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Cotard's Syndrome: A Conceptual Analysis

Author Name[1]

[1] Department of Psychology, SUNY New Paltz, USA

Corresponding Author:
Name, Contact Address
Email: wardwelo1@newpaltz.edu

Abstract

Cotard's Syndrome (CS) is a delusional disorder in which the individual will experience beliefs that they are dead or rejecting parts of their body. This condition has been correlated with other delusions of negation, such as those involving God, guilt, and soul. CS is often accompanied by self-harming behaviors and suicidal tendencies. The condition was first discovered by Jules Cotard and since then the literature surrounding the topic has only progressed slightly. It is currently understood that CS is a resulting symptom of underlying psychiatric disorders such as depression or psychotic disorders. Through an analysis of historical theory and several case studies, different similarities will be drawn between the classical foundations as well as the modern studies. In analyzing the limited case studies that exist regarding CS, it becomes clear that the currently understood mechanics of the condition may be too broad and that the reality may be far vaster than what can currently be recognized with the existing body of work. It is thus argued that a standalone diagnosis for CS could not only be logical, but also provide an empirical interest for further development of treatment plans and etiological understanding.

Keywords: Cotard's Syndrome, delusion, depression, dead, psychotic, psychosis

Cotard's Syndrome (CS) is a disorder in which an individual experiences delusions regarding their own mortality. Those with this disorder will frequently feel as if they are immortal, they are dead, parts of their body are not their own or decaying, and strong general nihilism (Debruyne & Audenaert, 2012). Although the disorder is rare, it can prove to cause strong harmful symptoms such as increased suicidal ideation and self-harming tendencies (Tomasetti et al., 2020). The term was coined after Jules Cotard whose original writings on his observations on the case of a 43 year old woman led him to describe an entirely new syndrome which he had characterized with suicidal tendencies, melancholy, anxiety, a sense of immortality, an inability to feel pain, and feelings of either not existing or that their body parts or soul are dead (Tomasetti et al., 2020). Cotard noted that these symptoms would frequently result in the individual feeling as if they no longer have to eat (Debruyne et al., 2009). Cotard proceeded to see multiple other individuals in which he believed their symptoms and experiences aligned with his proposed syndrome. It was most often noted that these individuals showed a depressed mood, and delusional nihilism pertaining to either the individual's body or existence (Debruyne et al., 2009).

The research that has continued on CS following Cotard's death has shown unique cases, prominent alignment with other psychiatric disorders, and cross-cultural incidence of the common symptoms (Dieguez, 2018). Case studies have been conducted that show varying ways in which CS can present itself. While Cotard's original analysis of individuals with CS were most commonly noted to have body nihilism, this particular symptom can present within an array of different bodily functions and experiences. For example, one recent case study followed a woman who had refused the existence of her pregnancy even though she was in the later and obvious stages of pregnancy, which aligns with the CS symptom of body nihilism (Walloch et al., 2006). Another such case study showed a woman that delusionally believed that she was paralyzed regardless of evidence to the contrary (Reif & Pfuhlmann, 2003). With time, the clinical boundaries of CS have been expanded further, particularly through the use of case studies; however, the psychiatric and neurological causes of CS are still debated (Debruyne et al., 2011).

While Cotard provided a strong foundation from which research had continued from following his death, there is still a lack of understanding regarding how the syndrome may develop and thus the best way it may be treated. Currently, CS is not recognized in the DSM and is not a solely diagnosable disorder. It is commonly seen that the symptoms of CS can be easily categorized into depressive, mood, and psychotic disorders (Debruyne et al., 2009). Not only can these symptoms be congruent with the diagnostic criteria of the DSM-5-TR, but in practice CS will often be seen as a result of other underlying mental disorders. While Cotard himself and following research have suggested that this syndrome could be recognized as its own unique diagnosis, the current popular understanding of CS is that it is a manifestation of other psychiatric disorders (Tomasetti et al., 2020). It is possible that shifting the popular narrative regarding this syndrome toward identifying a unique diagnosis could have significant implications toward the improvement of the knowledge base and treatment.

Current Science

Considering the lack of inclusion of CS in the DSM, current research is divisive regarding whether it should be included in the future. While the symptoms of CS are be congruent with other psychotic, mood, or depressive disorders, it can be argued that the specificity of the delusions may benefit from a unique diagnostic inclusion. A large number of case studies currently inform this body of work. Considering that the disorder is so rare, large-scale studies or RCTs prove difficult to conduct, leading to a lack of strong understanding about the neurology, symptomatology, and treatments. Many of the current case studies aim to provide information on the wide array of cases that CS can cover, such as the previously mentioned pregnancy and paralysis cases (Walloch et al., 2006) (Reif & Pfuhlmann, 2003), and while the power of many of these studies to inform future research may be limited, it provides a framework from which to construct the diagnostic argument.

The current diagnostic practice of viewing CS as a result of other disorders results in many different treatments being used to treat the symptoms. Commonly, the underlying disease or disorder will be treated in combination with traditional treatments for mood disorders and depression. For example, one such case documents a patient with Neurofibromatosis 1 (NF1) that had displayed symptoms of CS (Nemlekar et al., 2021).. NF1 is a genetic disorder that causes spots, freckling, and a predisposition to developing benign tumors. NF1 is also highly correlated with many other psychiatric disorders, and in this case the individual had been admitted after a self-harm attempt (Nemlekar et al., 2021). While NF1 is not solely curable, the individual was prescribed antidepressants, antipsychotics, and psychotherapy (Nemlekar et al., 2021). This particular case provides an example of the unique nature of treating cases of CS. Not only is NF1 comorbid with many other disorders, but the specific symptoms of the disease involve physical changes of the body like freckling or tumors. It is possible that these symptoms may have increased the likelihood of bodily nihilistic behaviors and delusions that led to the determination that this was a case of CS. Nonetheless, the individual was treated with antidepressants and antipsychotics like many other disorders that would be causing these self-harming outcomes.

