





Comparison of the efficacy and Safety of Home vs hospital narrowband UVB in the Treatment of Vitiligo.

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Introduction & Objectives: Repigmentation of certain skin patches is caused by the loss of melanocytes in vitiligo, a persistent skin condition. Because of its safety and effectiveness, narrowband ultraviolet B (NB-UVB) phototherapy at 311 nm is commonly used to treat vitiligo with stabilization of depigment repigmentation. The effectiveness and safety of NB-UVB therapy administered at home versus outpatient settings are compared. On the one hand, the two techniques are equally effective at causing noticeable repigmentation. Thus, home-based therapy represents a true shift from the classic model to the modern pattern with the added benefits of ease and flexibility

Materials & Methods: Those with vitiligo that had just started (within the last three months) and involved less than 7% of their body surface area were chosen at random to be treated in a hospital or at home. Three times a week, NB-UVB phototherapy was given to both groups. Examined were the body surface area (BSA) affected by vitiligo, the Vitiligo Extent Score Index (VES), the Vitiligo Quality of Life Index (VitiQoL), the cost of treatment, and the efficacy of repigmentation.

Results: 60 patients in all finished the research. BSA and VES decreases showed improvements in both groups of patients. Regarding skin repigmentation, there were no discernible changes between the two groups (P > 0.05). At week eight, improvements in VitiQoL scores decreased to the maximum extent for every patient in both groups. The home-based therapy group had adverse events such as severe erythema, blistering, burning, and excessive hyperpigmentation more often than the hospital-based treatment group. After seven weeks of treatment, the hospital's phototherapy costs were higher than those of phototherapy at home.

Conclusion: Treatment with NB-UVB phototherapy at home was just as successful as treatment in a hospital, as it's convenient and flexible, it increases patient compliance while providing an alternate therapeutic approach in cases where access to medical institutions is limited. However, in order to minimize overuse and negative effects, proper selection and follow-up are crucial to the effectiveness of home-based therapy







effect of rituximab on clinical and serological profile of all cases of pemphigus:a prospective observational study

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Introduction & Objectives:

Pemphigus vulgaris (PV), characterized by autoantibodies targeting desmoglein (DSG) 3 and 1, presents a therapeutic challenge. Rituximab, in combination with corticosteroids, is a primary treatment option. This prospective observational study investigates the impact of Rituximab on the clinical and serological profiles of Pemphigus patients.

Primary Objective: Assess the efficacy of Rituximab (RTX) in Pemphigus patients.

Secondary Objective: Evaluate the safety profile of RTX in Pemphigus patients

Materials & Methods:

Patients with Pemphigus, regardless of Pemphigus Disease Area Index (PDAI) scores, were enrolled with informed consent. Efficacy was evaluated through PDAI scores, clinical responses, Visual Analogue Scale (VAS) assessments for itching and pain, Physician Global Assessment (PGA), Dermatology Life Quality Index (DLQI), and monitoring of adverse events (AEs) at baseline, 3, 6, and 12 months ,18months ,24 months post-RTX infusion. Serum levels of anti-desmoglein (Dsg) 1 and Dsg 3 were measured at similar intervals.

Results:

Ninety four Pemphigus patients were treated with RTX, with a mean age of 38.58 ± 11.77 years and a mean follow-up of 20.22 ± 3.45 months. Significant reductions in PDAI scores, anti-Dsg 1 and Dsg 3 levels, pain severity, and prednisolone dosages were observed within 1 to 3 months. Median time to achieve complete remission (CR) was 3-4 months, with a median CR duration and relapse time of 9 and 12 months, respectively. Newly diagnosed patients (NDPs) exhibited higher CR rates, longer remission durations, and lower relapse risks compared to previously treated patients (PTPs). Few patients required full dose rituximab after 12months and few patients were treated with intralesional rituximab on relapse of only oral lesions. No infusion reactions occurred, but six patients reported side effects like facial palsy, dental abscess, scabies, facial erythema and myiasis.

