

Effectiveness of Hypnotherapy in Pediatric Patients with Alopecia Areata

Efectividad de la Hipnoterapia en pacientes de edad pediátrica con Alopecia Areata.

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ABSTRACT

Introduction: Alopecia areata is localized or diffuse hair loss in a specific area of the scalp. Experts believe it can occur at any age, even in young children, with a multifactorial etiology considered the main cause, with psychological factors playing a key role.

Objective: To evaluate the effectiveness of therapeutic hypnosis for treating alopecia areata in pediatric patients who attended the hypnosis clinic.

Method: A quasi-experimental study was carried out from March, 2023 to December, 2024. Patients were assessed before and after treatment, taking into account their symptoms; the data obtained were processed quantitatively and qualitatively through psychological interviews and observations.



Results: The severity of alopecia areata was reduced by up to 8.7 % and the symptoms expressed in each of the patients were completely eradicated.

Conclusions: Therapeutic hypnosis proved to be effective in the management of alopecia aerata in pediatric patients who attended the hypnosis clinic in Santiago de Cuba.

Keywords: alopecia areata; therapeutic hypnosis; children.

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RESUMEN

Introducción: La Alopecia Areata es una pérdida de cabello localizada o difusa en una zona concreta del cuero cabelludo. Los expertos consideran se puede dar a cualquier edad, incluso en niños pequeños, considerando la etiología multifactorial como principal causa y donde las psicológicas juegan un papel fundamental.

Objetivo: Evaluar la efectividad de la Hipnosis terapéutica para tratar la Alopecia Areata en pacientes en edad pediátrica que asistieron a la clínica de hipnosis.

Método: Se realizó un estudio cuasi experimental, en el período comprendido desde marzo de 2023 hasta diciembre de 2024. Los pacientes fueron evaluados antes y después de aplicar el tratamiento, teniendo en cuenta los síntomas; mediante la entrevista y observación psicológicas, los datos obtenidos se procesaron cuantitativa y cualitativamente.

Resultados: Se logró disminuir hasta un 8.7% la severidad de la alopecia areata y la sintomatología expresada en cada uno de los pacientes se logró erradicar completamente.

Conclusiones: La hipnosis terapéutica demostró ser efectiva en el manejo de la Alopecia Areata en pacientes pediátricos que asistieron a la clínica de hipnosis de Santiago de Cuba.

Palabras clave: Alopecia areata; hipnosis terapéutica; niños.



Introduction

Alopecia Areata (AA) is a type of non-scarring hair disease with immune pathogenesis and variable, unpredictable progression in each patient. It affects the scalp in almost all cases, but it may also involve other hair-bearing areas such as the eyelashes, eyebrows, and beard, as well as cause nail lesions.⁽¹⁾ The most common pattern of hair loss consists of a localized, well-defined area with round or patchy hair loss, usually on the scalp, which can progress to complete scalp hair loss and even total body hair loss.

Among the most significant risk factors for the disease are family history and the presence of other immunological disorders. One factor that could contribute significantly to the development of alopecia areata is stress; some reports indicate that at least nearly a quarter of patients experience an emotional event or an anxiety crisis.⁽²⁾

Its prevalence is 0.1 to 0.2 %, with children accounting for approximately 20.0 % of patients, and only 20.0 % of patients being over 40 years of age.⁽¹⁾ Currently, there are no recent reference epidemiological studies in our country, although it is considered that the prevalence of the disease behaves similarly to that reported in other countries. In Santiago de Cuba, after the 2023 health census, a total of 68,295 children were reported in the 5–10 age range. Of these, 32,995 belonged to the main municipality. From this figure, a prevalence of 0.1 % corresponds to approximately 33 children, for whom around 6 cases were expected as the 20.0 % of reported Alopecia Areata cases during the year.