Reconceptualization

While CS is currently seen most commonly as a result of underlying psychiatric conditions, the complexities regarding the context of all of the different case studies that make up the literature call the current practices into question. While these treatments may have a positive effect on those that take them, it is possible that specific treatments could be found to benefit those with CS. Using the current framework, it is easy to see CS as simply a specific set of delusions that are a part of a different psychotic disorder; however, with more research it could be seen that CS may be a niche enough occurrence that it could be diagnosable as its own disorder.

If a stronger push could be made to possibly contextualize CS as a solely diagnosable disorder, it is possible that more empirical resources may be allocated to further understand it and how to treat it. The unique delusions that those with CS experience may take better to a more focused approach rather than a typical treatment for depression or psychotic disorders. With more theoretical backing, a stronger decision could be made on whether to include CS in any diagnostic manuals for typical psychiatric evaluation and treatment. Although the disorder is very rare, this could prove to benefit those that do experience these delusions which could prove exceedingly important considering the self-harming and suicidal behaviors that are so common with it. In order to progress the literature in this way however, there must be a recontextualization of our current understanding of CS. This analysis aims to provide context as to why CS should be considered to be a psychiatric disorder of its own merit rather than simply a set of symptoms resulting from an underlying disorder.

Historical Theory

Jules Cotard's first case in which he described CS was in 1880 with a 43-year-old woman known as Mlle. X (Cotard, 1880). He had noted that the woman claimed to him that she did not have a brain, no digestive organs, and that she is only skin and

bone on a body that is decomposing (Cotard, 1880). He also noted some of the behaviors that would later become clear indicators of the condition such as the woman claiming that she has no need to eat (Cotard, 1880). She also claimed that there was no God and there was no devil, and thus she has no soul (Cotard, 1880). In order to characterize this woman's experiences, Cotard decided that this specific depression would be classified by delusions regarding existence and body as well as "anxious melancholia" (Debruyne et al., 2011). Cotard had originally decided that this condition be called *de´lire des negation* or *delusions of negation* in which different aspects of the individual's existence would be delusionally denied (Debruyne et al., 2011). Mlle. X also displayed aggressive behaviors towards others around her, being noted to bite, scratch, and hit (Dieguez, 2018). She would beg to be burned as she believed this to be the only way that her immortality could be circumvented (Dieguez, 2018). Not only would she beg to be burned, but she would attempt to burn herself, although it was noted that she had a desensitization to pain that was shown through pushing pins through her skin without any pain reactions (Dieguez, 2018). Mlle X believed that she was damned by God which extended into her *spiritual negation,* which are delusions of negation regarding the soul or higher powers like God, the devil, heaven, and hell (Dieguez, 2018).

Cotard would go on to draw from multiple previous case studies regarding "demonomania" considering his findings with the spiritual aspect of Mlle X's delusions of negation (Dieguez, 2018). He explained that a distinction between his newly discovered disorder and other psychotic disorders is the existence of delusions of persecution (Dieguez, 2018). Cotard insisted that an individual who is suffering from just paranoid disorders would frequently refer to delusions of external assailants or factors, whereas delusions of bodily negation were rare (Dieguez, 2018). These delusions are what made CS a clinically distinct phenomenon. Cotard went on to update his approach to the disorder by including delusions of negation not only having to do with the self or body, but also with what is told to them or given to them by the rest of the world. For example, the updated framework included denial of other people's existence, and even auditory or visual hallucinations (Dieguez, 2018), which connects to the current framework in which CS could possibly be the extension of an underlying psychotic disorder. Cotard's final addition to the clinical framework was to draw connections between CS symptoms and delusions of grandeur (Dieguez, 2018). Considering that these individuals would frequently involve delusions of immortality and thus the body would seem limitless. Cotard viewed this as what he called a "pseudo megalomania" considering that these delusions, although grand in scale, were still overtly negative and self-distressing (Dieguez, 2018).

In the late 1880s the name Cotard's Syndrome began to be used for these symptoms by other practitioners, and it was suggested to be linked not only with depression but with more psychiatric disorders (Debruyne et al., 2011). Later, the syndrome had been broken down into two different components for definition: the affective and the cognitive component (Debruyne et al., 2011). The affective component was responsible for the anxious and depressive symptoms, and the cognitive component was responsible for the common delusions. This spawned different theories throughout the years, some suggesting that a more general delusion of negation disorder could be linked with alcoholism, dementia, or even paralysis, although the pervasive theory that psychotic and depressive disorders such as schizophrenia were at the root of these delusions (Debruyne et al., 2011). Evidence based research was conducted for classification of CS for the first time in 1996 in which CS was broken into three groups: "psychotic depression" which included delusional melancholy and auditory hallucinations, "Cotard's syndrome type I," which featured nihilistic delusions and the lack of depressive episodes, and finally "Cotard's syndrome II," which was associated with depression, hallucinations, delusions of both nihilism and immortality, and self-harm or suicidal behavior. This study also insisted that while they do not see CS to be a new diagnosable disease, it may not be solely connected to the presence of depression within the individual (Berrios & Luque, 1996).

Currently CS is most commonly seen as a set of symptoms that manifest from an underlying condition, and much of the research surrounding it will align with this pretense. It is possible that CS may not be influenced by just depression considering the strong delusion symptoms as well as the presence of hallucinations in some diagnoses, but all of the disorders that align with these symptoms provide a complex and varied array of literature about the syndrome. The syndrome is very rare with prevalence ranging from 0.1% to 0.57% depending on the cultural context (Dieguez, 2018). However, considering the complexity of these symptoms and the ways that they present themselves, it is difficult to diagnose in the first place. If the theoretical framework surrounding CS would shift toward an openness to diagnose it as a unique psychiatric condition, it is possible that the diagnostic criteria could be further empirically strengthened. This could lead to a greater understanding of CS, even if still using the three diagnostic group frameworks. The vast majority of work regarding CS since the beginning of Jules Cotard's analyses have been through case studies. While this is logical considering that the condition is extremely rare, it tends to provide a bias toward focusing less on treatment plans for these delusions specifically and more toward treatment plans that help with the underlying unique condition or circumstance, as well as treatment that generally works well with psychotic disorders. By changing the theoretical approach to much of the literature on CS, it could be seen that a unique diagnosis may be well suited to treat these issues, but this remains to be seen until future studies will be conducted in this way. By drawing on

similarities between cases as well as critically analyzing the possible onset of the delusions within case studies, richer clinical conclusions could be drawn more than labelling niche cases of contextually unique delusions of negation as possible CS.