Conclusion:

Rituximab administration in Pemphigus patients showed favorable efficacy and safety profiles for both NDPs and PTPs. Complete remission was typically achieved within 3-4 months. These findings underscore the potential of RTX as a promising treatment option for Pemphigus, with implications for disease monitoring and management







Overcoming Treatment Challenges: Secukinumab in Recalcitrant Blaschkolinear Psoriasis

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Introduction & Objectives:

Psoriasis vulgaris, a common inflammatory skin condition, can prove particularly challenging in young adults. This case report explores the newer treatment options for psoriasis in patients with recalcitrant cases to other more common combination therapies.

- To present a rare case of recalcitrant blaschkolinear psoriasis unresponsive to conventional therapies.
- To demonstrate the efficacy and safety of secukinumab in achieving significant clinical improvement in a patient with this challenging dermatosis.
- To highlight the importance of considering newer biologic therapies like secukinumab in patients with recalcitrant psoriasis refractory to conventional treatments.

Materials & Methods:

A 24-year-old female presented with multiple erythematous plaques topped with thick whitish silvery scales on the face, trunk, and extremities. She was initially seen by a private dermatologist where several rounds of topical corticosteroids, mild soap, emollients, and sunscreen were given but with minimal improvement seen. Multiple biopsies performed on different sites revealed neutrophils in the stratum corneum and the upper epidermis, psoriasiform epidermal hyperplasia and superficial to mid perivascular infiltrates of lymphocytes and melanophages confirming a diagnosis of psoriasis. Workup for any systemic involvement was negative. Sexually-transmitted infections were ruled out for possible immunocompromised state. She was then referred to our institution for further evaluation. Above medications were continued and patient was started on NB-UVB phototherapy, and methotrexate therapy with marked decrease in number of lesions. Despite the patient's adherence to medication, flare-ups continued to occur. Emotional factors have been linked to these exacerbations, particularly during times of heightened stress like exams, bereavement, and illness. These flare-ups were compounded by unhealthy coping mechanisms, including overeating and unprotected sun exposure while bathing in rivers.

Results:

Aside from continued topical and phototherapy management, patient was given secukinumab injections and noted drastic improvement. We plan to continue this protocol and monitor the patient for further resolution of symptoms.

Conclusion:

This case demonstrates the efficacy of secukinumab in achieving significant improvement in a patient with recalcitrant psoriasis, particularly in the context of emotional triggers. This highlights the potential role of newer biologic therapies in managing challenging cases of psoriasis.







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Introduction & Objectives:

Psoriasis vulgaris, a common inflammatory skin condition, can prove particularly challenging in young adults. This case report explores the interplay between psoriasis and potential psychiatric comorbidities in a young patient.

- To present a rare case of recalcitrant blaschkolinear psoriasis unresponsive to conventional therapies.
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Association between hidradenitis suppurativa and spondyloarthritis: a case report.

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Introduction & Objectives:

Axial spondyloarthritis is the most common rheumatological disease in patients with hidradenitis suppurativa. Herein, we present a clinical case of a patient with ankylosing spondylitis and severe concomitant skin lesions in the form of hidradenitis suppurativa and acne conglobata, and also describes the experience of using secukinumab

Materials & Methods:

A 50-year-old man has been suffering for 24 years from recurrent nodulocystic acne on the back, buttocks, face, neck, axillary and anogenital areas. This patient had a history of suppuration of a coccygeal epithelial cyst, and therefore surgical excision was performed. In addition, the patient complained of back pain in the thoracic and lumbar spine.

Despite previous antibiotic treatment, the patient's symptoms persisted.

Results:

Clinical examination revealed multiple scar nodular-cystic formations with numerous fistulas and purulent discharge in the axillary and anogenital areas. Blood examinations revealed elevated acute phase reactants with impaired full blood count. The patient was negative tests for coeliac disease with the presence of HLA-B27 positivity. MRI of the spine and sacroiliac joints was conclusive for inflammatory changes and the patient was diagnosed with HLA-B27 positive.

During therapy of secukinumab, clinical improvement occurred by week 12: the separation of organs from organs decreased, the inflammatory process in the formed areas of the skin decreased, and pain symptoms in the body area practically disappeared, which significantly limited his quality of life. White blood cell and C-reactive protein levels returned to normal.

