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Morgellons Disease Versus Delusional Infestation in the Context of Mixed Dementia: A Case Report and Narrative Review

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Abstract

Morgellons disease is a rare and controversial condition characterized by self-reported cutaneous fibers, pruritus, and systemic complaints such as fatigue, cognitive decline, and mood disturbances. Its classification remains debated: some authors propose an infectious etiology, particularly Lyme disease, while others consider it a variant of delusional infestation. We present the case of an 89-year-old institutionalized woman with mixed dementia who developed persecutory and somatic complaints, including the belief of “wires” emerging from her body. No cutaneous lesions were found on dermatological examination. Neuroimaging revealed frontotemporal atrophy and periventricular ischemic leukoencephalopathy. Risperidone and quetiapine were poorly tolerated due to sedation and gait instability, whereas olanzapine combined with memantine achieved partial improvement. This case illustrates the diagnostic and therapeutic challenges of Morgellons-like delusions in elderly patients with neurocognitive disorders. A narrative review is provided to contextualize current knowledge, highlighting the lack of consensus on etiology and treatment. Greater awareness of Morgellons disease and its overlap with delusional infestation may improve clinical recognition and management, particularly in vulnerable populations such as the elderly with dementia.

Keywords: Morgellons disease, delusional infestation, dementia, case report, psychodermatology

Introduction

Morgellons disease (MD) is a rare and controversial condition characterized by cutaneous complaints, including pruritus, formication, and self-reported fibers or filaments emerging from the skin ^[1]. Patients often describe crawling, stinging, or biting sensations, sometimes accompanied by visible excoriations or ulcerations. Beyond dermatological symptoms, MD has been associated with systemic manifestations such as cognitive impairment, chronic fatigue, neuropathic pain, and psychiatric comorbidities ^[2].

The nosological status of MD remains debated. Some authors propose a potential association with infectious processes, particularly *Borrelia burgdorferi* in the context of Lyme disease ^[2]. In contrast, others conceptualize MD as a subtype of delusional infestation, a psychiatric disorder as the fixed, false belief of being infested with living or non-living materials in the absence of medical evidence ^[3,4].

Epidemiological data are scarce. A population-based study by the U.S. Centers for Disease Control and Prevention estimated a prevalence of 3.65 cases per 100,000 enrollees, with a predominance in middle-aged Caucasian women ^[5]. Patients often experience significant reductions in quality of life, partly due to functional impairment and the distress caused by persistent symptoms ^[6].

Therapeutic strategies remain inconsistent. While no established guidelines exist, low-dose atypical antipsychotics such as risperidone, olanzapine, and aripiprazole have been reported to reduce symptom severity ^[7]. Psychotherapeutic interventions, particularly cognitive-behavioral therapy, have also been suggested, although robust evidence is lacking ^[8].

In elderly populations, the diagnostic process is even more complex. Cognitive decline, psychiatric comorbidities, and frailty often complicate the differentiation between primary delusional infestation, secondary Morgellons-like presentations, and neurocognitive disorders with psychotic features ^[4]. The clinical overlap underscores the need for careful multidisciplinary assessment, involving psychiatry, dermatology, and neurology.

Here, we report the case of an 89-year-old institutionalized woman with mixed dementia who developed persecutory and somatic delusions resembling Morgellons disease. We also

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provide a narrative review of MD to contextualize the current state of knowledge, with emphasis on diagnostic challenges and therapeutic approaches in elderly patients.

