

UNUSUAL FINDINGS IN MORGELLONS DISEASE AND DELUSIONS OF PARASITOSIS

Abstract

We are presenting four new cases of delusions of parasitosis, two of which also had features of Morgellons disease. They illustrate the difficulties in therapy of these patients and the almost universal refusal to accept a psychiatric component. Two of the patients responded to treatment while two did not. Of the two responders one was lost to follow up. The recommended treatments of pimozide, lexapro, or risperdone are examined. These rare diseases continue to pose a rigorous challenge to the dermatologic community.

Introduction

The skin and psychiatric disorder known as delusions of parasitosis is a monosymptomatic psychosis manifested by the fixed false belief that insects are crawling over the skin or erupting from body parts including eyes, ears, scalp, or genitalia(1,2). Morgellons disease is a closely related disorder or subset in which the patients observe strings of white material coming out of the skin. In the following report two of the patients showed features of both disorders at the same time.

We have recently been referred a number of patients with delusions of bugs, strings, or just crawling sensations in the skin wherein no infection, parasite, or other tangible factor could be ascertained as the cause of the afflictions as believed by the patients. This is the first report of a patient who stated she saw a tiny statue of an elephant emerging from the skin on her leg. Previously, the same patient who had brought in samples of debris (Photo 1) had also brought in a bedbug (Photo 2). This finding further complicated the diagnosis and treatment (which to this day has not been successful). The four patients we describe exhibit the successes and difficulties encountered in therapy of these disorders which range from much success to lack of any response at all. Another patient was using a type of electric pulse machine to kill the “demodex bugs” she insisted were coming out of her skin, eyes, nose, and

genitalia. This is the first report of a patient using such a machine in search of relief from the delusions of parasitosis. The treatment was initiated by the patient herself after consultation and recommendation by a holistic healer.

A third patient illustrates that notable improvement of symptoms can be attained in therapy with psychotropic drugs, in this case, risperidone. All of the patients reported herein described a traumatic experience in their lives which very likely acted as a precipitating cause. Such precipitating factors have been previously described as operative in these diseases (1). The fourth patient was the only male in our current series, and he showed the fastest clinical response, possibly because his symptoms were the mildest to begin with.

Case report #1

A 54-year-old Caucasian female was referred by another dermatologist for evaluation of delusions of parasitosis. She complained that demodex mites were on her scalp, face, eyelashes, and genitalia, causing her disturbing, crawling, sensations. The patient indicated that six months previously she first saw demodex mites all over her body wherever hair was distributed. She felt she contracted the infection from her pet ferrets while staying in motel rooms on a journey eastward from her home state in the western U.S. She was travelling due to failure in her business ventures which had plummeted due to the economy and came as a source of great concern. She voiced fears the mites might cut off her breathing and kill her as they were “exploding” in her nose as well as hair, ears, eyes, torso and genitalia. She started shaving her eyebrows and eyelids. (Photo 3). The itching in the scalp resulted in excoriations from scratching. (Photo 4). In the previous six months she had been treating herself with several topical creams and solutions including permethrin prescribed by one of a number of dermatologists she had consulted with no success. Additional treatments she tried were clobex spray, clobetasol solution, and tea tree oil. She had also consulted a holistic medical practitioner on the advice of a friend, who recommended using a machine with a radiofrequency generator of 33 MHz, broadcasting waves when strapped to her skin to electrocute the mites. (Photo 5). The patient felt that the mites were electrocuted by the machine’s waves but that the eggs laid by the mites were not affected which necessitated her to keep repeating the treatments.

History

The history was negative for prior heart disease, diabetes, or hypertension

Physical Examination

Physical examination revealed a thin and haggard looking, highly agitated 54-year-old female. Complete skin examination revealed a few excoriations on the forehead and scalp. There were no mites, lice or other parasites detected. The eyelids and eyebrows were shaved (Photo 3). The wrists showed contact dermatitis bilaterally where she had strapped on the “broadcast wave machine” (Photo 6). The eyebrows and eyelids were shaved off with no visible mites. Examination of the genitalia revealed she was clean shaven with no visible mites.

