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DELUSIONAL INFESTATION: RECOGNITION IN DERMATOLOGY PRACTICE AND DIFFERENTIAL DIAGNOSIS

INFESTAÇÃO DELIRANTE: RECONHECIMENTO NA PRÁTICA DERMATOLÓGICA E DIAGNÓSTICO DIFERENCIAL

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ABSTRACT

Delusional infestation is characterized by a fixed belief of infestation by living organisms or inanimate material despite the absence of adequate medical evidence. Patients commonly seek dermatologic rather than psychiatric care and may present with excoriations, erosions, ulcers, scars, alopecia, irritant dermatitis, and carefully collected specimens. The diagnosis is clinical and should be made only after a respectful, proportionate evaluation excludes true infestation, primary dermatoses, systemic or neurologic causes of pruritus and formication, substance exposure, medication effects, and other psychiatric disorders. This narrative review addresses recognition, differential diagnosis, consultation technique, investigations, treatment, and safety. The first encounter should validate suffering without confirming the proposed infestation, examine the skin and submitted material, document morphology and distribution, and establish a longitudinal therapeutic alliance. Testing is guided by history and examination rather than repeated indiscriminate sampling. Primary delusional infestation is treated principally with an antipsychotic selected according to age, metabolic risk, cardiac risk, extrapyramidal vulnerability, interactions, and patient acceptability; risperidone, olanzapine, aripiprazole, and amisulpride are commonly reported options. Pimozide is no longer a routine first choice because of cardiac and extrapyramidal toxicity. Evidence consists

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largely of case series and observational cohorts, and no placebo-controlled randomized trial establishes superiority of one drug. Dermatologic wound care, treatment of secondary infection or dermatitis, reduction of hazardous eradication behaviors, psychiatric collaboration, and monitoring for metabolic and neurologic adverse effects are integral. Urgent action is required when self-injury, pesticide toxicity, fire risk, psychosis affecting dependents, or suicidality is present. A neutral, evidence-based approach permits diagnostic rigor while preserving the relationship needed for effective care.

Keywords: Delusional Infestation. Delusional Parasitosis. Psychodermatology. Formication. Antipsychotics. Differential Diagnosis.

RESUMO

A infestação delirante é caracterizada por uma crença fixa de infestação por organismos vivos ou material inanimado, apesar da ausência de evidências médicas adequadas. Os pacientes comumente procuram atendimento dermatológico em vez de psiquiátrico e podem apresentar escoriações, erosões, úlceras, cicatrizes, alopecia, dermatite irritativa e espécimes cuidadosamente coletados. O diagnóstico é clínico e deve ser feito apenas após uma avaliação respeitosa e proporcionada que exclua infestação verdadeira, dermatoses primárias, causas sistêmicas ou neurológicas de prurido e formicação, exposição a substâncias, efeitos de medicamentos e outros transtornos psiquiátricos. Esta revisão narrativa aborda reconhecimento, diagnóstico diferencial, técnica de consulta, investigações, tratamento e segurança. O primeiro contato deve validar o sofrimento sem confirmar a infestação proposta, examinar a pele e o material submetido, documentar a morfologia e distribuição, e estabelecer uma aliança terapêutica longitudinal. Os testes são guiados pelo histórico e exame clínico, em vez de amostragem indiscriminada repetida. A infestação delirante primária é tratada principalmente com um antipsicótico selecionado de acordo com idade, risco metabólico, risco cardíaco, vulnerabilidade extrapiramidal, interações e aceitabilidade do paciente; risperidona, olanzapina, aripiprazol e amisulprida são opções comumente relatadas. Pimozida não é mais uma escolha rotineira de primeira linha devido à toxicidade cardíaca e extrapiramidal. As evidências consistem amplamente em séries de casos e coortes observacionais, e nenhum ensaio clínico randomizado controlado por placebo estabelece a superioridade de um medicamento. Cuidados dermatológicos de feridas, tratamento de infecção secundária ou dermatite, redução de comportamentos perigosos de erradicação, colaboração psiquiátrica e monitoramento de efeitos adversos metabólicos e neurológicos são integrais. Ação urgente é necessária quando autolesão, toxicidade por pesticidas, risco de incêndio, psicose afetando dependentes ou suicidalidade estão presentes. Uma abordagem neutra e baseada em evidências permite rigor diagnóstico enquanto preserva o relacionamento necessário para o cuidado eficaz.