Conclusion:

Because of the cross-inflammatory cascade, it seems rational to use genetically engineered biological drugs in the treatment of not only arthritis and sacroiliitis, but also skin pathology in such patients in order to improve treatment results and the quality of life of patients.







Comparison of the efficacy and adverse effects of Nivolumab vs Ipilimumab in the treatment of cutaneous melanoma: A review

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Introduction & Objectives:

The cutaneous melanoma (CM) is responsible for 80% of deaths from dermal cancer. Most CMs are diagnosed early, at which time they tend to produce immunogenic proteins that facilitate their treatment through immunotherapy such as PD-1 and CTL-4. The drugs Nivolumab and Ipilimumab are respectively the most used drugs for this purpose. Because of this, systematic review was carried out on the adverse effects and therapeutic efficacy of the use of Nivolumab and Ipilimumab in patients with MC.

Materials & Methods:

Using the PICO strategy, a systematic search was performed in PubMed. Only original articles published between January 2013 and December 2023, written in english, whose study population was patients with a confirmed diagnosis of cutaneous melanoma in stages I – IV, were included. Studies belonging to systematic reviews, expert consensus, preexperimental studies and in vitro studies were excluded, resulting in a final of 21 eligible articles.

Results:

Disease control and overall survival: The included studies evaluated the degree of disease control (therapeutic response + stable disease); patients belonging to the studies where combinations of Nivolumab and Ipilimumab were used showed the highest percentage of patients with stable disease: 67.33%, followed by patients treated with Ipilimumab monotherapy and those treated with Nivolumab monotherapy, 44.00% and 32.40%, respectively.

Regarding overall survival, patients undergoing combined treatment had a longer survival, having an average of 24.09 months compared to those treated with Nivolumab and Ipilimumab in monotherapy, who had 22.5 and 18.23 months of survival respectively.

Report of adverse effects: In relation to the selected treatment, the highest percentage of adverse effects occurred in the studies that used Ipilimumab as monotherapy (78.42% \pm 29.39%), followed by those that combined treatment (74.11% \pm 22.63%) and finally those studies that used Nivolumab as monotherapy (48.36% \pm 36.84%).

Conclusion:

The greatest therapeutic efficacy in terms of response to treatment, control of neoplastic progression and median survival was reported in those studies that used combined regimens of both inhibitors, with the dose of Nivolumab at 3 mg/kg with Ipilimumab at 1 mg/kg being the more effective.

However, although combined immunotherapy regimens can be effective as a treatment for melanoma, their prolonged use entails adverse effects derived from immune overstimulation. Given the persistence of these adverse effects, the guidelines recommend continuing long-term treatment using Nivolumab in monotherapy, that exhibited the lowest number of related adverse effects. Therefore, combination therapies appear to be a means to increase response rates independent of melanoma genotype although with an increase in adverse events.

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Comparative Analysis of Topical Tacrolimus and Ultraviolet-B Phototherapy in the Treatment of Vitiligo

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Comparative Analysis of Topical Tacrolimus and Ultraviolet-B Phototherapy in the Treatment of Vitiligo

Introduction & Objectives: Because of a deficiency of melanin, vitiligo, a defined melanocytopenia, causes skin patches to become less brilliant. One of the available therapeutic approaches is phototherapy. The most difficult part of therapy is the distal limb. To evaluate the effectiveness of UVB + tacrolimus against UVB alone in the treatment of vitiligo.

Materials & Methods: Sixty individuals between the ages of 18 and 75 were enrolled. Using UVB phototherapy three times a week, patients in Group-A applied 0.03% topical tacrolimus twice a day to their bodies and 0.01% tacrolimus twice a day to their faces. After determining the lowest erythema dose, Group-B received solely UVB treatment for depigmented patches three times each week at a dose of 0.021 j/cm2. increased by ten percent each time. The monthly percentage of re-pigmentation during a three-month period was used to calculate the effectiveness of the treatment. Following up, re-pigmentation was categorized as poor (<25%) to excellent (>75%).