The quality of life of patients with alopecia is affected by manifestations of low self-esteem, depression, or anxiety. These same effects could impact the growth and development of children, since in childhood, this type of disease has the same causes and symptoms as at other ages, only occurring at an earlier stage, as expected. However, in children, especially those who are no longer very young, it can lead to significant psychological discomfort. Therefore, it is necessary for these patients and their families to receive not only medical care but also psychological support, due to the role of these professionals in managing emotions and providing emotional support in case of relapse.



Drug groups such as Class I and II topical steroids are often used as first-line treatment in children with alopecia areata, due to their favorable side effect profile, ease of use, and low cost. The use of intralesional corticosteroids in this same population often causes pain from the injection, which limits their use. Although anesthetic cream is applied in older children, which increases tolerance. Furthermore, the use of oral steroids should be carefully considered, taking into account their long-term adverse effects in childhood. All of this leads to the conclusion that current treatments are subject to a large number of adverse effects associated with their use, which can sometimes cause patients to fear taking the medication and result in poor adherence, compromising its effectiveness.

In Cuba, in addition to the treatments generally prescribed in dermatology clinics, alternative treatments from natural and traditional medicine have also been well received. Therapies such as Bach flower essences and the use of the seven-point hammer have proven effective for the treatment of alopecia areata in the adult population. However, these methods could present a significant challenge in childhood, due to the preparation and/or application techniques, which might also lead to rejection by the children.

Another modality of natural and traditional medicine that has been used in the treatment of alopecia areata is therapeutic hypnosis. This approach could be ideal for patients of any age group, due to its safety and proven effectiveness in patients with various types of dermatopathies. Experience with this therapeutic technique indicates that it is not an exclusive treatment for curing alopecia areata, but research shows that it helps reduce glucocorticoid levels and decreases the expression of inflammatory cytokines, which are an important risk factor for the development of autoimmune diseases. Additionally, it reduces levels of a factor involved in the pathogenesis of alopecia areata, namely stress, through the neuroendocrine-immune axis. This axis consists of a miniature equivalent of the hypothalamic-pituitary-adrenal axis in the skin and in the nerve plexus surrounding hair follicles. The key mediators between the neuroendocrine and immune systems are mast cells. Stress-related actors, such as corticotropin-releasing hormone (CRH), substance P, and nerve growth factor, trigger mast cell degranulation, leading to inflammation through the release of histamine, tumor necrosis factor-alpha (TNF α), IL-6, and IL-1. Substance P directly promotes the



ectopic expression of MHC-I, which indicates the collapse of immune privilege in anagen hair follicles.⁽³⁾

At the hypnosis clinic in Santiago de Cuba, experience with treating alopecia areata in children is still limited. The cases received have come through referrals from specialists in dermatology, psychology, and psychiatry, after conventional treatments were reported to have low effectiveness. Considering these aspects, the following

Research Problem Arises:

Will Therapeutic hypnosis be effective in pediatric patients with alopecia areata?

Hypothesis

If therapeutic hypnosis is applied as an alternative treatment of alopecia areata in pediatric patients, then there will be a clinical evolution and a favorable response to treatment.

Objective

To evaluate the effectiveness of therapeutic hypnosis to treat alopecia areata in pediatric patients who attended the hypnosis clinic of Santiago de Cuba in the period from March, 2023 to December, 2024.

Method

Given the characteristics of the quasi-experimental studies and the work with a pediatric population, the principles promulgated in the Declaration of Helsinki, adopted by the World Medical Association, were taken into account. This document states among its fundamental principles that all medical research with human participants is subject to ethical standards that promote and ensure respect for all participants and protect their health and rights. Therefore, informed consent was obtained from parents and children after the research was explained to them and they agreed to participate.



Type of Study

A quasi-experimental design was carried out to evaluate the effectiveness of therapeutic hypnosis as an alternative treatment in pediatric patients with alopecia areata, referred to the hypnosis clinic of Faculty No. 1 of the University of Medical Sciences. The research took place from March, 2023 to December, 2024. The clinical method was also used, always seeking to delve into the psychological particularities of the patients and to monitor emotional changes occurring within the therapeutic process.

