Morgellons disease: insights into treatment

David Aung-Din[1] MS BS, Dev R Sahni[1] BS, Joseph L Jorizzo[1,4] MD, Steven R Feldman[1,2,3] MD PhD

Affiliations: [1]Center for Research, Department of Dermatology, Wake Forest University School of Medicine, Winston-Salem, North Carolina, USA, [2]Department of Pathology, Wake Forest School of Medicine, Winston-Salem, North Carolina, USA, [3]Department of Social Sciences & Health Policy, Wake Forest School of Medicine, Winston-Salem, North Carolina, USA, [4] Department of Dermatology, Weill Cornell Medical College, New York, New York, USA

Corresponding Author: Steven R. Feldman MD PhD, Department of Dermatology, Wake Forest School of Medicine, Medical Center Boulevard, Winston-Salem, NC 27157-1071, Tel: 336-716-7740, Fax: 336-716-7732, Email: sfeldman@wakehealth.edu

Abstract

Morgellons disease is a disfiguring and distressing condition. Patients commonly present with multiple, non-healing, cutaneous wounds. Patients report protruding fibers or other objects as the source and often provide samples to the clinician. Originally the etiology of this condition was broad and debated ranging from infectious to psychiatric. This article reviews current treatments and details our approach to treatment, aiming to aid clinicians with useful pharmacotherapy and adherence techniques when treating patients with Morgellons disease. Although current opinions have consolidated to the psychiatric spectrum, Morgellons treatment remains difficult and unstandardized with most evidence from retrospective reviews and a handful of case reports. Having considerable overlap with delusions of parasitosis, treatments have consisted of various antipsychotics and antibacterial wound care. Many antipsychotics have been selected owing to additional antipruritic or analgesic benefits. Generally, low-doses are used to minimize the risk of side effects. Risperidone or trifluoperazine can provide relief to patients especially when paired with adjuvant therapies, strong doctor-patient relationships, and a multidisciplinary approach.

Keywords: antipsychotics, disease, Morgellons, trifluoperazine, treatment

Introduction

Morgellons disease is a poorly understood and debilitating cutaneous disorder. The classical appearance is of multiple non-healing lesions, which are often ulcerated and superficially infected. Patients will self-report extrusion of fibers, hairs, or other materials from the skin and they;often present samples to the clinician [1,2]. Morgellons often includes additional somatic, neurologic, and psychiatric complaints including itching, fatigue, myalgias, burning, stinging, and foreign body sensation [1, 3, 4].

The term Morgellons was formally introduced in 2002 by biologist Mary Leitao [5]. Her son experienced recurrent bouts of itching with visible fiber protrusion from the skin, which she named Morgellons [5].

After the increased recognition of Morgellons in 2002, the number of cases has steadily increased [5]. This increase in inquiries led the Centers for Disease Control (CDC) to perform a large population study from 2006-2008 and whereas both infectious and psychiatric etiology has been proposed, the CDC was unable to identify an infectious link or endogenous fiber protrusion, establishing a psychiatric causation as the prevailing medical view [1, 2, 6]. Unfortunately regardless of etiology, this condition is recurrent, difficult to manage, and burdensome to both clinicians and patients.

The diagnosis and treatment of Morgellons remains a controversial topic. With an unclear etiology and multiple viewpoints regarding this condition, treatment guidelines are lacking [2-4, 7]. Mixed reports of antidepressant, antipsychotic, and anti-microbial therapies have been described; however, treatment is not standardized. The purpose of this commentary is to summarize the current effective treatments for Morgellons disease. The PubMed

database was searched using combinations of keywords Morgellons, disease, psychiatric, treatment, and infectious.

Various low dose antipsychotic agents are efficacious for Morgellons, especially when utilized in combination therapy (**Table 1**), [1-4, 7-9].

Table 1.*Summary of treatment modalities used in studies for Morgellons.*

References	Study Type	Subjects	Treatment	Outcome
Alfaris et al. [3]	Case Report	1	Topical clindamycin 1%, topical doxepin 5%, and soft splints	Improvement in skin lesions after one year. Patient denied any offer for psychiatric intervention
Freudenreich et al. [2]	Case Report	1	Initial risperidone 2mg QD one month Switched to aripiprazole 5mg QD	Complete resolution of physical and psychiatric manifestations after 1 year
Mohandas et al. [1]	Case Series	35 3 lost to F/U 1 declined Rx 1 unrelated death	All treated with topical antiseptic. 13 treated with an antipsychotic or antidepressant 14 treated with an antipsychotic and phototherapy 1 topical antiseptic only 2 antipsychotic or antidepressant and oral antibiotic	30 patients received treatment with follow-up 16 Stabilized (Patient experienced improvement with occasional "outbreak" of fibers) 14 Improved (Patient felt well with cessation of new lesions)
Ranka et al. [4]	Case Report	1	Risperidone 2mg QD, Olanzapine 0.5mg QD, and topical emollient QD	75% improvement in symptoms within 10 days
Reid and Lio [7]	Case Report	1	Pimozide 2 mg BID	Complete resolution of psychiatric and physical manifestations within 2 months
Robles et al. [8]	Case Series	3	**Patient 1** Doxycycline 100mg BID, desonide ointment, and hydrocolloid dressing. Follow up every 2-4 weeks and weekly telephone call from dermatology resident **Patient 2** Escitalopram, trazodone, risperidone, nortriptyline, CBT **Patient 3** Doxycycline 100mg BID and hydrocolloid dressing	**Patient 1** Complete resolution of physical symptoms after 9 weeks **Patient 2** Skin picking reduced from 10 hours to 30 minutes per day **Patient 3** Complete resolution of physical manifestations
Yan and Jorizzo [6]	Retrospective Review	24	Trifluoperazine at bedtime 1.9 and 2.3mg/d	1.9 mg/d achieved 50-90% improvement in 2.2 months 2.3 mg/d achieved greater than 90% improvement in 6.6 months
Yu et al. [5]	Case Report	1	Fexofenadine (unknown dose and frequency) and Aripiprazole (unknown dose and frequency)	At 2 weeks feelings of fibers and pruritic symptoms resolved but thoughts of protruding bugs remained