The Case of Per Yngve "Pelle" Ohlin

Per "Dead" Ohlin was a Swedish musician and lead singer of infamous Norwegian Black Metal band "Mayhem" from 1988 to 1991. Ohlin committed suicide in 1991, and his case provides a striking note to our current understanding of CS. While Ohlin had never been formally assessed during his life, the legacy that he had left behind led many to believe that he had experienced CS. Ohlin's particular case provides such a unique example considering the culture and people that he was surrounded by through being a part of the early Norwegian black metal scene, which is infamous for actively pursuing and glorifying violence, nihilism, misanthropy, and self-harm behavior (Sanches et al., 2022).. This contrasts with other subgenres that simply use violent imagery or parody as those in the early black metal scene tended to be more serious about the message (Sanches et al., 2022).

As a young boy, Ohlin had suffered from extreme bullying that in one case led to him being hospitalized. He believed that during this incident he had gone through an out of body near-death experience in which he described passing into the "deadworld" and actually dying (Sanches et al., 2022). This experience would later manifest into a strong belief that he was dead the entire time. Ohlin grew a strong fascination with the macabre and began gathering dead animals and obituaries to collect (Sanches et al., 2022). Upon joining "Mayhem", Ohlin would become entrenched in a new dark way of thinking and living that would easily reflect these morbid curiosities and his experience with "dying".

Many of the experiences that Ohlin went through during his transition into the band and moving to Norway align with those that would lead to depression. He struggled with finances, he found less success with "Mayhem" than he had expected, and he was struggling with any emotional connections as he did not have any relationships or family members in Norway when he had moved there (Sanches et al., 2022). He was known to be quite reclusive by his fellow bandmates and some of his friends from back in Sweden noticed a marked change in his demeanor and appearance since moving away and joining the band such as noticeable weight loss (Sanches et al., 2022). Ohlin began to engage in some more extreme actions as his time with the band progressed.

Ohlin would frequently talk about suicide and death openly with his band mates, and there are even some reports that claim that he would cut himself openly in the company of friends (Sanches et al., 2022). He was also known to cut himself on stage during "Mayhem" performances (Sanches et al., 2022) which was welcomed with the nihilistic theatrics that were especially strong in the Norwegian scene. Ohlin would also begin to express more delusional beliefs openly at this point. He claimed to those around him that he was not a human being and belonged to a different world (Sanches et al., 2022), which is similar to his statement on his near-death experience where he claimed that he was passing into the "deadworld". He would state that he had frozen blood and that he was in fact dead, and this was even reflected within the lyrical content of his songs where he would lament on the feeling of being a mortal but lacking anything that made him feel human (Sanches et al., 2022). These claims all align with the symptomatology of CS. He was experiencing strong nihilistic bodily delusions with the statements about his frozen blood and experiencing nihilistic delusions of existence through his experience of feeling he was dead.

Ohlin would even go so far as to make himself appear and feel as much like a corpse as he could. He would bury his clothes in the soil before a performance so that he smelled like he was in a grave (Sanches et al., 2022). He would even at times have his bandmates bury him to strengthen this effect (Sanches et al., 2022). While many of these actions could be seen as the pursuit of dark, shocking imagery to push the theatrical dramatics of the Norwegian black metal scene, it is also important to keep Ohlin's self-harming and nihilistic attitudes in consideration which seem to separate his feelings from those of his colleagues who wished to push the boundaries of cultural acceptance. Ohlin's actions were extreme in comparison to his colleagues, truly wishing to entrench himself in death to reflect his delusions. He has even been reported to keep a dead crow in a bag that he would smell before performances to keep the scent of death fresh in his mind before going on stage (Sanches et al., 2022).

The aftermath of Ohlin's suicide provides context into the environment that may have negatively impacted his symptoms. Ohlin took his life in the shared home that the band had lived in, and upon discovering his body, bandmate Øystein "Euronymous" Aarseth posed the gun in Ohlin's hand, took pictures, and then called the police (Sanches et al., 2022). The extreme nature of Ohlin's attitudes and behaviors was celebrated by those truly dedicated to the extreme nature of this burgeoning music scene, which would later become infamous for multiple murders and the ritual arsons of multiple churches across Norway (Sanches et al., 2022). Ohlin had lived the last years of his life surrounded by those that would praise him for his acts of self-harm and the culture of death and violence that had surrounded him within his music scene is likely to have increased the severity of any struggles he was experiencing internally. If looking at Ohlin's case as one of CS, the people in his life were the ones that would hear these delusions that he was succumbing to and either not see it as anything more than part of his character, or possibly even encourage him to continue. Considering that his band mates would watch him harm himself on

stage, bury him underground, and listen to his distressing thoughts about being torn between worlds, it is possible that Ohlin's delusions were only strengthened.

Ohlin was never clinically analyzed during his life, so it is not possible to say for sure that his statements and actions were indicative of any delusional disorder, but considering his propensity for self-harm and his eventual suicide, it is clear that these actions may have more merit than a man trying to maintain a dark persona for the sake of musical theatrics. Ohlin's experiences align strongly with the foundations of CS and its symptoms. He was experiencing several different delusions of negation. He experienced nihilistic bodily delusions regarding his frozen blood or his need to appear as a corpse, but he also experienced spiritually negative delusions similar to those of Mlle X or the cases of "demonomania" that Cotard had studied originally (Dieguez, 2018). What is so striking about Ohlin's particular case is that his experiences provide a possible glimpse into a type of onset for CS.