Palavras-chave: Infestação Delirante. Parasitose Delirante. Psicdermatologia. Formicação. Antipsicóticos. Diagnóstico Diferencial.

RESUMEN

La infestación delirante se caracteriza por una creencia fija de infestación por organismos vivos o material inanimado a pesar de la ausencia de evidencia médica adecuada. Los pacientes comúnmente buscan atención dermatológica en lugar de psiquiátrica y pueden presentar excoriaciones, erosiones, úlceras, cicatrices, alopecia, dermatitis irritante y especímenes cuidadosamente recopilados. El diagnóstico es clínico y debe realizarse solo después de una evaluación respetuosa y proporcionada que excluya infestación verdadera, dermatosis primarias, causas sistémicas o neurológicas de prurito y formicación, exposición

a sustancias, efectos de medicamentos y otros trastornos psiquiátricos. Esta revisión narrativa aborda el reconocimiento, diagnóstico diferencial, técnica de consulta, investigaciones, tratamiento y seguridad. El primer encuentro debe validar el sufrimiento sin confirmar la infestación propuesta, examinar la piel y el material enviado, documentar la morfología y distribución, y establecer una alianza terapéutica longitudinal. Las pruebas se guían por el historial y el examen clínico en lugar del muestreo indiscriminado repetido. La infestación delirante primaria se trata principalmente con un antipsicótico seleccionado según la edad, el riesgo metabólico, el riesgo cardíaco, la vulnerabilidad extrapiramidal, las interacciones y la aceptabilidad del paciente; risperidona, olanzapina, aripiprazol y amisulprida son opciones comúnmente reportadas. La pimozida ya no es una opción rutinaria de primera línea debido a la toxicidad cardíaca y extrapiramidal. La evidencia consiste en gran medida en series de casos y cohortes observacionales, y ningún ensayo clínico aleatorizado controlado con placebo establece la superioridad de un medicamento. El cuidado dermatológico de heridas, el tratamiento de infección secundaria o dermatitis, la reducción de comportamientos peligrosos de erradicación, la colaboración psiquiátrica y el monitoreo de efectos adversos metabólicos y neurológicos son integrales. Se requiere acción urgente cuando hay autolesiones, toxicidad por pesticidas, riesgo de incendio, psicosis que afecta a dependientes o suicidalidad. Un enfoque neutral basado en evidencia permite el rigor diagnóstico mientras se preserva la relación necesaria para la atención efectiva.

Palabras clave: Infestación Delirante. Parasitosis Delirante. Psicodermatología. Formicación. Antipsicóticos. Diagnóstico Diferencial.

1 INTRODUCTION

Delusional infestation (DI), historically termed delusional parasitosis, is a psychotic disorder in which a person remains convinced that the body, skin, clothing, or environment is infested despite the absence of medical evidence sufficient to support that conclusion. The perceived agent may be an insect, mite, worm, fiber, fungus, biofilm, or an undefined material. Abnormal sensations such as crawling, biting, stinging, or movement are common, but the defining feature is not formication alone; it is the fixed interpretation that infestation is present and the resistance of that belief to appropriate contrary evidence.[1–4,14]

Dermatology occupies a central position because patients usually seek validation and eradication rather than psychiatric assessment. They may consult multiple clinicians, laboratories, veterinarians, or exterminators and bring dust, lint, skin fragments, fibers, or photographs as proof. The traditional label 'matchbox sign' has been replaced by 'specimen sign' because samples now arrive in bags, adhesive tape, containers, or digital images. Secondary skin damage can be extensive and may make the original absence of primary lesions difficult to recognize. Repeated rejection or premature confrontation can end care and intensify hazardous self-treatment.[2–5,15]

The dermatologist must balance two obligations. One is diagnostic: genuine scabies, pediculosis, environmental arthropods, neuropathic itch, systemic disease, intoxication, withdrawal, medication effects, and other psychiatric syndromes must not be dismissed. The other is relational: unnecessary investigations, anti-infective treatment, or pest-control advice can reinforce the belief and expose the patient to harm. A structured approach permits adequate exclusion of alternatives without entering an endless cycle of tests.[1,3,6]

DI may be primary, occurring as a delusional disorder without another explanatory condition, or secondary to a psychiatric illness, medical or neurologic disorder, prescribed drug, or substance use. This distinction matters because secondary DI requires treatment of the underlying cause in addition to control of the delusion. It is often provisional at the first visit and should be refined as collateral history, laboratory results, medication review, and longitudinal observation become available.