Diagnosis Treatment and Followup

Based on the clinical presentation and physical examination the patient was diagnosed with delusions of parasitosis. The patient was offered extensive testing and consultation with social service, psychology and psychiatry but she refused because she was adamant in her belief that there was no psychiatric element and she wished to return home hoping to obtain treatment there and to resuscitate her business. She felt numerous financial issues were paralyzing her judgment. She was given Taclonex scalp solution samples as she claimed she had no funds to purchase any medication. She refused pimozide or risperidone therapy. She called several times thereafter to report dissatisfaction in finding any physician help in her home city or state and was lost to followup.

Case report #2

A 66 -year-old female was referred by another dermatologist for delusions of parasitosis. She presented with a body rash that she first noticed in 2011, and started self-treatment with over the counter medications, including allegra and eucerin lotion with no improvement at all. In June 2013 after a cholecystectomy she noticed that the rash was all over her body and saw a “dead fly” in her stool and believed it came out of her body and not anywhere else, but denied use of any medication treatment to relieve the symptoms at that time. She had been pulling out the “hard substances and strings” in her skin with a tweezers and she voiced that she used a pumice stone for roughness on her elbows and legs to “soften” her skin. The elbow lesions were previously diagnosed as psoriasis. Between 2011 and 2014 she had seen 12 dermatologists. One of them diagnosed spongiotic dermatitis and prescribed Bactrim, Clindamycin lotion, and Clobetasol ointment. Another dermatologist told her it was all nerves and that she needed a psychiatrist. This angered her and she kept on going to additional dermatologists. She was seen by psychologist in 2006 after a beauty treatment that she states caused her loss of hair. She has been under the pain management care since 2006 for spinal stenosis with intractable back pain which she was told could not be operated on since her skin condition was extensive and precluded surgery. (Photo 7).

105

106 Past medical and surgical history

107

108 She had a malignant melanoma of the left inner thigh removed in 2009 with no
109 recurrence, as well as a squamous cell cancer of the skin. In addition she had
110 spinal stenosis, a herniated disc of the neck with nerve damage, and a torn meniscus.
111 She suffered from recurrent herpes simplex infection of the buttocks for years and took
112 valtrex when needed.

113 Surgeries:

114 Cholecystectomy 2013

115 Arthroscopic Meniscus Repair 2010

116 Lipoma excision 2006

117 Excision and removal of melanoma 2009

118 Hysterectomy

119

120

121 Medications: Endocet, zanaflex, restoril, Xanax, Elavil, Lidoderm patches, Compazine,
122 Lipitor, Protonix, valtrex, Pataday eye drops, diflucan, calcium, senna, amitriptyline,
123 clobetasol ointment.

124

125 Several skin biopsies were taken by several different dermatologists with the following
126 reports:

127

128 1. October 4, 2013 right lower medial leg biopsy showed: subtle changes possibly
129 of an interface dermatitis. Some of the dyskeratosis could be due to scratching.

130

131 2. November 5, 2013, two biopsies were taken : Left forearm biopsy showed :
132 resolving spongiotic dermatitis/eczema. Right lower leg showed: non-specific
133 epidermal erosion and necrosis.

134

135 3. December 18, 2013 three biopsies were taken. Right forearm showed: solar
136 damaged skin with no inflammatory infiltrate. Not otherwise diagnostic. Right
137 lower leg showed: traumatized skin with early cicatrix formation. No evidence of
138 any inflammatory dermatosis. Left thigh showed parakeratosis not otherwise
139 diagnostic. No inflammatory infiltrate.

140

141 4. January 9, 2014 pathology exam of material submitted by the patient showed
142 scale, crust and retractile foreign material possibly cloth.

5. March 20, 2014 biopsy from the left thigh showed no parasites, purulent scale and crust with fragments of necrotic material. A few foreign particles were noted possibly representing fibers from bandages or clothing.
6. May 22,2014 pieces of debris which were brought in by the patient and were sent to pathology biopsy for analysis. Pathology reported portions of arthropod which was diagnosed to be a bed bug, and separate fragments of plant material.
7. July 10,2014 skin from the left elbow showed benign verrucoid keratosis . No evidence of parasites .

Physical Examination

Physical exam revealed bilateral elbows with localized well circumscribed patches and hyperkeratotic plaques with overly diffuse scales. The scale was shiny and silvery. (Photo 8). Multiple reddish papules, plaques, purpura and excoriations were seen on the arms and legs. (Photo 7) .

