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Biologic therapies in pediatric psoriasis: A single-center experience

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ABSTRACT

Pediatric psoriasis accounts for approximately 2% of dermatological conditions in children under 16 years of age. The objective of this study is to describe the clinical characteristics, treatment regimens, and observed efficacy and safety profiles in a real-world cohort.

This retrospective study analyzed 15 pediatric patients treated with biologics in Argentina between 2010 and 2024. The median age at treatment initiation was 8 years, with a predominance of female patients. The biologics used were primarily adalimumab, followed by secukinumab, etanercept, and ixekizumab. Five patients experienced treatment failure secondary to adalimumab. The therapy was well tolerated, with no adverse events reported.

The data suggest that early intervention can alter the course of the disease and prevent long-term complications.

Keywords: *psoriasis; children; biologics; adalimumab; monoclonal antibodies.*

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INTRODUCTION

Pediatric psoriasis accounts for 2% of dermatological conditions in children under 16 years of age. One-third of patients with psoriasis in adulthood develop the disease before age 20.[1] In adults, psoriasis is considered an independent cardiovascular risk factor. It is now recognized that proper management is essential to prevent the development of metabolic, cardiovascular, and joint comorbidities in adulthood. More than half of patients with psoriasis have mild forms; in cases of moderate-to-severe psoriasis, phototherapy, methotrexate, acitretin, cyclosporine, or biologic therapies are indicated.

While biological therapies have been available for adults for more than 20 years—with over ten approved options on the market—this is not the case in pediatrics, where the options are more limited: currently, adalimumab and etanercept (anti-TNF), recommended for children over 4 years of age, and secukinumab (anti-IL-17) for children over 6 years of age, are approved in Argentina.[2] Most of the information on the efficacy and safety of these drugs comes from multicenter, randomized trials, but this does not always correlate with real-world data.

Therefore, the objective of this study is to describe the clinical characteristics, treatment regimens, and observed efficacy and safety profiles in a real-world cohort of pediatric patients in Argentina.

POPULATION AND METHODS

Design and population

A retrospective, descriptive, single-center study was conducted. The study included patients under 18 years of age diagnosed with psoriasis who were treated with biologic medications at Hospital Alemán between January 2010 and January 2024. Patients with incomplete medical records were excluded. The study was approved by the Independent Ethics Committee of Hospital Alemán (Date: 12/16/2025. Registration code: 16720).

Variables and operationalization

Initial efficacy was defined as achieving a Psoriasis Area and Severity Index (PASI) 75 response—that is, a 75% improvement from baseline PASI—at 12 to 16 weeks, depending on the duration of the induction phase for each biologic.

The primary endpoint was defined as failure to achieve a minimum clinical response (PASI75) after completing the drug induction phase (12-16 weeks, depending on the biologic).

Secondary failure was defined as the loss of a PASI75 response following an initial improvement sustained during the maintenance phase. Comorbidities (obesity, hypertension, anxiety), prior treatments, and adverse events were recorded.

Statistical analysis

Categorical variables were presented as frequencies and percentages. Numerical variables were expressed as the median and range, or the mean and standard deviation, depending on their distribution. Given the small sample size and the non-normality of some variables, the median and interquartile range were prioritized for description.

RESULTS

Cohort characteristics

Among the 15 patients (10 female), the mean age at onset was 8 years (range, 4-16 years). The median time from the onset of lesions to the start of biologic therapy was 4.9 years (range 0.5-11). Four patients had a first-degree family history of psoriasis, and 4 had a second-degree family history. All but 1 patient had exclusively cutaneous psoriasis. The remaining patient developed peripheral psoriatic arthritis (PsA) at age 14, which preceded the skin lesions by two years. All patients had plaque psoriasis. In addition, 14 patients had scalp involvement; 3, nail involvement; 3, guttate psoriasis; 2, genital involvement; and 1, palmoplantar psoriasis. Six patients had recurrent streptococcal infections.

Previous treatments

All patients received topical therapy (corticosteroids, calcineurin inhibitors, and/or vitamin D analogs) and oral methotrexate at a dose of 0.4 mg/kg/week before starting biologic therapy. The median duration of methotrexate use was 16 months (interquartile range 9–36 months). Fifty-three percent (n = 8) underwent narrowband UVB phototherapy, and 13% (n = 2) received acitretin.

Efficacy and maintenance

The baseline PASI score was 19.1 ± 6.0 (*Figure 1*). The most commonly used biologic as first-line therapy was adalimumab (9 patients), followed by secukinumab and etanercept (3 and 2 patients, respectively), and 1 patient received

ixekizumab (later switched to adalimumab due to lack of access).