2 OBJECTIVE

To provide a clinically practical review of DI for dermatology practice, emphasizing diagnostic recognition, a disciplined differential diagnosis, proportionate investigation,

communication, pharmacologic and dermatologic management, monitoring, and prevention of harm.

3 METHODS

A structured narrative review was performed using major psychodermatology reviews, the 2022 British Association of Dermatologists guideline, systematic reviews of treatment, diagnostic-workup publications, and clinically informative cohorts and case series available through September 2026. Priority was given to sources addressing adult diagnosis, secondary causes, antipsychotic outcomes, and the dermatology consultation. Because randomized controlled evidence is absent and observational reports use heterogeneous definitions and outcome measures, treatment findings are interpreted descriptively rather than as comparative efficacy estimates.

4 RESULTS AND DISCUSSION

4.1 CLINICAL RECOGNITION IN THE DERMATOLOGY OFFICE

A characteristic presentation combines a detailed account of infestation with intense conviction, repetitive inspection or removal behavior, and little objective evidence of a causative organism. Patients may describe a life cycle, route of entry, spread through the household, or material emerging from the skin. Sensations are genuinely experienced even when their explanation is delusional. Sleep, work, relationships, and finances may be severely affected. The patient may wash repeatedly, shave hair, apply occlusive dressings, dig with instruments, or use alcohol, bleach, kerosene, veterinary products, insecticides, heat, or fire.[1–4,16]

Cutaneous findings are usually secondary and vary with access by the dominant hand. Excoriations, geometric erosions, ulcers, crusts, scars, post-inflammatory pigment change, lichenification, irritant or allergic contact dermatitis, and localized alopecia may coexist at different stages. Areas that are difficult to reach can be relatively spared. A primary inflammatory morphology, a burrow, an attached arthropod, lice or nits, or a reproducible environmental exposure argues for an alternative or concurrent diagnosis. DI and genuine skin disease can coexist; discovering dermatitis does not automatically explain a fixed infestation belief, and diagnosing DI does not make every new lesion psychogenic.[3,5,6,17]

The specimen should be received respectfully and examined with the patient when feasible. Dermoscopy and low-power microscopy often identify lint, hair, keratin, dried

exudate, plant matter, or nonpathogenic arthropod fragments. Clinically plausible material can be sent to microbiology, parasitology, or entomology with a specific question. The result should be explained clearly and incorporated into a positive plan. Repeatedly analyzing equivalent material after adequate evaluation rarely changes diagnosis and can strengthen checking behavior; limits should therefore be kind, consistent, and documented.[18]

Several features raise suspicion for secondary rather than primary DI: abrupt onset; younger age with stimulant exposure; late onset with cognitive or neurologic change; fluctuating attention; visual hallucinations; disorganization; marked mood symptoms; temporal association with a medication; and systemic symptoms suggesting renal, hepatic, endocrine, hematologic, infectious, or nutritional disease. Shared DI should be considered when a close contact develops the same belief through relational influence. Each person requires an independent assessment, and the index patient's treatment is central.[1,2]

Table 1

Clinical features that support recognition of delusional infestation

Domain	Typical finding	Interpretive caution
Belief	Fixed conviction of infestation despite adequate contrary evidence	Formication without a fixed explanation is not DI
Description	Crawling, biting, stinging, fibers, organisms, eggs, or material emerging from skin	The perceived agent may be living or inanimate
Skin	Excoriations, erosions, crusts, ulcers, scars, dermatitis, or alopecia without a coherent primary infestation pattern	True dermatosis and DI can coexist
Specimens	Lint, keratin, hair, crust, dust, or photographs repeatedly presented as proof	Clinically plausible material still deserves respectful examination
Behavior	Repeated checking, cleaning, extraction, pesticide use, doctor shopping, or environmental disruption	Behavior may create genuine lesions and toxic exposure
Insight	Alternative explanations are rejected or only briefly entertained	Insight exists on a continuum and can change during treatment

DI, delusional infestation. Diagnosis requires clinical assessment and exclusion of relevant alternatives; no single sign is diagnostic.[1–4]
Source: Prepared by the authors.