Definition of the Study Population

To calculate the sample for our research, the formula for a simple random sample⁽⁴⁾ was applied, resulting in the 10 patients who attended the therapeutic hypnosis Clinic during the period from March, 2023 to December, 2024.

Inclusion Criteria:

1. Pediatric patients diagnosed with alopecia areata referred to the hypnosis clinic of Santiago de Cuba.
2. Accompanying family member of the pediatric patient who accepts the therapeutic hypnosis treatment and provides written consent.

Exclusion Criteria:

1. Pediatric patients attending the hypnosis clinic of Santiago de Cuba who do not suffer from alopecia areata.

With drawal Criteria:

1. Patients and family members who do not attend therapeutic hypnosis sessions regularly.
2. Patients and family members who discontinue therapeutic hypnosis sessions.

Materials and Instruments

A suitable battery of psychological tests was selected for these patients, with the aim of obtaining a greater body of information to contribute to the achievement of the research objectives.



Techniques and procedures

1. **Observation:** Used consciously, in a planned and systematic way throughout the entire therapeutic process, it allowed for the active collection of qualitative data that could confirm or refute the results obtained from the other techniques applied.
2. **Semi-structured interview:** Conducted individually with both patients and accompanying family members, in order to specifically identify the cause of the condition that brought them to the clinic. It also made it possible to assess the level of knowledge about this health problem and the psychotherapeutic technique to be applied.
3. **State-Trait Anxiety Inventory (IDARE-N), Cuban version:** This is a self-report inventory divided into two parts. The first aims to measure anxiety as a state (state scale), with twenty statements and three possible answers: "Nothing," "Somewhat," and "A lot," scored as 1, 2, and 3, respectively; instructions require subjects to indicate how they feel at that moment, "right now." The second part aims to measure anxiety as a trait (trait scale); it also has twenty statements with three possible answers: "Almost never," "Sometimes," and "Often," scored from 1 to 3; however, here the instructions ask subjects to describe how they feel "generally." The quantitative scoring of the test is done by summing the score marked by the subject for each answer, taking into account which items are direct or positive (RP) and which are inverted or negative (RN) for each scale.
4. **Child State-Trait Depression Inventory (IDEREN):** A self-evaluative inventory designed to assess two relatively independent forms of depression: depression as a state (a temporary emotional condition) and depression as a trait (a tendency to experience depressive states as a relatively stable personality characteristic).
5. **Free Drawing:** Aims to reveal aspects of the subject's personality. It is an excellent exploratory projective tool that offers an overall view of the subject's life situation in relation to their environment.
6. **SALT Index:** Used to assess the severity of alopecia areata. The name comes from the English acronym Severity of alopecia Tool (SALT), in which the scalp is divided into four parts to determine the affected percentage:



- Vertex: 40.0 % (0.4) of the total surface.
- Two lateral areas: each 18.0 % (0.18) of the total surface.
- Posterior area: 24.0 % (0.24) of the total surface.

The percentage of hair loss or SALT score in each area is calculated by multiplying the percentage of hair loss by the percentage that area represents relative to the total scalp surface. The final score is obtained by adding the values from the four areas. Subgroups are then created according to the severity of the disease based on the percentage affected: S0: no hair loss; S1: 25.0 % hair loss; S2: 25–49.0 %; S3: 50–74.0 %; S4: 75–99.0 % (S4a: 75–95.0 %, S4b: 96–99.0 %); S5: 100.0 % hair loss

Procedures

Upon arrival at the Therapeutic Hypnosis Clinic of Faculty No. 1 at the University of Medical Sciences, informed consent was obtained from the parents or accompanying family members, who were informed about the characteristics and conditions of the treatment to be received. The treatment consisted of 8 in-person sessions, each lasting between 45 minutes and 1 hour, with a weekly frequency. Each session had a specific objective, which guided the use of therapeutic resources aligned with these objectives. Starting from the second session, subsequent sessions began with a check-in in the form of an interview, during which the patient's mood, significant events occurring during the week, and adherence to assigned tasks were reviewed, as well as progress evaluated. The hypnotic procedure for the session was then determined, followed by the immediate induction of the patient into the hypnotic trance.