Although it is clear that Ohlin was also struggling with depression due to his general outlook and his self-harming, the manifestation of his nihilistic delusions came back down to one specific occurrence in his childhood. He believed that when he was hospitalized was the moment that he had died, and while this delusion may have increased in intensity over time and alongside the progression of possible other psychiatric disorders, that particular moment is what caused him to die, thus providing evidence to him that this was not a delusional thought pattern but was true. His belief that this incident was what caused him to die was so strong that he maintained it up until his suicide. Ohlin had written in his suicide note that he did not want to explain because no one would understand and signed it off by saying "This didn't come to me now, but seventeen years ago." (Sanches et al., 2022). He had also left the lyrics to a song that he called "Life Eternal" that dealt lyrically with his delusions of living death (Sanches et al., 2022). Considering that these delusions were pinpointed frequently by him to have begun when he was younger after this near-death experience, it could be argued that Ohlin's specific case could be one in which his delusions were a post-traumatic stress response.

With Ohlin's experience of extreme physical harm to the point of hospitalization, the presence of trauma in his life is clear. Research indicates that comorbidity of multiple other psychiatric disorders is common in those with PTSD (Brady, 1997). While it is not possible to say whether Ohlin may have also had PTSD and that this case is specifically that of CS induced by PTSD, it is clear that many of the symptoms that Ohlin had experienced in the years prior to his death were induced by or at least amplified by his traumatic experience. The conclusions to be drawn from this case are limited in this regard, nothing can be said for certain about any other diagnoses that Ohlin may have had, and it cannot be confirmed whether or not other symptoms of PTSD were present in his life such as reliving the event or avoidance, but it does provide yet another specific context in which CS may have been fostered and developed. There is a current gap in the literature regarding this particular facet of CS development. While many of the symptoms, delusions, and comorbid psychiatric disorders are commonly accepted now, the delusions of being dead are not empirically backed by actual experiences of near death within the individual. It could be possible that a traumatic near-death experience could trigger these delusions and possibly other psychiatric disorders to develop into a classically definable case of CS. Specifically, it could be postulated that this is a case of CS II considering the presence of depressive episodes (Berrios & Luque, 1996). Thus, considering that this could be yet another way to contextualize CS within the individual, treatment could possibly benefit from a stable diagnostic criteria for specifically CS rather than underlying conditions if the possible traumatic foundation would be considered.

The Case of Mr. H

A brief case report looking at an individual known as Mr. H was published in 2012 that gives a description of someone who was experiencing extreme symptoms and acting in hostile ways in accordance with possible CS (Huber & Agorastos, 2012). Mr. H was 22 years old at the time of his induction to a psychiatric ward which he entered involuntarily following an arrest that was made after a fight with his neighbors (Huber & Agorastos, 2012). He was diagnosed with both abuse of cannabis and paranoid schizophrenia of which he was treated with multiple medications both orally and through injections (Huber & Agorastos, 2012). This case, while brief, provides a similar example to that found with Ohlin within the analysis that leads to his presumption of CS.

Following psychological examinations at the ward he was staying in, he would claim that not only was he dead because he had drowned in a lake in the past, but he was brought back from the dead as a zombie because of radiation exposure from cell phones. Not only did he believe that he himself had drowned and was brought back from the dead, but he also believed that he was still underwater, and thus, those around him had also drowned and were brought back as zombies (Huber & Agorastos, 2012). In his explanation, this is why it was reasonable for him to act in such aggressive and hostile ways, because while he admitted that violent acts on other people were wrong, he did not believe that these violent acts were being done upon human beings (Huber & Agorastos, 2012). This relates directly to Cotard's findings, particularly that of the classic delusional negation of the patient's own life and body, but also he was experiencing the more general delusions of negation regarding those around

him considering that he refused to see those around him as people and rather as zombies to explain his acts of violence. These symptoms manifested in a type of nihilism that aligns with the typical symptoms of CS in that he was not concerned with any legal action to be taken against him because he was dead and had nothing to worry about (Huber & Agorastos, 2012). This is similar to other behaviors that put the individual with CS into possibly harmful situations such as the refusal to eat as the individual would not need to worry about such things if they were dead; however, it does seem contradictory to other symptoms such as delusions of persecution. Mr. H is not concerned with his fate, whereas other cases may be overly concerned with their fate believing that they are "damned", which Mr. H would likely be experiencing if presented with evidence that he was going to be tried or persecuted.

The treatment course that Mr. H was prescribed following this analysis was a line of different antipsychotic drugs that were noted to influence not only his aggression but also the delusions of death. While it was not stated that these delusions entirely disappeared, the drugs seemed to have reduced the intensity, and the patient was released showing no more hostile behavior (Huber & Agorastos, 2012). While the report is brief and does not include a full study or analysis on the patient, the inclusion of the treatment plan provides an important look into the effects that drugs may have for helping the delusional aspect of CS. While the patient was diagnosed with schizophrenia which could be seen as the underlying condition that led to the syndrome, the specific traumatic experience that seemed to have led to these delusional thought patterns bears resemblance to Ohlin. While both the case of Ohlin and the case of Mr. H are limited in that it is impossible to say if these experiences that they claimed to have had are fully true, if the word of the individuals is to be trusted then it seems as if Ohlin may not be the only case in which a traumatic "death" experience leads to or expedited the onset of these delusions. Mr. H is separate in this case from Ohlin in that he has a concrete diagnosis and clinical evaluation providing merit to the existence of his delusions as the result of a disorder, negating the possibility that exists in Ohlin's case that these delusions were merely a chance to procure a strong dark image.