At 16 weeks, except one patient treated with etanercept (who was switched to secukinumab), most achieved a significant response (PASI75). Five patients experienced secondary failure, all on adalimumab, after a median of 2.4 years of treatment. They were then switched to ixekizumab (3 patients after turning 18), deucravacitinib as part of an investigational protocol (1 patient), and risankizumab (1 patient after turning 18). One patient, due to a lack of access to secukinumab, had to discontinue it and enrolled in an investigational protocol, where he received deucravacitinib.

The median follow-up duration was 4 years (range: 1.5 to 15 years). At the last evaluation, 12 patients achieved PASI90; 2 patients (patients 5 and 13) achieved PASI75; and 1 patient (patient 2) had a suboptimal response (PASI50). These responses, achieved during the first year of treatment, were sustained throughout the follow-up period, with no significant fluctuations in PASI scores.

In cases of isolated lesions, topical corticosteroid treatment was prescribed. All patients are currently being followed up at the department.

Safety and comorbidities

Baseline comorbidities included hepatic steatosis, overweight, and anxiety in one patient; Moya-Moya disease in another; and generalized anxiety disorder in yet another (*Table 1*). Throughout the follow-up period, laboratory tests were monitored according to age and concomitant biologic use, with no new comorbidities or clinically relevant adverse effects associated with biologic therapy observed during the study period.

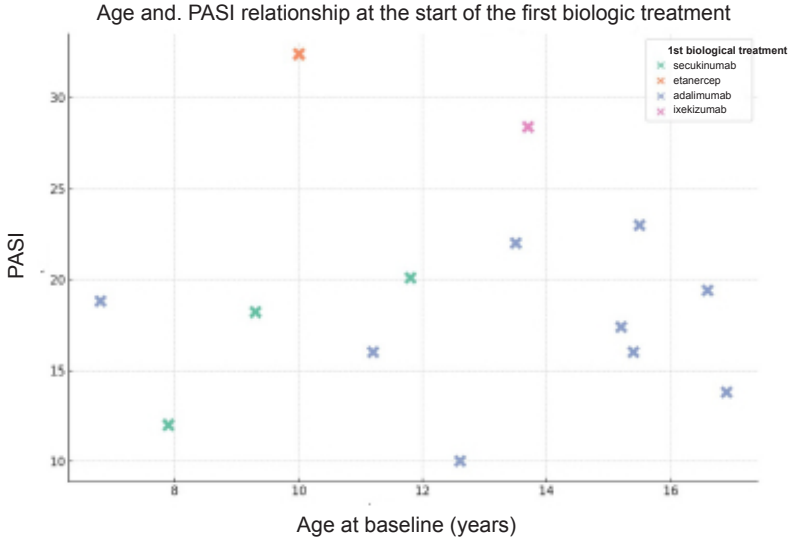
DISCUSSION

As reported in the literature,[3] in this case series, the median age at onset of psoriasis was 8 years, with a predominance of female patients. Unlike adults, most children in this study did not have comorbidities at the onset of psoriasis, and half had had recurrent streptococcal infections (a very common trigger in this age group).[3] However, it is known that children with psoriasis have twice the risk of comorbidities such as hyperlipidemia, hypertension, diabetes, Crohn's disease, and rheumatoid arthritis, compared to those who do not have the condition.[1] Recent data in adults are beginning to demonstrate the importance of early and effective intervention in achieving long-term remission,[4] and the pediatric population is potentially an ideal target for such strategies.

The indications for biologic therapy in children are similar to those in adults; however, unlike in adults, the range of approved medications is more limited, and the duration of treatment is longer due to the earlier disease onset.

This carries a higher cumulative risk of

Figure 1. Relationship between the psoriasis area and severity index, age at the start of the first biologic treatment, and the type of biologic prescribed



PASI: Psoriasis Area and Severity Index.