Results: When the two groups' pretreatment clinical parameters were compared, there were no significant differences between them (p>0.05). Most Group-A patients (19, or 63.4%) and Group-B patients (23, or 76.7%) exhibited depigmentation levels of 1–10%, while the remaining patients had levels more than 11%. In terms of efficacy, 17 patients in Group-A (56.7%) responded more successfully than 8 patients in Group-B (26.7%) (p-value <0.05).

Conclusion: The combined effect of UVB + Tacrolimus (0.03% for the body and 0.01% for the face) was noticeably stronger than Tacrolimus alone.







From Doses to Differences: Methotrexate Prescribing Practice in Ireland

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Introduction & Objectives:

Methotrexate, originally an anti-neoplastic agent, is now extensively used at lower doses in dermatology and rheumatology for chronic inflammatory conditions. It is a potentially toxic drug frequently prescribed for dermatological and rheumatological conditions. While its safety is supported by routine blood monitoring, there remains variability in the recommended monitoring frequency, folic acid supplementation, liver function testing, and the role of specific biomarkers, such as Type III Procollagen Peptide (PIIINP).

This study aimed to compare methotrexate prescribing and monitoring practices in Ireland with various national guidelines, including those from the European Medicines Agency (EMA), the British Association of Dermatologists (BAD), and the European Alliance of Associations for Rheumatology (EULAR). Given the discrepancies between international guidelines, the goal was to document current methotrexate prescribing and monitoring practices in Ireland to identify inconsistencies in practice.

Materials & Methods:

An online survey was distributed to members of the Irish Association of Dermatologists (IAD) and the Irish Society of Rheumatology (ISR) in July 2024. The questionnaire covered pre-treatment screening, blood monitoring practices, folic acid supplementation, and adverse events experienced by patients under their care throughout their clinical experience.

Results:

We achieved a response rate of 15.5% (52/336), including 32 dermatologists and 20 rheumatologists. All respondents performed full blood count (FBC), renal profile (RP), and liver function tests (LFTs) before starting methotrexate. Infectious screening (Hepatitis B/C, HIV) was requested by 36 (69.2%), Varicella Zoster Virus (VZV) IgG by 34 (65.4%), QuantiFERON TB by 21 (40.4%), Type III Procollagen Peptide (PIIINP) by 13 (25%), and chest X-ray (CXR) by 22 (42.3%). Dermatologists were significantly more likely to perform infectious disease screenings compared to rheumatologists (p<0.05). For monitoring, all included FBC, RP, and LFTs; 19 (36.5%) monitored PIIINP, and 15 (28.8%) repeated CXR. Blood monitoring intervals ranged from two to twelve months after stabilisation.

When initiating methotrexate, 15 (28.8%) prescribed a 2.5–5mg test dose, while others started at 7.5–15mg weekly. Rheumatologists are significantly more likely to initiate methotrexate therapy at higher doses compared to dermatologists (p<0.05). Maximum weekly doses ranged from 15–30mg, with 83% prescribing 25mg. All prescribed folic acid, with dermatologists more likely to prescribe regimens of six times weekly (47%) compared to rheumatologists (20%, p<0.05). Abnormal LFTs/PIIINP prompted hepatology referrals for 48%, while the remainder reported never requesting a liver biopsy. Seven (13%) reported irreversible liver damage cases, and one (2%) death from pneumonia was noted.

Conclusion:

This study highlights significant discrepancies in methotrexate prescribing and monitoring practices among Irish clinicians, similar to the variations seen in international guidelines. While we acknowledge the small sample size, which may not fully

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represent actual practice, these findings underscore the need for updated, unified guidelines to ensure consistent and safe methotrexate use across specialties.





A case of refractory Pyoderma Gangrenosum successfully treated with Upadacitinib

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Introduction & Objectives:

This is the complex case of a 44-year-old female with a long-standing history of Crohn's disease who developed pyoderma gangrenosum (PG) resistant to multiple treatments. Following the initiation of Upadacitinib, a selective JAK1 inhibitor, the patient experienced significant improvement in her PG ulcer, adding to the current evidence that JAK inhibitors represent a promising therapeutic option for pyoderma gangrenosum.