Results

The following is a quantitative and qualitative analysis of the results obtained. The objectives established during the research were taken into account, noting that our population, from the fifth hypnotherapy session onward, experienced a slight change in the number of participants, as one of the cases studied discontinued the therapeutic treatment.



Table 1. Distribution of patients with Alopecia Areata by age group and sex at the Hypnosis Clinic of Santiago de Cuba from March, 2023 to December, 2024.

Age Group (years)	GENDER					
	Masculine		Femenine		Total	
	No.	%	No.	%	No.	%
From 6 to 7	0	0	3	30	3	30
From 8 to 9	3	30	2	20	5	50
From 10 to 11	1	10	1	10	2	20
Total	4	40.0	6	60.0	10	100.0

Source: Clinical History

In the table referring to the distribution of studied patients by sex and age, a predominance of the female sex is observed, accounting for 60.0 %.

Table 2- Levels of Anxiety as a Trait and as a State before and after therapeutic treatment.

Levels	Trait				State			
	Before		After		Before		After	
	No.	%	No.	%	No.	%	No.	%
Low	1	10	6	66.7	0	0	9	100
Medium	8	80	3	33.3	1	10	0	0
High	1	10	0	0	9	90	0	0
Total	10	100.0	9	100.0	10	100.0	9	100.0

Source: IDAREN

The IDAREN results show the category of Trait Anxiety at a Medium Level, with eight patients for an 80.0 %. One patient exhibited High levels of anxiety, and another showed Low levels, for 10.0 % each.

Table 3: Levels of Depression as a Trait and as a State before and after treatment

Levels	Trait		State	
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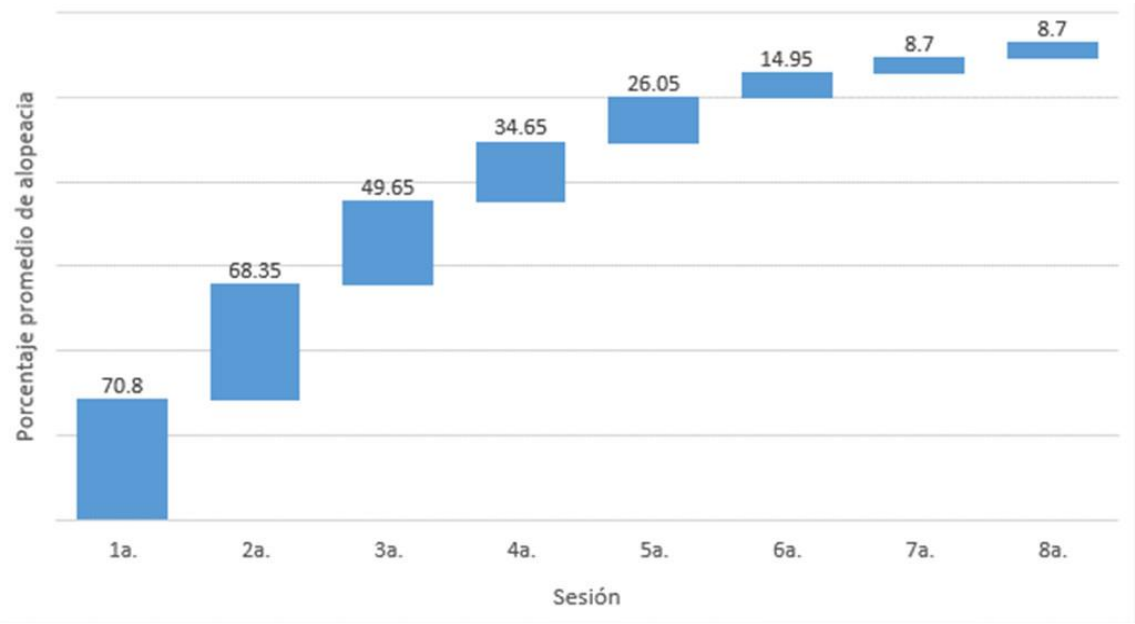