Table 1. clinical characteristics of patients with pediatric psoriasis

Patient	Sex	Age at onset of psoriasis (years)	Age at which the first biologic was started (8 years)	Phenotype	Comorbidity	1st biologic	Baseline PASI/BSA/ DLQI	Reason for discontinuation	2nd biologic
1	**M**	**8**	**9.3**	**Plaques, sc**	**Moya-Moya -disease**	**SEC**	PASI 18.2 BSA 13% DLQI 18		
2	M	5	10.0	Plaques, pp	Hypothyroidism, CGT, hepatic steatosis, overweight	ETC	PASI 32.4	Failure 1	SEC
3	F	5	7.9	Plaques, sc	No	SEC	PSAI 12 DLQI 15 BSA 10%		
4	F	5	11.2	Plaques, sc	No	ADA	PASI 16 BSA 25% DLQI 13		
5	F	10	12.6	Plaques, sc	No	ADA	PASI 10 BSA 10% DLQI 19		
6	M	10	15.2	Plaque, gutt, sc	No	ADA	PASI 17.4 BSA 28.2% DLQI 16	Failure 2	IXE
7	M	5	15.5	Plaques, sc genital, gutt	No	ADA	PASI 23 BSA 28% DLQI 18	Failure 2	
8	F	9	16.6	Plaques, sc	No	ADA	PASI 19,4 BSA 27,6% DLQI 13	Failure 2	
9	F	16	16.0	Plaques, nails	No	ETC	NA because of PsA		
10	F	8	15.4	Plaques, sc	No	ADA	PASI 16 BSA 12% DLQI 16	Failure 2	
11	F	15	16.9	Plaques, sc, genital, gutt	GAD	ADA	PASI 13,8 SA 16% DLQI 21		
12	F	6	13.5	Plaques, sc, nails	No	ADA	PASI 22 DLQI 20		
13	M	6	13.7	Plaques sc, nails	No	IXE	PASI 28.4 BSA 50%	Lack of access	ADA
14	F	4	6.8	Plaques, sc	No	ADA	PASI 20,1	Failure 2	DEU PR
15	F	10	11.8	Plaques, sc	No	SEC	BSA 31%	Lack of access	DEU PR

ADA: adalimumab; BSA: body surface área; CGT: congénita; DEU PR: deucravacitinib in the context of a clinical trial protocol; DLQI: Dermatology Life Quality Index; ETC: etanercept; GAD: generalized anxiety disorder; gutt: guttata; IXE: ixekizumab; NA: not aplicable; pp: palmoplantar; sc: scalp; PASI: Psoriasis Area and Severity Index; PsA: psoriatic arthritis; sc: scalp; SEC: secukinumab.

adverse effects, although none were observed in our series, in contrast to other real-world studies.[5] Approximately 25% of pediatric patients with psoriasis will receive biologics at some point in their lives.[3]

The main challenges encountered were related to a fear of injections; therefore, therapies requiring less frequent administration were better accepted by patients and their caregivers. We emphasize the need to develop medications that better align with the comfort needs of the pediatric population, whether in oral formulations (syrup or

small tablets) or with less frequent subcutaneous injection regimens. Our goal is to provide real-world data on the long-term use of biologic therapy in pediatric patients.

One of the main limitations is the retrospective design, the small sample size, and the absence of a control group. As this is a single-center study, selection bias may be present. Furthermore, the retrospective nature of the study could lead to underreporting of mild adverse events.

Although Argentina has local guidelines for the treatment of pediatric psoriasis,[6] in most cases, the choice of biologic was influenced by payer-imposed regulations and insurance coverage. To improve access, additional clinical studies and real-world evidence are needed to inform clinicians and payers about the effectiveness and safety of biologics in pediatric patients.

CONCLUSION

Biological therapy in pediatric patients has a favorable safety profile and high initial efficacy. Timely intervention offers a window of opportunity to reduce the inflammatory burden and improve long-term quality of life. ■

REFERENCES

1. Morita A, Saeki H. Pediatric psoriasis: Understanding pathological conditions and advances in treatment. *J Dermatol*. 2024;51(2):185-95. doi: 10.1111/1346-8138.17049.
2. Hebert AA, Browning J, Kwong JPC, Duarte AM, Price HN, Siegfried E. Managing pediatric psoriasis: update on treatments and challenges—a review. *J Dermatolog Treat*. 2022;33(5):2433-42. doi: 10.1080/09546634.2022.2059051.
3. Narbutt J, Niedźwiedź M, Lesiak A, Ceryn J, Skibińska M. Secukinumab for the Treatment of Psoriasis in Pediatrics: Patient Selection and Acceptability. *Patient Prefer Adherence*. 2023;17:421-31. doi: 10.2147/PPA.S350753.
4. Eyerich K, Asadullah K, Pinter A, Weisenseel P, Reich K, Paul C, et al. Noninferiority of 16-Week vs 8-Week Guselkumab Dosing in Super Responders for Maintaining Control of Psoriasis: The GUIDE Randomized Clinical Trial. *JAMA Dermatol*. 2024;160(9):953-63. doi: 10.1001/jamadermatol.2024.2463.
5. Marques E, Paluch Z, Boháč P, Slanař O, Běláček J, Hercogová J. The safety profile of biologic agents in comparison with non-biologic systemic agents, and topical compounds in the management of psoriasis—a 30-month prospective, observational cohort study. *Int J Clin Pract*. 2021;75(12): e14915. doi: 10.1111/ijcp.14915.
6. Luna PC, Abad ME, Larralde M, Boggio P, Ferrari B, Maccario MF, et al. Recomendaciones para el tratamiento de la psoriasis en Pediatría. *Rev Fac Cien Med Univ Nac Córdoba*. 2023;80(4):523-37. doi: 10.31053/1853.0605.v80.n4.42874