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EDITORIAL

Finally, successful interventions to ameliorate cutaneous infestations

In the last decade, we have encountered numerous patients presenting with a very complex dermopathy where the patients complain of the presence of a cutaneous infestation with parasites and other microbes, spontaneous ulcerations, and the symptoms of crawling, biting, stinging, itching, and burning. Some individuals only experience the extrusion of black, brown, or white dots or fibers from the skin's surface. Intensive efforts have been directed to identify the origin of this infestation. We carefully examined the material brought by the patients, performed skin scrapings for microscopic analysis, and, on many occasions, proceeded to biopsy the skin for histologic visualization. We could not identify the infesting organisms; similar studies of this unexplained dermopathy have been reported in the past with identical results (1). Our patients suffer tremendously from the severe discomfort of the infestation and the disbelief they encounter in treating physicians, compounding their anguish. For years, we experimented with a combination of treatments, including a variety of anti-parasitic and antibiotic agents, with discouraging results until we came across reports of several older FDA-approved psychiatric medications that were repurposed as potent antimicrobials (2–6). Indeed, these medicines that had been used in the past by psychiatrists were found to combat parasites (7–14), bacteria (15–23), fungi (24–29), tuberculosis (30–32), viruses (33–40), and even cancer (41). In a landmark article by Feldman (42), this investigator discussed these drugs' putative antiparasitic mechanism of action, describing how they can disrupt this vexing infestation.

We were surprised when we saw positive results when incorporating these medications into the treatment regimens. After a few months of therapy, our patients noticed a marked improvement in all their symptoms; for example, subjects who had isolated themselves from family members for fear of spreading this terrible disease were able to return to their normal lives. We treated them with different drugs, sometimes combining them with a weekly 3 mg dose of ivermectin and/or 3 gm/day of gabapentin. The medication selection was based on the patient's tolerance, considering possible side effects, and on occasions, having to try different ones. Approximately 70% of our patients were free of infestations, although the time required for this varied between less than a month to a whole year or more. Of all the medicines tried, aripiprazole in doses between 2 mg and 20 mg daily was the most effective treatment, followed by trifluoperazine (2–6 mg a day), pimozide (1–4 mg a day) and risperidone (0.5–2 mg a day); the doses required mainly were much lower than those prescribed for psychiatric diseases. We did encounter resistance from patients to take psychiatric medications that were originally approved for schizophrenia. Some refused to try these drugs since, after all, they did not have schizophrenia; they were unable to understand that these drugs had been recently found to have a wide range of effects beyond schizophrenia, including their effectiveness against a whole host of microbes, including fungi and parasites, as mentioned above. This is understandable, but by avoiding these medicines, their infesting disease continued uncontrolled. Additional medications, such as olanzapine and lurasidone, may also be very effective.

An additional fortuitous observation that we encountered was that patients who were taking prescribed stimulants such as amphetamines for attention deficit disorder (ADD) would respond much less or not at all to our treatment regimen. We cannot be certain, but these stimulants either interfere with the therapeutic effect of the antiparasitic medicines or somehow facilitate the infestation. Those patients who agreed to discontinue prescribed amphetamine salts were found to resolve the cutaneous infestations with the above-mentioned medications; however, we encountered very significant resistance from most subjects to stop the amphetamine salts. We caution treating health providers on the necessity of having this discussion with their patients, offering them the choice between continuing with the infestation or switching to a non-amphetamine treatment for ADD, or, better yet, discontinuing it altogether. We also observed that cocaine, even used sporadically, prevented patients from improving, probably in the same manner as the amphetamines or through other mechanisms as suggested in a prior report (42).

Patients who present with this very disturbing infestation suffer tremendously, leading to significant distress, anxiety, depression, and a disruption of family life. This is very understandable; who would not be stressed by experiencing an infestation with an organism that has not been identified? Until the disease is under control, we urge our colleagues to address these devastating symptoms and refer the patients to a mental health provider who can assist with the emotional suffering.

Unfortunately, dermatologists, in general, are not experienced in using these medicines and shy away from prescribing drugs that until now were mostly used by psychiatrists. Although these drugs are very safe, we were fortunate to have a consulting psychiatrist who helped with the dosing and assessment of these antipsychotics, as well as addressing the emotional aspects of this disease. The latter was of much help in maintaining the patients' mental health during the treatment until the resolution of the infestation, as highlighted in a previous publication (42).

We urge our colleagues to take these patients and their disease seriously, especially considering the availability of successful treatment regimens.

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