Materials & Methods:

Patient information was collected from regular clinic visits, uploaded letters, histology results from ICE, and images taken to monitor changes in the ulcer's appearance. Regular contact with the patient was essential to assess her progress and the effects of various treatment modalities.

Results:

A 44-year-old female with a 22-year history of Crohn's disease had been treated with infliximab and azathioprine, having previously tolerated sulfasalazine poorly due to side effects. Additionally, she was diagnosed with enteropathic arthritis, and there was a family history notable for psoriasis and eczema. Her bowel and joint symptoms were well controlled on the above regimen.

The patient was referred to dermatology for a scabby plaque on her right shin, which had evolved from a small red papule over one year. Histological evaluation initially revealed acute inflammation consistent with folliculitis. However, the biopsy site failed to heal and rapidly developed into a 2.5 cm deep ulcer clinically consistent with pyoderma gangrenosum. Initial management included ABPI and compression therapy, along with very potent topical corticosteroids and topical calcineurin inhibitors. Subsequently, oral antibiotics and systemic steroids were trialled as well as escalated doses of infliximab. Despite these measures, the ulcer continued to progress.

Ciclosporin was then introduced after MDT discussion with rheumatology, dermatology and gastroenterology. Initial improvement was noted; however, the patient's renal function had declined, and blood pressure had started to rise prompting a re-evaluation of therapy.

Following a further MDT discussion, Upadacitinib was initiated, and ciclosporin was tapered. The patient received Upadacitinib 45 mg daily. Early signs of healing were observed with a notable reduction in pain and ulcer size. The ulcer completely healed after 6 months of Upadacitinib, and her Crohn's disease remained stable.

Conclusion:

The successful management of this patient's resistant pyoderma gangrenosum with Upadacitinib offers a compelling case for the broader application of this therapy in similar clinical cases. This case underscores the potential of Upadacitinib in treating refractory pyoderma gangrenosum, particularly in patients with underlying inflammatory conditions such as Crohn's disease. Although not specifically licensed for pyoderma gangrenosum, the favourable response observed suggests further investigation into JAK inhibitors may be warranted.

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Anti-Fibrotic Mechanisms of IL-31 Blockade in Prurigo Nodularis

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Introduction & Objectives:

Prurigo nodularis (PN) is a chronic inflammatory and fibrosing skin condition often requiring systemic therapy. This study explores the anti-fibrotic effects of nemolizumab, an IL-31 receptor a antagonist, using immunocytochemistry, RNA sequencing (RNA-seq), single-cell RNA sequencing (scRNA-seq), and cytokine analysis.

Materials & Methods:

Skin biopsies from lesional (L) and non-lesional (NL) areas of 4 PN patients and 3 healthy controls (HC) were collected. Fibroblasts were isolated and treated with 10mg/ml nemolizumab or PBS and further analyzed for collagen production via COL1A1-specific immunocytochemistry. RNA-seq and scRNA-seq evaluated transcriptomic changes and fibroblast supernatants were analyzed with a 53-plex cytokine panel.

Results:

Nemolizumab significantly reduced COL1A1 expression in PN fibroblasts L (p<0.01) and NL (p<0.05). Differential gene expression analysis showed decreased FGF14 expression in fibroblasts L + nemolizumab vs. L untreated (p<0.05). Gene set enrichment analysis revealed upregulated collagen biosynthesis pathways in fibroblasts L vs. HC untreated (NES 1.8, p<0.01) and downregulation of IL-20 (p<0.01), IL-23 (p<0.01), STAT phosphorylation (p=0.05) and IL-4 (p<0.01) pathways in fibroblasts L + nemolizumab vs. L untreated. scRNA-seq identified 26 unique clusters. Preliminary analysis showed upregulation of elastic fiber related and extracellular matrix pathways in PN fibroblasts from L vs. HC (FDR<0.05) but were no longer upregulated post-treatment with nemolizumab. Cytokine analysis revealed changes in fibrosis-associated cytokines MCP-1 and IL-22.