	Before		After		Before		After	
	No.	%	No.	%	No.	%	No.	%
Low	10	100	9	100	0	0	9	100
Medium	0	0	0	0	10	100	0	0
High	0	0	0	0	0	0	0	0
Total	10	100	9	100	10	100	9	100

Source: IDEREN

Table 3 shows the application of the IDEREN during the diagnostic stage that 100.0 % of the patients exhibit low levels of depression as a trait. These results behave similarly after the application of this psychometric test following hypnotherapy treatment. Meanwhile, when measuring depression levels as a state, 100% of the patients are at the medium level.

Fig 1: Average percentage of alopecia areata between sessions



Source: Salt Scale

In Graph 1, it can be seen that, from an average severity of 70.8 % of alopecia areata in the treated patients, this average is reduced to 8.7.0 % severity after 7 treatment sessions. A sharp decrease in the severity of alopecia areata is observed between the second and third sessions, highlighting the importance of maintaining



the sequence of treatment, particularly during these two sessions. Furthermore, the greatest percentage of improvement is achieved in the seventh treatment session.

Discussion

In the table 1, referring to the distribution of studied patients by sex and age, a predominance of the female sex is observed, accounting for 60.0 %. In Cuba, researchers Pastrana, Ramírez, and Ramírez, in their study on the treatment of alopecia areata with a natural product in children at “Juan Manuel Márquez” Pediatric Teaching Hospital, reported a predominance of the female sex at 70.0 % in their study,⁽⁵⁾ which aligns with the results obtained in this research. Similarly, Fortique and Falco, in their study on the prevalence of different types of alopecia in a specialized hair clinic, included 293 patients, of whom 200 were female (68.0 %).⁽⁶⁾ Another retrospective study conducted in Venezuela in 2022 by Colmenarez, Uzcátegui, and Sáenz on childhood alopecia areata—a cohort of 149 dermatology patients—found that, of 149 medical records of pediatric patients with alopecia areata, 54.3 % were girls who had been treated for this condition. Furthermore, it was noted that the predominant age range among these children was between 6 and 11 years,⁽⁷⁾ which does not differ from the results obtained in this study.

It is observed that after hypnotherapy, three of the patients (33.3 %) remained at the Medium level of Trait Anxiety, and 6 (66.7 %) decreased to the Low level of Trait Anxiety, (table 2). This is a noteworthy finding, as trait anxiety is typically stable over time, indicating in this study a significant difference due to the positive impact of the treatment applied and the modifiable characteristics in the personality of our patients.

Regarding State Anxiety levels, it can be observed that before treatment, 9 (90.0 %) of the patients studied presented high levels of anxiety, and one (10.0 %) was at the medium level of this same category.

These results are closely related to those reported by van Dalen, Muller, Kasperkovitz, Okkerse, and Pasmans, who in their research titled “Anxiety, depression, and quality of life in children and adults with alopecia areata: A systematic review and meta-analysis” refer that in the relationship existing



between alopecia areata and anxiety disorders in pediatric patients, 51.8 % of the patients were diagnosed with at least one anxiety disorder. The study reports that another investigation found no differences when applying the Beck Anxiety Inventory to children with alopecia areata and a case-control group; however, the first group showed higher levels of separation anxiety and total anxiety, as well as signs of panic and total anxiety in the parents of these children. Studies comparing children with alopecia areata with children suffering from other dermatological conditions found no differences in anxiety symptoms compared to other dermatological conditions, epilepsy, and vitiligo. However, it was found that the former scored higher in worry, hypersensitivity, and concentration than the other patients.⁽⁸⁾