4.2 DIFFERENTIAL DIAGNOSIS

True infestation is the first branch of the differential. Scabies is supported by nocturnal itch, affected contacts, burrows, typical sites, and mites, eggs, or fecal material on dermoscopy or scraping. Pediculosis requires visualization of lice or viable nits attached close to the hair shaft. Bedbugs, fleas, bird or rodent mites, and occupational arthropods are

evaluated from exposure history, lesion pattern, household clustering, and reliable environmental identification. A patient's certainty, photographs of nonspecific debris, or response to an empiric pesticide is not diagnostic. Conversely, a single negative scraping does not exclude scabies when the pretest probability is high.[3,6]

Primary dermatoses can produce itch, dysesthesia, scaling, crust, and fragments that are interpreted as organisms. Atopic or contact dermatitis, prurigo nodularis, urticaria, xerosis, psoriasis, folliculitis, Grover disease, bullous disease, neuropathic itch, scalp dysesthesia, and cutaneous malignancy should be considered according to morphology and distribution. Skin picking may be secondary to itch or may represent excoriation disorder. In excoriation disorder, the person recognizes that picking causes the lesions and attempts to resist the behavior; in DI, manipulation is usually understood as necessary removal of the alleged agent. Insight can vary, so the distinction requires more than observing excoriations.

Systemic pruritus or formication may arise from renal or cholestatic disease, thyroid dysfunction, diabetes and neuropathy, iron deficiency, vitamin B12 or folate deficiency, hematologic disease, human immunodeficiency virus infection, or other conditions suggested by history. Neurologic causes include peripheral neuropathy, stroke, Parkinson disease, multiple sclerosis, traumatic brain injury, epilepsy, dementia, and structural disease. Delirium is differentiated by acute onset, impaired attention, altered arousal, and fluctuation; it requires urgent medical evaluation rather than classification as primary DI.[1,3,6]

Substance-induced symptoms are especially important. Cocaine and methamphetamine may cause formication and delusional interpretation; prescribed stimulants, dopaminergic drugs, bupropion, corticosteroids, and other agents have also been implicated. Alcohol or sedative withdrawal can cause tactile hallucinations in a broader withdrawal syndrome. The chronology of use, intoxication, dose change, and abstinence is more informative than a judgmental question about addiction. Urine toxicology can be useful when it answers a clinical question and is interpreted within its detection limits.[3,6]

Psychiatric alternatives include schizophrenia-spectrum illness, mood disorder with psychotic features, illness anxiety disorder, obsessive-compulsive disorder, body dysmorphic disorder, and neurocognitive disorder. Primary DI generally presents as a relatively circumscribed somatic delusion with otherwise organized thought, whereas prominent hallucinations in other modalities, negative symptoms, disorganization, mania, or pervasive mood-congruent psychosis indicate a broader syndrome. Suicidal ideation, hopelessness, and comorbid depression must be assessed directly rather than inferred from demeanor.

Table 2

Differential diagnosis and directed evaluation

Category	Examples	Directed assessment
True infestation	Scabies, pediculosis, bedbugs, fleas, environmental mites	Exposure, contacts, lesion pattern, dermoscopy, scraping or reliable specimen identification
Dermatologic	Contact or atopic dermatitis, xerosis, prurigo, folliculitis, bullous disease, neuropathic itch	Full skin examination; biopsy, culture, or patch testing only when clinically indicated
Systemic	Renal, hepatic, thyroid, diabetic, hematologic, iron or vitamin deficiency, infection	CBC, renal and hepatic profile, glucose, TSH; iron, B12, folate, and infection tests when indicated
Neurologic	Neuropathy, stroke, Parkinson disease, multiple sclerosis, dementia, structural disease	Neurologic and cognitive examination; targeted imaging or referral for specific clues
Substance or medication	Cocaine, methamphetamine, withdrawal, stimulants, dopaminergic drugs, bupropion, corticosteroids	Nonjudgmental chronology, medication reconciliation, toxicology when it changes management
Psychiatric	Schizophrenia spectrum, mood disorder with psychosis, OCD, illness anxiety, excoriation disorder, neurocognitive disorder	Thought form, hallucinations, mood, behavior, insight, cognition, function, and collateral history