Conclusion:

Nemolizumab reduces collagen production and fibrotic signaling, supporting IL-31 blockade as a therapeutic strategy for fibrosis-driven pathology in PN patients.

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Secukinumab in the therapy of hidradenitis suppurativa - drug or provocateur? A case report - abstract

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Introduction & Objectives:

Secukinumab is an interleukin 17A inhibitor that is used to treat both ankylosing spondylitis and hidradenitis suppurativa (HS). Its efficacy in HS has been confirmed in clinical trials, but the case presented here raises the question about the possibility of inflammatory changes during therapy.

Materials & Methods:

Analysis of the case was conducted on the basis of the patient's medical records, including the patient's medical history, course of treatment and results of laboratory tests A literature review was also conducted on IL-17 inhibitors and their potential side effects in the context of HS.

Results:

It is a presentation of the case of a 36-year-old patient with AS, treated with secukinumab for 3.5 years - initially at a dose of 150 mg, then escalated to 300 mg. Three months after the dose escalation multiple inflammatory lesions appeared in the pubic hilum, axillae and the intercostal crevice (Hurley II), suggesting the development of HS. Despite intensive antibiotic therapy (clindamycin 300 mg 2× daily, rifampicin 300 mg 2× daily for 3 months), no improvement was achieved, resulting in a referral of the patient for surgical treatment.

Conclusion:

The case presented here highlights the need for further follow-up of patients with HS or predisposition to this disease who receive therapy with IL-17 inhibitors. Future studies should consider investigating the potential effects of this class of drugs on the immune microenvironment of the skin.

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Tofacitinib: A Promising Therapeutic Option for Refractory Pityriasis Rubra Pilaris - A Case Report

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Introduction & Objectives: Pityriasis Rubra Pilaris (PRP) is a rare inflammatory skin disorder, that can severely impact the quality of life in patients, particularly when presenting in chronic or refractory form. Emerging evidence suggests that JAK inhibitors may offer a potential treatment option. Here, we present a case of refractory PRP successfully treated with tofacitinib.

Materials & Methods: A 57-year-old female patient with no prior medical conditions visited the clinic due to an itchy skin lesion that had persisted for several months. Initially appearing on her face, the lesion progressed in a head-to-toe pattern, eventually affecting her extremities and the back of her neck.

The biopsy results indicated hyperkeratosis, psoriasiform acanthosis, alternating orthokeratosis and parakeratosis with follicular plugging along with an infiltration of mixed lymphoplasmacytic cells. These microscopic findings confirmed the diagnosis of pityriasis rubra pilaris.

Treatment was initiated with a daily 25 mg dose of Acitretin. After two months, due to an insufficient response to the initial treatment, 15 mg of Methotrexate was added to the regimen on a weekly basis. However, even after two months of therapy, the patient continued to experience persistent erythema, scaling and itching. Taking into account a case report highlighting the efficacy of Tofacitinib in managing patients resistant to conventional treatments, Tofacitinib was introduced at a dosage of 5 mg twice daily, in addition to the existing therapy.

Results: Following one month of treatment, the patient reported a resolution of pruritus. A significant improvement in erythema and other signs was observed at the six-month. Acitretin and methotrexate were gradually tapered and discontinued over six months, while tofacitinib was continued for an additional six months. The patient remained well-controlled with no relapse. Subsequently, tofacitinib was tapered to 5 mg daily and has been maintained at this dosage to date.

Conclusion: this case report supports the potential of tofacitinib as a treatment option for patients with refractory PRP.







Emerging Treatments for Dermatologic Diseases in Infants, Children, and Adolescents: A Systematic Review of Clinical Trials on Biologics and Small Molecule Inhibitors

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Introduction & Objectives:

Recent advancements in the treatment of pediatric dermatological conditions have emerged with the introduction of biologics and small molecule inhibitors (SMIs). These therapies target specific inflammatory pathways, which may enhance treatment outcomes for diseases like atopic dermatitis, psoriasis, and alopecia areata.** This systematic review seeks to assess the effectiveness and safety of biologics and SMIs for dermatologic conditions in children and adolescents, with an emphasis on randomized clinical trials.