Legend: Summary of treatment modalities used in studies for Morgellons.
F/U= Follow-up, Rx= Prescription, CBT= Cognitive Behavioral Therapy, mg/d=milligrams per day, QD= Everyday, BID= Twice Daily

Both risperidone and trifluoperazine can alleviate symptoms and have placed patients in remission [1, 8].

In a retrospective review of 35 patients with Morgellons, 29 received treatment with an antiseptic wash and antipsychotic or antidepressant. In addition, adjunctive therapies included oral antibiotics and phototherapy. Out of 26 patients started on antipsychotics, 14 patients felt mentally well with complete cessation of new skin lesions. Additionally, 12 patients stabilized with improvement in skin and mental health, reporting only occasional outbreaks of fiber protrusion. The authors concluded that a combination of topical antiseptic, low-dose antipsychotic, and narrow band phototherapy was most beneficial. Low dose antipsychotics used included: quetiapine, risperidone, olanzapine, aripiprazole, and amisulpride. Risperidone was the most utilized medication starting at 0.5mg and titrating up to 2mg per day [1].

In another retrospective review of 24 patients with Morgellons, the effectiveness of a single typical low dose antipsychotic trifluoperazine was assessed by a single physician [8]. Overall, 7 patients returned to baseline and 15 achieved at least 50% improvement with treatment. The mean dose needed to achieve 50-90% improvement was 1.9mg/day, whereas the mean dose needed to obtain at least 90% improvement was 2.3mg/day. Regarding the time to improvement, 50% disease control was achieved in a mean of 2.4 months and 90% control was achieved at a mean of 6.6 months. The median overall dose for baseline function was 2mg/day, achieved at a mean of 10 months [8].

Discussion

Although these results are promising, initiation of antipsychotics is a hurdle in itself. Many patients with Morgellons remain unconvinced of the psychiatric component of the disorder [1, 2]. Fixated beliefs can preclude treatment with an antipsychotic. To help patients overcome this barrier, clinicians can highlight the additional analgesic and antipruritic effects of some antipsychotics, acknowledge the impactful nature of symptoms, and avoid characterization of the disorder as delusional in nature. These techniques can lessen stigma and help build rapport with patients [1, 9].

Ultimately, low dose antipsychotics are frequently utilized for Morgellons and adjunct therapy with antibiotics, corticosteroids, and phototherapy may be beneficial [1, 10]. However, the treatment of Morgellons extends beyond a simple medication prescription. Co-existing depression, anxiety, and substance use disorder are commonly present in these patients and frequently complicate management [7]. A strong physician-patient relationship and team-based approached can be beneficial in these situations. When Morgellons patients were treated in a multidisciplinary clinic, 40% of patients experienced significant or complete resolution of skin symptoms [1]. Frequent and recurrent follow-up is also crucial. Phone calls once per week, 2-4 week follow up, and checks of medication adherence can improve treatment success [10].

Our approach utilizes low dose trifluoperazine (Stelazine) at bedtime. Although psychiatric doses for psychosis start at 2-4mg/day and can increase to a max of 40mg/day, our approach does not exceed 1-3mg/day, with 4mg being used in extremely rare situations [11]. With this low dose, side effects associated with higher doses (i.e. extrapyramidal symptoms (EPS), tardive dyskinesia, ocular symptoms) have not been reported [8, 11]. To begin, a therapeutic contract is discussed with the patient and expectations are set to allow at least one month before symptom improvement. If patients have a history of abnormal cell counts a complete blood count (CBC) is ordered. If prescribed other psychiatric or interacting medications, initiation is cleared with the patient's other prescribing physician. Patients are then started on 1mg/day at bedtime. If this dose is well-tolerated and patients' skin or other distressing symptoms have not improved they may increase to 2mg/day. If, after 2 months, patients remain symptomatic the dose can be increased to 3mg/day and in rare occasions 4mg/day has been used on subsequent follow-up. Our therapeutic endpoint is improved skin destruction/disfigure-

ment as well as patient attestation of a return to their normal/baseline or improved quality of life. After patients have been stabilized they are followed every 3-4 months and queried for any problems with the medication, visual changes, or EPS. If discontinuation of the medication is desired, a slow wean can be attempted with a taper of no more than 1mg/month. If symptoms return the taper is discontinued and patients are maintained on their minimum effective dose.

Conclusion

In this commentary we summarize treatments used for Morgellons disease and detail our low dose approach. However, although antipsychotic medications are efficacious for Morgellons, the social and psychological barriers for these patients are often difficult to overcome. Furthermore, initiation may require multiple attempts and close follow-up before success is achieved.

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