The test panel should be individualized. Repeated broad testing without a new clinical indication may reinforce the belief.[1,3,6]
Source: Prepared by the authors.

4.3 HISTORY, EXAMINATION, AND PROPORTIONATE INVESTIGATION

The consultation begins with an uninterrupted account of what the patient experiences, when it began, how it has changed, and what has already been attempted. Useful questions cover sensation, visible material, body sites, timing, affected contacts, travel, pets, housing, occupational exposure, sleep, substances, prescription and nonprescription drugs, mood, cognition, and functional consequences. Records from prior clinicians reduce duplication. With permission, a relative can clarify onset, decline, exposure, shared beliefs, and hazardous practices.

Examination should include the entire skin surface, scalp, hair, nails, and mucosa when indicated. Morphology, primary versus secondary lesions, distribution, infection, scarring, and alopecia should be recorded. Dermoscopy, scraping, adhesive-tape preparation, hair examination, biopsy, or culture is selected only when a plausible dermatologic question exists. Biopsy commonly shows nonspecific excoriation or dermatitis; its main value is excluding a specific alternative, not proving DI.[1,3]

A reasonable initial laboratory screen often includes complete blood count, electrolytes, renal and hepatic tests, glucose or glycated hemoglobin, and thyroid function. Ferritin or iron studies, vitamin B12, folate, inflammatory markers, urine toxicology, and infection testing are added according to symptoms and risk. Testing for HIV, syphilis, or hepatitis should be consented and risk guided. Pregnancy testing may affect medication decisions. Cognitive screening, neurologic examination, brain imaging, electroencephalography, or specialist referral is reserved for late or abrupt onset, focal signs, seizures, head injury, cognitive decline, or other neurologic clues.[1],[3],[6]

The workup should have an explicit stopping rule. New objective findings deserve investigation, but repeating normal parasitology, biopsies, or broad panels solely because conviction persists turns testing into reassurance seeking and may imply that the infestation remains medically plausible. A planned follow-up visit to review results, skin healing, safety, and treatment provides more value than serial urgent consultations.

4.4 COMMUNICATION AND THERAPEUTIC ALLIANCE

The clinician should validate distress and disability without endorsing infestation: 'I can see that these sensations and skin changes are causing substantial suffering; I have not found evidence of an organism today, and I would like us to treat the symptoms and continue a careful assessment.' Neutral terms such as 'cutaneous sensations,' 'skin debris,' and 'working diagnosis' reduce confrontation. Saying that nothing is wrong is both inaccurate and damaging, because the patient has real symptoms, wounds, anxiety, and impairment.[2],[4],[7]

Directly arguing that the belief is impossible rarely changes conviction. Equally, prescribing ivermectin, antibiotics, or pesticides 'just in case' after an adequate negative evaluation can validate the delusion, cause toxicity, and make later reframing harder. The productive middle position is epistemic clarity: no evidence currently supports infestation, alternative causes have been assessed, and effective treatment is available for the sensations, preoccupation, sleep loss, and skin injury.

Antipsychotic treatment is often accepted when presented in relation to the target experience and nervous-system signaling rather than as a test of whether the patient is 'psychotic.' The clinician should explain that the same medicine is used at different doses for several conditions and that response does not retrospectively prove a psychiatric cause. Shared decisions about one measurable goal—sleep, time spent checking, wound healing, or reduction in crawling sensations—can open a path to treatment. A psychodermatology

clinic or coordinated dermatologist-psychiatrist relationship minimizes the sense of dismissal created by a stand-alone psychiatric referral.[1,2,7]

4.5 TREATMENT

Secondary DI is managed by treating the driver whenever possible: stopping or substituting an implicated drug, treating intoxication or withdrawal, correcting deficiency or endocrine disease, managing neurologic illness, or addressing a primary mood or psychotic disorder. Improvement of the cause may not immediately remove an established delusion, so antipsychotic treatment may still be required. True dermatoses, wound infection, and pain are treated concurrently; otherwise ongoing cutaneous signals can perpetuate attention and manipulation.