Focusing on the treatment that Mr. H had followed allows for a possible lens through which future research or treatment courses could be enacted. While his schizophrenia diagnosis makes it clearer to prescribe these drugs, it provides an example of specifically an individual that became violent due to the symptoms of CS (Huber & Agorastos, 2012). This is similar to classical cases such as that of Mlle. X (Cotard, 1880), and while it is not possible now to be able to say for certain if she had also been experiencing paranoid schizophrenia, the question remains if antipsychotic drugs could possibly be used as a general treatment for aggressive and hostile CS patients. In the case of a CS diagnosis with stronger depressive elements, it is possible that prescribing antipsychotic medication may lessen the delusions and thus lead to a more treatable case of depression or anxiety that could be caused by the feeling of being dead or rejecting one's own body. In this case, at least, it can be seen that a schizophrenic individual with CS delusions may take well to antipsychotic drugs when it comes to lessening the delusions, but more specifically, treating aggression and violence as an outcome of delusions of negation. It remains to be seen if a different treatment plan involving targeted psychotherapies or other interventions could increase the reduction of CS delusions, and this case report is limited in that the "decrease in intensity" is not explained in terms of what beliefs may or may not still be present (Huber & Agorastos, 2012).

The Case of FM

FM was a 22-year-old woman that had experienced depressive episodes since she was 19 and was successfully treated with antidepressants. She later went in for a consultation where she had complained about feelings of sadness which led to her being diagnosed with another depressive episode and she received drug treatment for two weeks which showed no resolution (Weiss et al., 2013). In a consultation following this null treatment it was revealed that she had been having trouble with sleeping, and she began to develop nihilistic delusions and delusions of negation. She would claim that she had killed her loved ones, she was responsible for the death of everyone in the world, and she had been face to face with God (Weiss et al., 2013). She was admitted to a psychiatric hospital based on these responses and received a psychotic syndrome diagnosis from which she was prescribed multiple medications including those for anxiety and schizophrenia (Weiss et al., 2013). FM's symptoms progressed during her stay where she slowly began displaying motor function impairment, rigidity of limbs, general dullness, and mutism. She would struggle with swallowing, and it was stated that she entered a "stupor" after 4 days of this treatment (Weiss et al., 2013).

Based on these symptoms she was moved to a general hospital to better suit her struggles with swallowing along with other bodily functions that were hindered due to her rigidity (Weiss et al., 2013). Her condition worsened and progressed to a point where she needed to be put on life support for 9 days before she inevitably stabilized. Although these extreme physical symptoms were experienced and she was brought back to a stable state, she was still experiencing her psychotic symptoms, and the delusions had not dissipated so she returned to the psychiatric hospital where she was given special care by nurses due to the progressions of her catatonic state (Weiss et al., 2013). She began to be treated with electro-convulsive therapy (ECT),

but her delusions continued. The classic CS delusions of negation and nihilism appeared where she would claim that she did not have a heart or head and that her body was broken. She also continued the delusion that she was the reason that the entire world was going to die (Weiss et al., 2013). She continued being treated with ECT and antipsychotic medication and after many months of treatment it was stated that her emotional state returned to function, and she now carries a job and has a stable relationship with continued psychotherapy (Weiss et al., 2013).

The case of FM presents multiple similarities between the foundational findings of Cotard, current understandings of the syndrome, and further implications for research. Many of the delusions she was experiencing fall along the current popular belief that CS develops as a set of symptoms alongside or due to an underlying depressive or psychotic condition. FM had already been experiencing depressive episodes for a few years, and this particular episode emerged with more psychotic elements. She was quite young at the time of these diagnoses and her family history with psychiatric illness was not stated by the case study; however, it could be assumed that the psychotic disorder she had developed led to the emergence of her delusions of negation in tandem with her previous underlying depressive condition. One specific delusion that she was experiencing was that of her encounters with God and her strong role to play in the fate of others (Weiss et al., 2013). These delusions align with the common theme of spiritual negation or persecution that have been noted within cases of CS since Cotard began his analyses. These delusions seemed to have developed for FM before any bodily negation which was seen later in her case where she refused the existence of her body parts (Weiss et al., 2013). FM's progression could align with other cases of development where bodily and existence negation would progress in a later stage of the syndrome.

FM provides a unique example of a strong case of catatonia in response to CS symptoms. Her delusions were inevitably partnered with an inability to move, swallow, or even sleep (Weiss et al., 2013). It is difficult to determine the sequence in which these symptoms were developed to the parameters of a case report format; however, her behaviors seem to align with other cases of CS in which the individual will not seek to perform any acts of self-care or even self preservation. This ideology that accompanies these delusions is what will often associate with self-harm or suicide, as if the person is already dead it would not matter if these tasks are performed or not. While FM did not seem to display any examples of direct self harm or suicidal ideation, this catatonia may have developed as a result of her extreme belief that her body was not intact and the stress of extreme guilt from her delusional belief that she not only killed her loved ones but she was responsible for the deaths of every person in the world (Weiss et al., 2013). Catatonia is in fact a symptom that other cases of CS share in common with FM and the existence of the symptoms may correlate with the existence of delusions of bodily and self-negation.

FM's treatment plan also offers some insight into how CS could be successfully treated in other cases. Over the course of her stay at multiple hospitals, FM was treated in various ways, including psychiatric medication, ECT, and even life support for the physical manifestations of her catatonia (Weiss et al., 2013). While many of the delusions not only persisted with treatment but in fact seemed to progress in intensity, the prolonged course of ECT that she had received in combination with antipsychotic medication seemed to be what led to her reduction in symptoms and ability to transition back into a stable life (Weiss et al., 2013). Important to note is that prior to her ECT treatment she had been treated with a multitude of other drugs, many of which at the same time, throughout which her delusions progressed, and her catatonia worsened (Weiss et al., 2013). This could suggest that ECT was a particularly effective treatment for FM's case, albeit a longer necessary course. Overall, FM's case is another example of the complexity that surrounds CS that shows a strong clinical framework regardless of limited empirical support.