Additionally, Zaga, Loayza, Rosario, and Delbem, in their research titled “Etiological Factors Associated with alopecia areata,” found that some psychological variants related to alopecia areata are mainly: anxiety, depression, emotional traumas, social phobia, and stress.⁽⁹⁾ In Cuba, the results do not seem to differ, as in the research titled “Comorbidities and Associated Factors in Patients with Alopecia Areata” by Jacas, López, Girón, and Girón, it is reported that patients with this disease suffer predominantly from depression, anxiety, and social phobia.⁽¹⁰⁾

At the end of the study, a considerable decrease to the low level of state anxiety was observed in 100 % of the patients participating in the research up to that moment. This result is consistent with the findings of the research titled “Hypnosis as a Treatment: A Compilation of Clinical Evidence – A Systematic Review” by Johan-Dojaquez, López-García, and Centeno-Covarrubias.⁽¹¹⁾ They refer to the effectiveness of hypnosis in controlling anxiety, inducing relaxation, and providing benefits in the treatment of depression. In turn, Cardoso, Costa, Junior, Vitória, and Silva, in their research on “Clinical Challenges of Hypnotherapy in the Current Medical Setting,” report very favorable results related to the use of this technique to reduce levels of anxiety and stress detected in patients with dermatological diseases.⁽¹²⁾ Cobián, in his book “I Do Believe in Hypnosis,” reports on the effectiveness of using this technique in a patient with alopecia areata who attended the hypnosis clinic in Santiago de Cuba. This author, through direct suggestions, reduced the patient’s anxious state from the first treatment session, considering it a direct cause of the condition in this patient.⁽¹³⁾



This result is supported by van Dalen, Muller, Kasperkovitz, Okkerse, and Pasmans, who relate alopecia areata to depressive syndromes, showing that in a study of a small group of 14 children with alopecia areata, 50.0 % of them suffered from depressive disorders, (table 3). Additionally, studies with a larger population reported that 10.0 % of the children were diagnosed with Dysthymia, and that children with alopecia areata are diagnosed with a depressive disorder more frequently than any other patient. In three other investigations studying depressive symptoms with case-control groups, two of them found more depressive symptoms in children with alopecia areata, while the third study found no significant differences when comparing patients with alopecia areata to their unaffected siblings.⁽⁸⁾

Similarly, the research conducted by García Medina and collaborators suggests that patients with alopecia areata tend to present more withdrawn, depressive traits. They are also more sensitive to emotions and fears compared to other individuals and tend to worry about trivial matters.⁽¹⁴⁾

Although a notable decrease to the low level of State Depression is observed in 100 % of the patients once the hypnotherapy sessions were applied, these results were also confirmed in Pérez Almoza's study titled "Hypnotherapy in Psoriasis and the Alterations Associated with Anxiety and Depression." He reports that, once the proposed hypnotherapy treatment was applied to a patient with a dermatological disease, a favorable reduction in negative affective states described in his study was achieved.⁽¹⁵⁾

These results also coincide with those obtained by Cobián, who states in his book that the patient improves their alopecia condition in just 7 weeks and was prescribed relaxation exercises during the hypnotic trance (fig. 1). The use of hypnotherapy in the treatment of alopecia areata saves time and enhances the patient's own resources for recovery; therefore, if we compare this outcome with that obtained while following conventional treatment without any improvement, we consider the hypnotherapeutic method to be both feasible and useful.⁽¹⁶⁾

Conclusions



Therapeutic hypnosis proved to be effective in the management of alopecia areata in pediatric patients who attended the hypnosis clinic in Santiago de Cuba, observing an improvement in the clinical manifestations of the disease, as well as its therapeutic response from the second treatment session, thus validating its importance.

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Conflict of interest

The authors have no conflicts of interest to declare.

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