Diagnosis Treatment and Followup

Based on the clinical presentation and physical exam the patient was diagnosed with delusions of parasitosis and Morgellons disease. She was referred to a social worker/ therapist to discuss the myriad of her life problems including loss of finances in a business transaction gone awry, a precipitous, often troublesome, long term relationship with a boyfriend, and an annoying bothersome neighbor. She was unable to take one of the medications for delusions/Morgellons such as risperidone or pimozide due to poor interactions with the pain medication regimen she required for long term back pain. Escalipotram (Lexapro) had been prescribed by another physician but the patient claimed she was unable to take it because it didn't agree with her. She was referred to a psychiatrist specializing in psychopharmacology to assist in obtaining a potentially relevant medication that would not interfere with her pain management therapy. Topically, she was treated with kenalog ointment, emollients, and Sarna lotion. She

177 was given supportive biweekly therapy in the dermatology office, and after two months
 178 reported feeling somewhat better but still felt she needed a tweezer to remove
 179 occasional strings coming out of her skin. At this writing she has been under
 180 psychologic counseling but has as yet to consult with a psychopharmacologist. At the
 181 last followup visit she reported thousands of white shreds falling off her body in the
 182 shower and had to remove a tiny statue of an elephant which was protruding out of the
 183 skin on her leg. At the time of the last office visit she pricked an erosion in the skin of
 184 her arm which caused bleeding and required bandaging. She is still awaiting to consult
 185 with a psychopharmacologist but claims she has made an appointment.

186

187

188 Blood work from August 2013 , WNL including CBC Chem screen ANA and hepatitis
 189 profile. Stool for ova and parasites was negative.

190

191

192 Case report #3

193 A 65 year old African American female was seen by several dermatologists for a year
 194 with no improvement and was referred to our clinic for further evaluation of the feeling
 195 that “bugs are crawling on me”. She felt that the bugs were getting into her organs. In
 196 addition she found fibers jumping out of her skin. She was convinced she had scabies.
 197 To get rid of the bugs she vacuums several times throughout the day, air dries her
 198 clothing on the balcony and avoids close contact with other people as much as possible.
 199 For the past year she has been treating herself with over the counter medications and
 200 topical creams including Permethrin prescribed by one of the dermatologists she had
 201 consulted with no success. She verbalized that she has a psychiatrist but she has not
 202 discussed the above problem with him. At times she was tearful and felt the bugs were
 203 interfering with her life.

204 History

205 The history revealed asthma and hypertension

206 Physical Examination

207 Skin examination revealed no evidence of scabies or mite infestation.

208 Diagnosis Treatment and Followup

Based on the clinical presentation and physical exam the patient was diagnosed with delusions of parasitosis with some features of Morgellons disease. The patient and the psychiatrist were agreeable to treatment with risperidone 0.5 mg bid. In addition the patient was given emollients and kenalog cream. Within 3 weeks there was marked improvement and the patient was troubled little by any crawling sensations. At the present time the dosage of risperidone has been reduced to 0.25 mg hs and she continues to be followed in the dermatology clinic. She seems pleasant and cheerful.

Case report #4

A 73 year old male was referred from a large medical school dermatology practice for treatment of delusions of parasitosis. The patient complained of itching and bugs crawling on the legs arms and trunk. He felt he was been bitten by the bugs. He also stated that he saw "white stuff coming out of the skin". He said the problem started when he changed his old mattress. He saw black spots on the new mattress and decided he had bed bugs. The patient first saw his PCP and received five treatments of permethrin cream with no improvement. He then went to a medical center dermatologist complaining of white mites on the skin and under the fingernails which caused him to scratch. Hydroxyzine prescribed by a previous dermatologist did not help. The onset of the sensation of been bitten by bugs coincided with the time he was diagnosed with liver cancer. He had a history of hepatitis A,B and C and cirrhosis of the liver which is now being considered for a treatment. He is on a waiting list for a liver transplant. Examination revealed scattered excoriations on the legs with a few two to three mm papules. See photo (9). A biopsy of one papule on the right thigh was performed.

The results of the biopsy showed no evident of parasites. The final diagnosis was crusted granulation tissue. The changes were consistent with trauma .

Based on the history and physical findings the diagnosis of delusions of parasitosis with features of Morgellons disease was made. The patient was treated with triamcinolone cream.1% b.i.d., lexapro 20mg at night, and xyzol 5mg in the morning. The patient returned 3 weeks later and reported improvement.