The Case of Mr. B

Mr. B was a 65-year-old man who was living a retired life with no history of mental disorders in his family that began to develop delusions that could be categorized under CS (Grover et al., 2014). His symptoms began with a general depressive mood, an increase in anxiety, sleep issues, loss of appetite, and he suffered from ideas of negative self-worth as well as guilt of sin. These symptoms later escalated as he began to develop delusions regarding persecution and nihilism in which he would be fearful of the end of all things and that his brain was not working anymore (Grover et al., 2014). Mr. B had attempted suicide before being admitted to a mental hospital although he was saved. His suicide note revealed that his motive behind taking his life was that he believed he would spread illness to others around him and wanted to preserve them from developing cancer (Grover et al., 2014). After his suicide attempt, Mr. B showed the common symptoms of CS of a belief that he was dead and a refusal to eat, and we would later attempt suicide twice again. He was diagnosed with depression including psychotic symptoms on the account of his delusions and began to be treated with ECT, antidepressants, and antipsychotics. A complete resolution of symptoms followed (Grover et al., 2014).

The case of Mr. B adds further complexity to the onset of CS. Unlike other cases, such as Mr. H with cannabis abuse early in his life and Ohlin with extreme bullying and displacement, it was not clear that any particular risk factors were pertinent in the life of Mr. B beyond cigarette smoking and what was listed only as "psychosocial stressors" (Grover et al., 2014). Mr. B

was an older man who seemed to have been well adjusted to his retirement; however, his depressive and anxious symptoms seemed to develop first before any delusions began to set in. Worth noting is the inclusion of guilt and sin within his original line of symptoms upon initial analysis (Grover et al., 2014). Both of these symptoms could be linked to similar ideas found within delusions of negation. While Mr. B was not experiencing any delusions or psychotic symptoms at this point, the guilt of sin that he was experiencing could have made him more prone to the line of thinking that delusions that Cotard himself had analyzed follow. For example, although the level of this guilt and sin that Mr. B was experiencing is not explained in great detail within the case study, sin and guilt generally relate to delusions that many other CS patients may have experienced about damnation and pertaining to the individual's soul such as what was seen with Mlle. X. The delusions that he developed did not first begin with the classic belief that he was dead. Mr. B first suffered from more general delusions of nihilism such as his organs failing, or even general delusions of negation where he believed that his house was being destroyed (Grover et al., 2014). It seems that the full delusion of existence negation did not develop until later into his symptom development, after his first suicide attempt.

The suicide note that Mr. B left behind surely suggests that he was experiencing psychosis that included delusions of grandeur considering that he was preventing the spread of a disease that only he was capable of stopping villagers from developing cancer (Grover et al., 2014). Although at the point of his first attempt he was experiencing psychotic symptoms, it seems as if the belief that he was dead and his resultant weight loss from the refusal to eat came after being stopped from completing the act. If using the same lens that has been argued with the case of Mr. H and Ohlin, the occurrence of Mr. B's delusion of death taking place after his suicide attempt seems logical if this suicide attempt would be considered as a "death" experience. This case provides a more stable example of the traumatic death experience than the other two because we have tangible clinical proof that Mr. B not only had the intention himself to take his life but actually attempted and possibly would have succeeded if someone had not intervened (Grover et al., 2014). Thus, Mr. B's death delusions seemingly developing after this traumatic death experience could add some clarity to the development of one of the more classic symptoms of CS.

Mr. B also displayed a common symptom of CS which was his refusal to eat and subsequent weight loss. This was in fact listed as one of his physical observations during his examination upon admittance to the outpatient facility in which malnutrition was noted. Many of the symptoms that Mr. B experienced reflect the self-harming and lack of self-preserving tendencies that are commonly seen within those with CS. Mr. B's multiple suicide attempts are reflective of many others that experience these delusions, and while it may seem paradoxical that one that believes they are already dead would commit suicide, the commonality of the ideology is enough to warrant attention toward treatment plans. In Mr. B's case, many of the possible treatments commonly used for CS were used. Not only were antipsychotic drugs administered, but he also received ECT and antidepressants (Grover et al., 2014). All of these options in tandem seem to provide a strong basis to cover the wide breadth of conditions that could lead to the onset of CS. Important to note is the usage of not just pharmacotherapy but also the usage of ECT. General anesthetics and muscle relaxation drugs were both administered to Mr. B during his ECT sessions, and with the combination of the other drugs he was taking his symptoms entirely resolved (Grover et al., 2014). It is difficult to say whether or not the addition of ECT led to a stronger resulting outcome than other cases that used medication predominantly or exclusively, but it could be possible that this method is what separates the complete remediation seen with Mr. B and just the reduction of delusions with a patient such as Mr. H.

The Case of Ms. A

Ms. A was a 62-year-old that in contrast to Mr. B had suffered from bipolar disorder for 35 years prior to her CS delusion onset (Grover et al., 2014), after experiencing a month's long relapse that contained symptoms of anxiety, depression, pessimism, and difficulties with self-care and motor function. These symptoms then developed into nihilistic and negatory delusions in which she denied the existence of the parts of her own body as well as the existence of other members of her family (Grover et al., 2014). These symptoms ended up progressing into the delusion that she was dead which caused her to refuse to eat, lose significant weight, display incontinence with feces and urine, as well as developing mutism. She would remain rigid in all of her limbs, and she was taken to an emergency room based on the extreme nature of her symptoms (Grover et al., 2014). Upon examination it was discovered that her brain had atrophied in combination with other physical symptoms that resulted from her refusal to eat and limb rigidity. Based on this examination and her history with bipolar, she was diagnosed with depression with psychotic symptoms and was given lorazepam first to begin her treatment, although this showed no effect on her symptoms (Grover et al., 2014). Similarly to Mr. B, ECT was also given with anesthesia and muscle relaxants which resulted in a drastic decrease in her catatonia and depression. After the ECT sessions she was prescribed antipsychotics, mood stabilizers, and antidepressants (Grover et al., 2014).