For primary DI, guidelines recommend offering an antipsychotic early while tailoring the choice to patient factors.[1] Commonly reported second-generation options include risperidone, olanzapine, and aripiprazole; amisulpride is used in jurisdictions where available. Treatment usually begins at a low dose and is titrated gradually to response and tolerability. Older adults, people with neurocognitive disease, and those with medical frailty require particular caution. Pimozide has historical evidence but is no longer a routine first choice because QT prolongation, drug interactions, and extrapyramidal toxicity complicate use.[1,8–10]

Evidence does not justify a universal drug hierarchy. A Cochrane review found no eligible randomized controlled trials.[8] Systematic reviews of case reports and case series describe improvement with both first- and second-generation antipsychotics but emphasize inconsistent diagnosis, variable doses, selective publication, and nonstandard outcomes.[9,10,12,13] High remission percentages in small series must not be compared as if patients were randomized; an apparent advantage may reflect case selection, dose, follow-up, or reporting. A 27-patient retrospective series found symptom control in most patients treated with risperidone, but dose variation and uncontrolled design limit inference.[11]

Drug selection is therefore risk based. Risperidone is familiar and commonly reported but may cause hyperprolactinemia, extrapyramidal symptoms, orthostasis, and metabolic effects. Olanzapine may help sleep and agitation but carries substantial weight and metabolic burden. Aripiprazole generally has lower prolactin and metabolic effects but can cause akathisia or activation. Amisulpride can elevate prolactin and prolong QT. Baseline assessment should include weight and body mass index, blood pressure, glucose or glycated hemoglobin, lipids, medication interactions, movement symptoms, and an electrocardiogram

when cardiac history, QT-prolonging drugs, electrolyte disturbance, or the selected agent warrants it.[1],[2]

Response is usually assessed over several weeks, with adherence verified before declaring failure. Once remission is stable, treatment is commonly continued for months and later tapered gradually under supervision because relapse after premature discontinuation is frequent. If one adequately dosed and tolerated agent fails, the diagnosis, adherence, substance exposure, and secondary cause should be reviewed before switching. Complex cases merit psychiatric involvement. Antidepressants treat comorbid depression, anxiety, or obsessive-compulsive symptoms but are not substitutes for antipsychotic therapy when a fixed delusion remains.[1],[9],[10]

Dermatologic care includes bland emollients, soap substitution, appropriate dressings, treatment of bacterial infection when present, and anti-inflammatory therapy for documented dermatitis. Occlusion should be used cautiously when it becomes part of removal rituals. Clear limits on harmful products and a simple skin-care plan reduce competing interventions. Psychotherapy alone rarely dissolves a fixed delusion, but supportive or cognitive-behavioral work can address distress, checking, avoidance, insomnia, and relapse once sufficient engagement exists.

Table 3

Antipsychotic selection and monitoring principles in delusional infestation

Option	Potential clinical fit	Prominent considerations
Risperidone	Commonly reported; flexible low-dose initiation	Prolactin elevation, extrapyramidal symptoms, orthostasis, metabolic effects
Olanzapine	Insomnia, agitation, or low weight when sedation/appetite may be useful	Weight gain, dyslipidemia, hyperglycemia, sedation
Aripiprazole	Metabolic or prolactin concerns	Akathisia, activation, insomnia, interactions
Amisulpride	Reported option where available	Prolactin elevation, QT prolongation, renal dosing considerations
Pimozide	Historical evidence; selected specialist use	QT prolongation, interactions, extrapyramidal toxicity; not routine first choice

No randomized evidence establishes superiority. Baseline and follow-up monitoring should reflect the chosen drug, age, comorbidity, and interacting medication.[1],[8–11]
Source: Prepared by the authors.