The patient was told to continue treatment and to follow up in a month.

242

243

244 Discussion

245 Delusions of parasitosis has also been referred to as Ekbom's syndrome, or
246 dermatophobia (3). It is a monosymptomatic psychotic delusion that the patient is
247 infested with parasites (bugs, mites, demodex, parasites, etc.) Morgellons patients
248 suffer the delusion that fibers or strings are coming out of their skin (patient 2). Although
249 the two diseases are different in this regard our patients showed overlap.

250 These four cases illustrate the complexities and difficulties in treatment of patients with
251 delusions pertaining to the skin. They also illustrate that features of Morgellons disease
252 can also be present at the same time as symptoms of delusions of parasitosis. The first
253 patient illustrates the self usage of an electric powered machine for relief of symptoms
254 which has never before been reported.

255 Although it has been reported that these diseases can remit on their own without
256 intervening psychotropic care, that was not the sequence observed in the patients we
257 presented (4). There is wide disparity in severity of the patients' symptoms which
258 possibly accounts for the responses to therapy. Lepping and Freudenmann (3)
259 indicated pimozide has too many adverse reactions to be considered as the treatment
260 of choice for delusions of parasitosis, although it has been shown to be effective in
261 some patients (5). Among the potential serious side effects of pimozide are cardiac and
262 extrapyramidal abnormalities. Elmer et al (6) indicated that risperidone should be
263 considered as the first treatment of choice although in our second patient we were
264 unable to prescribe this drug due to interactions with the patient's pain medications.
265 Previously (1) lexapro was used in several patients with less severe symptomatology
266 which led us to use this antidepressant in the fourth patient.

267

268

269 Summary

270 Four patients are described who fit the picture of Morgellons disease and/or delusions
271 of parasitosis. Only one was male indicating the preponderance of reported females in
272 this syndrome (1,4). Two of the three women did not benefit from treatment to date.
273 One of them moved to another state, and refused all medications while under our care
274 fearing side effects. The second of these two has so far been unable to take pimozide,
275 or risperidone due to her complicating medical conditions and medications. She

276 indicated she was previously given lexapro which disagreed with her. The third patient
 277 showed marked improvement in symptoms after a month of risperidone therapy coupled
 278 with weekly supportive visits to the clinic. Her skin remains clear. These patients
 279 illustrate the wide disparity in presentation of history, signs, and symptoms as well as in
 280 the success/failure ratio in treatment responses in these disorders.

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296 Legends and Photographs



297

298 Figure 1 photograph of debris brought in by patient 2 (the matchbox sign). Pathology analysis revealed
299 only debris.

300

301 .

302



Figure 2 photograph of bedbug brought in by patient 2 and confirmed by pathology lab.