The case of Ms. A provides another unique example of the onset of CS symptoms. Ms. A was someone who had previous struggles with other psychiatric disorders that she had been experiencing for a long time. It is likely that these psychotic

symptoms are not something she had experienced prior to her hospitalization on this particular relapse. This example shows someone that first showed depressive symptoms that were accompanied by pessimism and a loss of appetite, which could align with the later delusions of not needing to eat because she is dead. While it is not known what processes may have led to her developing that specific delusion, the progression of these particular symptoms into a psychotic depression would align with delusions of negation. Not only did Ms. A deny the existence of her own body parts, but she also denied the existence of family members which is similar to what Cotard described as the general delusions of negation where she would deny any information that was given to her from the outside world (Dieguez, 2018). Similarly to the case of Mr. B, Ms. A's symptoms began with delusions of negation before they developed into nihilistic delusions of life. Of note is a specific similarity that both Ms. A and Mr. B experienced during their delusions of negation, which was that of poverty and destruction of their homes. Ms. A believed that her house was going to collapse at any moment and kill everyone that lived within it (Dieguez, 2018).

While Ms. A was not stated to have shown any direct cases of self-harm or suicide attempts, her extreme refusal to eat and move could be seen as a form of self-harm by voluntarily putting herself into danger. Her lack of eating led to both dehydration and anemia upon admission to the hospital, and her limb rigidity and catatonia likely led to her issues with incontinence (Dieguez, 2018). While these behaviors may have been caused by other factors due to the onset of a psychotic disorder, her refusal to eat was predicated off of the fact that she believed she was dead (Dieguez, 2018). The onset of these delusions seems to be more complex than other cases as Ms. A was later in her life and had experienced a depressive disorder for much of her life without the existence of these delusions. While this particular relapse led to nihilism and negation, it progressed so far into the belief that she was dead without any significant external factor to make her truly believe this way. This contrasts with other cases like Mr. B or Ohlin in which the person actually experienced an event in which they may believe they had actually died or that they should have died. Ms. A did, however, experience a very extreme case of self-starvation, and although it was stated that she was refusing to eat because she believed she was dead, this could possibly be a traumatic incident that contributed to the progression of her delusions.

An important point in this case study is within the treatment plan that Ms. A underwent. Similarly to Mr. B, Ms. A was treated with multiple sessions of ECT (Dieguez, 2018). Rather than being given this treatment in combination with antipsychotic medication, she was prescribed other medication that did not appear to work, so ECT was given as an alternative which proved to be very effective. While she was treated later with multiple different psychiatric medications, the ECT sessions seemed to provide a drastic improvement in symptoms as a sole treatment prior to any other medications for longer lasting effects. This in combination with Mr. B provides a promising potential for this treatment to be used for CS delusions. If this treatment proved to be effective in these two cases that were much different in their onset and experience, it is possible that it could be effective for a wider array of CS cases from different onsets and underlying psychiatric problems.

The case of Ms. A also provides a critical point in understanding CS further in that she was living with bipolar disorder for many years prior to the onset of her delusions (Dieguez, 2018). While it is seemingly common for other individuals to develop CS alongside other psychotic or depressive symptoms, Ms. A showed that after years of experiencing one psychiatric disorder it suddenly manifested in this particular way that it never had before. This decreases the clarity surrounding current understandings of CS considering that the generally accepted theory is that CS would develop as a symptom of underlying psychiatric disorders; however, the development in the case of Ms. A seems more sporadic considering that she had an underlying condition that suddenly manifested in a relapse with psychotic symptoms.

Discussion

The presented case studies in combination with each other and in comparison to the classical foundation surrounding CS provide a variety of both contextual complications as well as clinical strength to some of the underpinnings of this particular set of delusions. In many ways, the current clinical understanding of CS is very similar to the original condition that CS had analyzed. The main delusions of negation and nihilism still present themselves in many similar ways regardless of the amount of time that has passed from the time of Cotard to now. This could be due to the fact that the literature on the syndrome is relatively scarce, but the existence of the data that does associate so well with the originally identified symptomatology leads to the possibility of a stronger theoretical foundation on which continued research can develop. Many of these cases follow similar directions, and considering the niche specificity of the symptoms that are manifested from CS it could be said that an empirically sound diagnostic criteria could be created. The lack of literature within this field makes it difficult to fully understand all aspects of the condition; however, strong connections exist between all of the symptom sets, but the onset and psychiatric underpinning them seem to differ in quite large extents.

Many symptoms of CS may overlap between examples and reflect upon the classically observed symptoms, the onset and context in which the delusions form seem to have many different possibilities. Even from the earlier years of recognition of this condition it has been suggested that underlying psychiatric conditions may be a cause. While it is most commonly

recognized within depressive and psychotic disorders, it seems the CS delusions and symptoms could appear within clinical contexts that can be different or unique from not only one another but also from the classical cases. The case of Ohlin for example provides strong evidence toward the complexity of this disorder. It must be stated again that the case that Ohlin had experienced is mostly speculative considering he was not officially diagnosed, assessed, or treated in any particular way which contrasts from the many other case studies that were presented here (Sanches et al., 2022). While this speculative approach does hold bearing, if the claims that he had made during his life truly were delusions, he provides a complex narrative surrounding cultural and social influence as well as the trauma-based approach to CS that was presented here. The people that Ohlin had surrounded himself with likely increased the intensity of his delusions considering that the evidence seems to show that he was encouraged and even commended to behave and think in the way that he did (Sanches et al., 2022). It was clear that regardless of the lack of his direct CS assessment during his life that he struggled with many mental health disorders thus leading to his self-harm, lack of eating and general care for his self, and his inevitable suicide, and if approaching his case with the framework of CS being the result of underlying psychiatric disorders his delusions appear logical to have developed. This suggests a particularly unique matter of development for CS syndrome, which suggests that these delusions may be possible to be prohibited by interactions with those around the individual.

