN.

This case therefore adds to the sparse evidence base pertaining to the treatment of muscle dysmorphia and is the first known case that details treatment during adolescence; the period in which symptoms are most likely to develop (Olivardia, 2001). The importance of addressing the onset of symptomatology in this age group is underscored by recent findings, which illustrate that an increasing number of males in their childhood and adolescence experience disordered eating (Madden, Morris, Zurynski, Kohn, & Elliot, 2009) and that such males are increasingly concerned with their level of muscularity, rather than their body fat per se (Darcy et al., 2012). This particular case suggests that FBT may be effective in bringing about a remission of the symptoms of muscle dysmorphia in adolescents, although it is important to note that treatment in this case required less sessions than is typically employed in the FBT of AN. It is likely that the starvation-induced cognitive impairments present in the context of AN warrant a more intensive and lengthier form of treatment and may preclude underweight adolescents in the acute stages of treatment from making the cognitive progress seen once weight restored. Furthermore, a lengthier treatment course in FBT of AN may perhaps be related to the time taken to restore the adolescent's body weight, which is not needed in FBT of muscle dysmorphia given that those afflicted are typically not underweight.

As such, this case featured several slight adaptations to manualised FBT for AN, which are important to note. For instance, FBT posits that raised parental anxiety is necessary in mobilising parents into ensuring swift and comprehensive intervention into their child's symptoms profile (Lock & Le Grange, 2013). This 'double-bind' of raising anxiety (around the potential medical consequences of AN), coupled with empowering parents into a role of responsibility, often leaves parents feeling compelled to act swiftly to intervene. However, in the absence of empirical evidence around immediate medical crises in the context of muscle dysmorphia, parental anxiety was raised through psychoeducation as to the comorbidities of muscle dysmorphia, including elevated rates of anabolic steroid use and suicidality (Pope et al., 2005). Further adaptations concerned the role of weighing in each session and since the patient's weight was within normal parameters, weight was not plotted in each session and parents instead chose to focus their interventions based on their behavioural observations rather than the weight of their child. This may be an important adaptation for FBT in the context of muscle dysmorphia, given that those with muscle dysmorphia typically report greater distress around body composition and shape rather than body weight per se (Murray, Rieger, & Touyz, 2011).

While the agnostic stance to aetiology adopted in FBT has shifted the clinical focus away from the precise mechanism of change throughout FBT, recent research has contested that cognitive symptoms remit through a process of parent-led exposure and response prevention (Hildebrandt

et al., 2012). The ego-syntonic and subjectively experienced positive effect of symptoms in muscle dysmorphia (in bringing one closer to one's weight and muscularity-related goals) may also necessitate parental involvement in ensuring exposure and response prevention given the commonly reported admiration of symptoms (Griffiths, Murray, Mond, & Touyz, in review) and fear of symptom remission (Fussell, 1991), although the present case study suggests that similar mechanisms may be equally effective in muscle dysmorphia. Similarly, this case suggests that the importance of addressing the adolescent's general concerns (typically undertaken in phase 3 of FBT) should be retained in adaptations of the FBT of muscle dysmorphia. In this instance, a continued focus on wider developmental concerns beyond symptom remission helped the adolescent communicate concerns around his schooling situation, resulting in important changes, which created a platform for the development of more secure familial relationships.

However, while novel, this case only represents one step in the development of evidence-based treatment approaches for muscle dysmorphia and, until replicated in larger samples, may hold limited significance. It is therefore recommended that future research endeavours continue to explore ways in which family-based interventions may be utilised in the treatment of adolescent muscle dysmorphia.

Declaration of conflicting interest

None declared.

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