315

316



317

318 Figure 3 Photograph of shaved eyebrows patient 1.

319

320

321

322

323



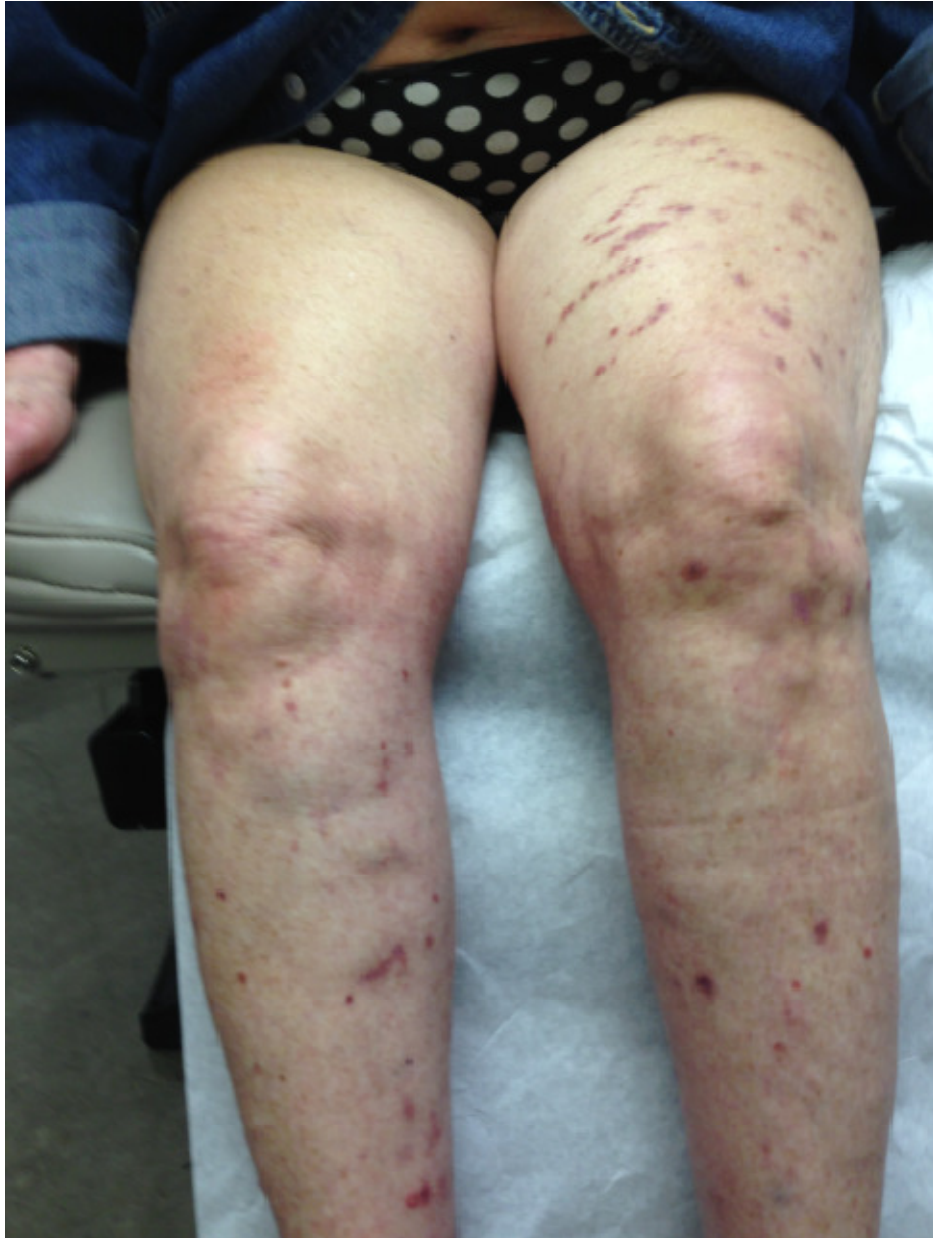
Figure 4 photograph of scalp excoriations patient 1.



Figure 5 Photograph of radiofrequency machine used to kill parasites patient 1.



Figure 6 photograph of contact dermatitis from machine hookup to wrists and arms of patient 1.



345

346

347 Figure 7 photograph of the legs of patient 2 after attempting to remove “strings” and “statues” out of
348 her skin with a tweezer.

349

350

351

352



353

354 Figure 8 photograph of elbows of patient 2.

355

356

357

358

359

360

361

362



363

364 Figure 9 photograph of excoriated skin on leg patient 4.

365

366

367

368

369

370

371

372

373

374

375 REFERENCES

376

- 377 1. Fellner, MJ . New findings in delusions of parasitosis. Skinmed. Mar-
378 Apr2012;10(2):72-4. (Medline)
- 379 2. Robles DT, Romm S, Combs H, Olsen J, Kirby P. Delusional disorders in
380 dermatology: a brief review. Dermatology Online Journal 14(6):2, 2009.
381
- 382 3. Lepping, P., Freudenmann, R.W. Delusional parasitosis: a new pathway for
383 diagnosis and treatment. Clinical and Experimental Dermatology ,2007 ; 33:
384 113-117.
385
- 386 4. Scheinfeld NS, Delusions of Parasitosis Treatment and Management,
387 <http://emedicine.medscape.com/article/1121818>. Feb 7,2014
388
- 389 5. Koblenzer CS: Pimozide at least as safe and perhaps more effective than
390 olanzapine for treatment of Morgellons disease. Arch Dermatol 2006;
391 142(10):1364
392
- 393 6. Elmer KB, George RM, Peterson K. Therapeutic update: use of risperidone for
394 the treatment of monosymptomatic hypochondriacal psychosis. J Am Acad
395 Dermatol 2000 Oct: 43(4):683-6.
396
397

398