Seen in many of the cases that were presented here is a possible direction that CS understanding could be led towards regarding the onset of the delusions. Three out of the five cases of CS experiencing individuals had an experience in which a near death experience was claimed. In the case of Ohlin and Mr. H, it is still unclear whether or not they actually did have a near death experience although they both claim that an experience in which they either died and came back to life (Huber & Agorastos, 2012) or that they had been between states of death and living during the experience (Sanches et al., 2022). Mr. B, however, undoubtedly experienced such a situation when he attempted suicide for the first time and was saved (Grover et al., 2014). All three of these men may have been experiencing other underlying conditions that increased the likelihood of the development of delusions and other psychotic symptoms; however, in each of these cases it appears that this "death" experience serves as the catalyst to bring along the specific delusion that they were dead and somehow still alive. It can be seen that other delusions of negation may be present before the specific existentially nihilistic delusions take course (Grover et al., 2014). It is possible then that even in a case where it cannot be certain if there was a predisposition to delusions or even preexisting delusions that the belief that one is dead would not develop until the later stages of CS progression. While this traumatic "death" experience may be a possible clinical inciting incident, it does not appear that it is a necessary prerequisite for one to develop CS and associated delusions of negation.

A unique symptom that appeared in two of the case studies analyzed was catatonia. This seemed to develop as delusions from CS progressed in severity and proved to cause drastic physical health dangers for both FM and Ms. A. It is possible that catatonia could be a common occurrence within those experiencing CS; however, the literature currently existing does not specify prevalence rates of any of these niche symptoms that are listed in the case studies. Interestingly, both of these cases showed individuals that were experiencing underlying depressive disorders with Ms. A experiencing bipolar disorder (Dieguez, 2018) and FM experiencing depressive episodes (Weiss et al., 2013). It is possible that with more research a link could be established between the development of CS from underlying depressive disorder with the incidence of catatonia within these individuals. Considering the physical health implications that catatonia exhibited in these two case studies, it could serve a large benefit toward others that develop CS if more information is understood about this unique symptom.

Finally, treatment courses were similar, albeit slightly vague across these case studies. Most commonly seen approaches to treating this condition within these studies were the use of psychiatric medication and ECT. It did seem that these had a strong effect on diminishing the prevalence of delusions and even reducing catatonia; however, it seems as if the strength and efficacy of the treatment varied depending on the individual it was used on. Different lengths of time were necessary for different cases that were observed, regardless of the perceived intensity of the symptoms and resulting self-harm or physical endangerment. While there are no single treatments that have been identified as the best use case for individuals with CS, it should be determined whether ECT could be generally used strongly across different cases, why it may be so effective, and if there are any other treatments that could be similarly or more effective. For example, the case of Ohlin showed mild erratic behavior and psychotic symptoms when compared to other cases mentioned. While he did experience suicidal ideation and self-harm, he was presumably not experiencing paranoia, catatonia, or other debilitating delusions. In cases like Ohlin where the delusion of death exists without extreme physically and behaviorally restrictive symptoms, a targeted psychotherapy technique may be well applied.

The variance among cases that have been analyzed here shows that CS is both far more complex while also being seemingly associated across cases than what is currently understood. The niche aspect of these cases in their widely varying development and contexts insists that CS may be more appropriately applied to understand a wider variety of cases. Currently, CS is predicated simply based on the existence of depressive, mood, or psychological disorders, and while it is very likely and almost

definitely comorbid with other psychiatric disorders, the variety of appearance cases and strong foundational symptomatology may prove that it could be considered for its own unique diagnosis. The inclusion of CS into the DSM could result in more empirical attention that would lead to more broad understanding of the different aspects underlying the syndrome. Considering that the condition features very specific sets of delusions that are unique to itself, creating a set of diagnostic criteria for inclusion would not be a difficult task. While some cases show certain symptoms that are absent in others, the underlying existence of delusions of negation as well as nihilistic delusions persist. This specificity could be an important addition to diagnostic manuals to help practitioners understand the experiences of their patients better, especially when this particular disorder can prove to be harmful or even deadly depending on the manifestation of the delusions.

Concluding Remarks

Much of the information presented is speculative as it is based on a very limited sample of research. The literature is not only sparse regarding CS, but it is also heavily dominated by case studies. This case study domination leads to a strong grasp on the breadth of situations in which the condition could apply; however, it is limited significantly in understanding the mechanisms that surround the incidence, progressions, development, and even symptom interactions within CS. For example, it is possible that a previous depressive disorder may increase chances of catatonia development with CS rather than a case that is predicated on a previous psychotic disorder. It is also difficult to truly understand the extent to which these delusions are affecting the lives and thinking of those experiencing them. Based on clinical case studies, it is clearly stated the delusional claims that an individual may be experiencing, but the progression of that belief cannot be tracked and understood for how and when someone may begin to see it as truth.

There are many directions toward which future research could and should be directed towards. One such direction is toward qualitative methods. Considering the difficulty there would be in collecting participants for quantitative studies on those with CS, qualitative methods could provide a great opportunity to further the understanding of internal mechanisms of CS and how an individual may recall their experiences. In some of the case studies presented here it can be seen that regular executive function can be restored and the delusions can be resolved, thus interviewing those who have experienced these delusions could provide insight into how they viewed the truth of their delusions, the ways in which they progressed, and stronger links can begin to be formed between the occurrence of CS and other thought patterns that may have existed prior. One aspect that could greatly benefit from qualitative methods could be to gather more information on the lives of the individuals prior to their case being clinically studied. The case studies themselves are limited in the information surrounding an individual's life experiences and even the existence of previous “death” experiences which could clarify the incidence of cases that seem to appear with near death being a catalyst.

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