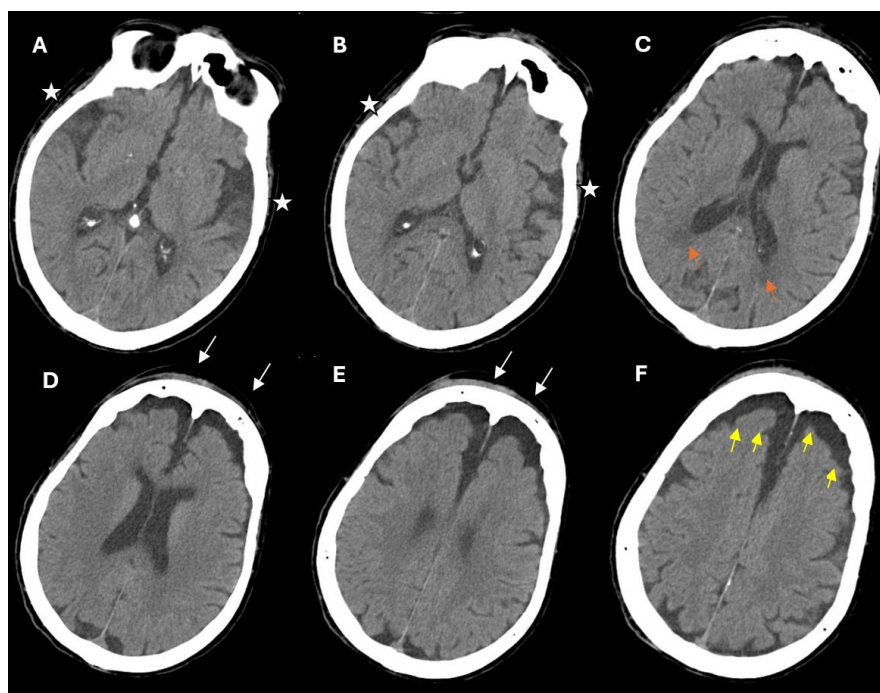
Case presentation

An 89-year-old woman, single and without children, living in a nursing home, was referred for psychiatric evaluation due to progressive insomnia and the emergence of some persistent unusual ideas. According to her caregivers, she had longstanding paranoid personality traits, characterized by marked suspiciousness, hostility toward men, querulous behavior, and social withdrawal.

Over the months prior to referral, she developed persecutory ideas, including accusations of theft within the institution, as well as somatic delusions involving the sensation of small “wires” in her anus, head, and vagina. These beliefs were expressed with conviction and caused significant distress. Cognitively, she was clearly deteriorated, only partially oriented in time and space, and displayed impaired recent memory, executive dysfunction, and reduced social engagement, consistent with an evolving neurocognitive disorder. A formal Mini-Mental State Examination was not

performed due to lack of collaboration, but clinical observation confirmed marked decline.

Laboratory evaluation revealed a mildly reduced vitamin B12 level, while complete blood count, renal and hepatic function, thyroid profile, electrolytes, and folic acid were all within normal limits. Cranial computed tomography showed periventricular ischemic leukoencephalopathy, generalized brain atrophy with frontotemporal predominance, and bilateral hygromas, compatible with mixed vascular and degenerative pathology, as seen in figure 1. Electrocardiography revealed supraventricular extrasystoles. At admission, her medications included quetiapine 150 mg, risperidone 1 mg, bromazepam, tramadol/paracetamol, pinaverium, simvastatin, and clopidogrel. Caregivers reported gait instability and excessive sedation since risperidone initiation. Dermatological examination was performed to evaluate her somatic complaints. No evidence of primary skin lesions, excoriations, or fibers was identified. The only abnormalities were venous stasis changes in the lower limbs, unrelated to her delusional beliefs.



Source: patient clinical process

Fig 1: Cranial Computed Tomography Scan Images in the axial plane: shows generalized brain atrophy with frontotemporal predominance (Figure 1A, 1B, white star and Figure 1D, 1E white arrow), periventricular ischemic leukoencephalopathy (Figure 1C, orange arrow), and bilateral hygromas (Figure 1F, yellow arrow)

Overall, the clinical picture was most consistent with a diagnosis of mixed dementia complicated by psychosis, presenting in the form of delusional infestation/MD.

Treatment was gradually optimized. Risperidone was tapered and discontinued due to poor tolerability, bromazepam was also withdrawn to reduce polypharmacy and sedation, and memantine was initiated with titration to a target dose of 20 mg for cognitive support. Quetiapine was initially maintained and adjusted, but later discontinued when insomnia and delusions persisted. Olanzapine was introduced at 5-10 mg, leading to partial improvement in sleep patterns and attenuation of psychotic symptoms, though residual delusional content remained.

Discussion

MD remains one of the most debated conditions in psychodermatology. First described in the 17th century and reintroduced in the early 2000s, MD is characterized by patients' reports of fibers or filaments emerging from the skin, often accompanied by sensations of crawling, stinging, or biting [1]. However, despite these consistent subjective complaints, objective dermatological findings are usually absent or nonspecific [2].