4.6 SAFETY, SAFEGUARDING, AND URGENT ESCALATION

Risk assessment is not optional. Patients may cut, burn, freeze, chemically injure, or electrically shock the skin in attempts to remove the agent. Pesticide exposure can affect the

patient, family, pets, and clinicians handling specimens. Excessive cleaning may create toxic fumes or fire risk. Eyes, ears, mouth, genitals, and other vulnerable sites require specific questioning because injury may be concealed. Severe infection, bleeding, visual or auditory injury, intoxication, withdrawal, or inability to care for wounds requires urgent medical treatment.[1,3]

The assessment should directly address suicide, aggression, weapons, threats toward presumed sources of infestation, and harm to dependents or animals. Children or vulnerable adults in a household may be washed, medicated, removed from school, or exposed to insecticides because of the belief. Shared DI, impaired capacity, or serious safeguarding concerns require multidisciplinary action consistent with local law. Confidentiality does not preclude proportionate disclosure when there is an imminent or legally reportable risk.

Urgent psychiatric evaluation is indicated for suicidality, severe self-neglect, dangerous self-treatment, escalating aggression, inability to understand immediate risk, or psychosis beyond a circumscribed infestation belief. Involuntary assessment is governed by jurisdiction and should be based on risk and capacity, not diagnostic label alone. The dermatologist should document exact statements, observed injuries, advice given, medications or chemicals used, collateral information, and the plan for follow-up.

4.7 FOLLOW-UP AND MULTIDISCIPLINARY CARE

Continuity is therapeutic. Early follow-up allows the clinician to review results, acknowledge any improvement, monitor skin damage, and introduce treatment without restarting the diagnostic debate. At each visit, progress can be measured by lesion count or photographs, sleep, time spent checking or cleaning, social function, distress, and strength of conviction. Medication monitoring should include weight, blood pressure, metabolic laboratory tests, orthostasis, sedation, extrapyramidal symptoms, akathisia, prolactin-related symptoms, and adherence.

Roles should be explicit when dermatology, psychiatry, primary care, infectious diseases, toxicology, neurology, or social services are involved. One clinician should coordinate prescriptions and communicate the diagnostic formulation so that conflicting empiric anti-infective treatment does not undermine care. Pharmacists can identify interactions and support antipsychotic monitoring; wound nurses can help with dressings; social workers can address housing disruption, debt, isolation, or safeguarding.

Disengagement should be anticipated. A patient who declines antipsychotic treatment can still be offered skin care, harm-reduction advice, scheduled review, and clear criteria for re-evaluation. The door should remain open without agreeing to repeated eradication therapy. If the patient seeks multiple opinions, a concise written summary of completed investigations and objective findings may reduce duplication while preserving dignity.

4.8 LIMITATIONS OF THE EVIDENCE AND RESEARCH PRIORITIES

The evidence base is constrained by rarity, inconsistent terminology, diagnostic heterogeneity, referral bias, and loss to follow-up. Published treatment data are dominated by case reports and retrospective series, while patients who accept medication may differ systematically from those who refuse. Remission is variably defined as disappearance of conviction, reduction in symptoms, improved function, or clinician judgment. Comparative response rates therefore cannot establish superiority or an optimal dose.[8–10]

Future studies need consensus diagnostic criteria, standardized severity and insight measures, explicit separation of primary and secondary DI, prospective adverse-effect monitoring, and patient-centered outcomes. Pragmatic trials could compare antipsychotic strategies, integrated psychodermatology with usual referral, and structured communication approaches. Research should also examine digital specimens, internet-mediated reinforcement, shared beliefs, pesticide injury, and the experience of caregivers. Until such evidence exists, transparent uncertainty and individualized monitoring are safer than claims of a single best drug.

5 CONCLUSION

Delusional infestation is a serious psychodermatologic condition in which diagnostic rigor and therapeutic alliance are inseparable. The dermatologist should identify the fixed infestation belief, examine skin and specimens respectfully, exclude genuine infestation and clinically plausible secondary causes, and avoid both dismissive confrontation and reinforcing empirical eradication. Investigation should be proportionate and should end when reasonable alternatives have been addressed unless new objective findings emerge.

Primary DI is usually treated with a carefully selected antipsychotic plus dermatologic wound care and longitudinal support; secondary DI requires treatment of its cause. Risperidone, olanzapine, aripiprazole, and amisulpride are reasonable options in appropriate patients, but observational evidence does not prove that one is universally superior. Safety

assessment must include self-injury, toxic exposures, suicidality, safeguarding, and medication adverse effects. A neutral explanation, measurable goals, and coordinated dermatology-psychiatry follow-up offer the best prospect of engagement and recovery.

REFERENCES

1. Ahmed A, Affleck AG, Angus J, Assalman I, Baron SE, Bewley A, *et al.* British Association of Dermatologists guidelines for the management of adults with delusional infestation 2022. Br J Dermatol. 2022;187(4):472-480.

2. Freudenmann RW, Lepping P. Delusional infestation. Clin Microbiol Rev. 2009;22(4):690-732.

3. Coetzee S, Mahajan C, França K. The diagnostic workup, screening, and treatment approaches for patients with delusional infestation. Dermatol Ther (Heidelb). 2023;13(12):2993-3006.

4. Campbell EH, Elston DM, Hawthorne JD, Beckert DR. Diagnosis and management of delusional parasitosis. J Am Acad Dermatol. 2019;80(5):1428-1434.

5. Reich A, Kwiatkowska D, Pacan P. Delusions of parasitosis: an update. Dermatol Ther (Heidelb). 2019;9(4):631-638.

6. Moriarty N, Alam M, Kalus A, O'Connor K. Current understanding and approach to delusional infestation. Am J Med. 2019;132(12):1401-1409.

7. Heller MM, Wong JW, Lee ES, Ladizinski B, Grau M, Howard JL, *et al.* Delusional infestations: clinical presentation, diagnosis and treatment. Int J Dermatol. 2013;52(7):775-783.

8. Assalman I, Ahmed A, Alhajjar R, Bewley AP, Taylor R. Treatments for primary delusional infestation. Cochrane Database Syst Rev. 2019;12(12):CD011326.

9. McPhie ML, Kirchhof MG. A systematic review of antipsychotic agents for primary delusional infestation. J Dermatolog Treat. 2022;33(2):709-721.

10. Lu JD, Gotesman RD, Varghese S, Fleming P, Lynde CW. Treatments for primary delusional infestation: systematic review. JMIR Dermatol. 2022;5(1):e34323.

11. Guedes NLKO, Dwan AJ, Gerlero P, Nico MMS. Delusional infestation treated with risperidone: a series of 27 patients. Clin Exp Dermatol. 2024;49(4):364-367.

12. Lepping P, Russell I, Freudenmann RW. Antipsychotic treatment of primary delusional parasitosis: systematic review. Br J Psychiatry. 2007;191:198-205.

13. Freudenmann RW, Lepping P. Delusional parasitosis: a new pathway for diagnosis and treatment. Clin Exp Dermatol. 2008;33(2):113-117.

14. Bewley AP, Lepping P, Freudenmann RW, Taylor R. Delusional parasitosis: time to call it delusional infestation. Br J Dermatol. 2010;163(1):1-2.

15. Pearson ML, Selby JV, Katz KA, Cantrell V, Braden CR, Parise ME, *et al.* Clinical, epidemiologic, histopathologic and molecular features of an unexplained dermopathy. PLoS One. 2012;7(1):e29908.

16. Trabert W. 100 years of delusional parasitosis: meta-analysis of 1,223 case reports. Psychopathology. 1995;28(5):238-246.

17. Foster AA, Hylwa SA, Bury JE, Davis MDP, Pittelkow MR, Bostwick JM. Delusional infestation: clinical presentation in 147 patients seen at Mayo Clinic. J Am Acad Dermatol. 2012;67(4):673.e1-673.e10.

18. Hylwa SA, Bury JE, Davis MDP, Pittelkow M, Bostwick JM. Delusional infestation, including delusions of parasitosis: results of histologic examination of skin biopsy and patient-provided skin specimens. Arch Dermatol. 2011;147(9):1041-1045.