The term Morgellons was first used in 1674 by Sir Thomas Browne, who described children in southern France developing “harsh hairs” or filaments emerging from the skin [9]. However, most scholars agree that Browne’s

description likely encompassed several heterogeneous dermatological conditions rather than the modern entity now debated as MD [1]. The contemporary use of the term was revived in 2002 by Mary Leitaio, who created the Morgellons Research Foundation after observing unusual skin lesions with protruding fibers in her young son [2]. Since then, the term has gained media attention and entered medical discourse, though its legitimacy as a distinct diagnosis remains disputed.

The etiology of MD remains controversial. Some researchers have suggested an association with infectious processes, particularly *Borrelia burgdorferi* and other tick-borne pathogens [2]. Conversely, most dermatologists and psychiatrists interpret MD as a subtype of delusional infestation, a psychiatric disorder defined in the DSM-5 as the fixed belief of infestation without medical evidence [3]. This nosological ambiguity is further highlighted by the absence of MD in current diagnostic classifications, including ICD-11 and DSM-5 [4].

Epidemiological data suggest a low prevalence, with the CDC estimating 3.65 cases per 100,000 enrollees, predominantly affecting middle-aged Caucasian women [5]. Importantly, MD is associated with significant impairment in quality of life, with many patients reporting frustration and distress when their symptoms are attributed to psychiatric causes, a phenomenon often leading to “doctor shopping” [6].

Therapeutic approaches remain challenging. Atypical antipsychotics such as risperidone, olanzapine, and aripiprazole are frequently reported as effective in reducing symptom severity, often at low doses [7]. Cognitive-behavioral interventions may provide additional benefit, although robust clinical trials are lacking [8]. The scarcity of randomized controlled trials underscores the need for cautious, individualized treatment strategies.

In elderly patients, diagnostic and therapeutic dilemmas are even more pronounced. Delusional infestation and Morgellons-like symptoms may occur secondary to neurodegenerative processes, cerebrovascular disease, or medication effects. In our patient, neuroimaging confirmed frontotemporal atrophy and ischemic leukoencephalopathy, consistent with mixed dementia, which likely contributed to the emergence of psychosis. The patient’s somatic delusions of “wires” are phenomenologically similar to Morgellons disease but occurred in the context of advanced cognitive decline, supporting a secondary Morgellons-like presentation.

Management was complicated by frailty and sensitivity to antipsychotic side effects. Risperidone induced sedation and gait instability, a frequent concern in geriatric patients. Transition to olanzapine allowed partial stabilization, while memantine was introduced to support cognition. Dermatological examination was crucial to exclude primary skin lesions and avoid unnecessary interventions.

This case illustrates the clinical overlap between Morgellons disease and delusional infestation and emphasizes the importance of multidisciplinary assessment. Dermatological input excluded organic cutaneous disease, while psychiatric evaluation identified a delusional framework within a broader neurocognitive disorder. The case underscores the need for clinicians to balance validation of patients’ distress

with careful explanation of the psychiatric nature of symptoms, particularly in populations vulnerable to iatrogenic harm.

Finally, our report contributes to the limited literature on MD in elderly populations, highlighting how dementia-related psychosis can mimic Morgellons disease. Further research is needed to clarify pathophysiological mechanisms and develop evidence-based guidelines for management.

Conclusion

MD remains a controversial condition situated at the intersection of dermatology and psychiatry, with uncertain etiology and no standardized treatment guidelines. In this case, an elderly institutionalized woman with mixed dementia developed somatic delusions resembling MD. The absence of dermatological findings, along with neuroimaging evidence of vascular and degenerative pathology, supported the diagnosis of secondary Morgellons-like syndrome in the context of dementia-related psychosis.

This case highlights the diagnostic complexity of differentiating primary MD from delusional infestation in elderly patients with neurocognitive decline. It further emphasizes the importance of individualized pharmacological strategies, careful monitoring of side effects, and interdisciplinary collaboration. Increasing awareness of Morgellons-like presentations in vulnerable populations may facilitate earlier recognition, reduce unnecessary interventions, and improve patient-centered care.

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