Materials & Methods:

We performed an extensive literature search across PubMed, Scopus, and Web of Science, following PRISMA guidelines. Studies included in the review were those that analyzed systemic treatments using biologics and SMIs in subjects under 18 years of age. We extracted data on participant demographics, treatment regimens, effectiveness outcomes, adverse effects, and follow-up details. The risk of bias in the studies was determined using the Cochrane Risk of Bias Tool (RoB2).

Results:

From an initial pool of 1,454 studies, 49 articles fitting the inclusion criteria were identified, encompassing 6,372 cases. The review found that biologics such as Dupilumab, along with investigational JAK inhibitors like Abrocitinib and Upadacitinib, exhibited considerable efficacy in treating various conditions, particularly atopic dermatitis and psoriasis. Dupilumab specifically demonstrated significant improvements in both disease severity and quality of life. While most reported adverse events were mild to moderate, some serious adverse events were noted with certain treatments.

Conclusion:

Biologics and SMIs show great promise as therapeutic options in pediatric dermatology, offering better efficacy compared to traditional treatments. Despite these encouraging findings, additional research is needed to verify their long-term safety, especially in relation to growth and development in younger patients. Future investigations should aim to include a broader range of patient demographics and dermatological conditions beyond those currently studied.







The Effectiveness and Safety of Tralokinumab in a Cohort of Real-World Patients with Atopic Dermatitis

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Introduction & Objectives:

Atopic dermatitis (AD) is a chronic inflammatory skin disorder characterised by redness and intense itch. It has a significant impact on quality of life for patients, so disease control is vital. Tralokinumab is a monoclonal antibody that inhibits the effects of interleukin-13, a key cytokine driving inflammation in AD.1 In this retrospective review we report the effectiveness and safety of tralokinumab in real-world AD patients from the U.K.

Materials & Methods:

Patients with AD who were prescribed tralokinumab were identified through pharmacy records from January 2023 to March 2024. Patient demographics, baseline eczema area severity index (EASI), dermatology life quality index (DLQI), previous AD treatments and the effectiveness, duration and adverse events for tralokinumab were documented from patient case notes. Adequate response to tralokinumab was defined as at least a 50% reduction in EASI and at least a 4-point reduction in DLQI.

Results:

During the period of study there were 39 patients with AD who were prescribed tralokinumab [25 males (64%)]. The mean age was 41 years (range 21-78). The mean EASI at baseline was 16.9. Twelve patients (31%) were biologic naïve, and 27 patients (69%) had previously received dupilumab. The reasons for dupilumab discontinuation were adverse events (n=17), secondary failure (n=6), primary failure (n=2) and lost to follow up (n=2). Nine patients (23%) had received treatment with a janus kinase inhibitor (baricitinib n=7, abrocitinib n=3 and upadacitinib n=2). Thirty-three patients (85%) had received other systemic agents including methotrexate (n=20), azathioprine (n=17), ciclosporin (n=16) and mycophenolate mofetil (n=6). Twelve patients (31%) had previously received phototherapy.

Tralokinumab was effective for the treatment of AD in 16 patients (41%). The mean duration of treatment for these patients was 7 months (range 2- 13). Out of these 16 patients, 6 (38%) were biologic naïve. Tralokinumab was effective in 10 patients (37%) who had previously discontinued dupilumab.

Tralokinumab was discontinued in 23 patients (59%). Reasons for discontinuation were primary failure (n=10), secondary failure (n=6), adverse events (n=6) and pregnancy (n=1). The adverse events were conjunctivitis (n=3), severe dry eyes (n=1), infection (n=1) and painful gynaecomastia (n=1). The mean treatment duration in those who discontinued tralokinumab was 6 months (range 1-10).

Conclusion:

In our real-world cohort of patients with moderate-to-severe atopic dermatitis, who have already been extensively treated with systemics and phototherapy, tralokinumab was effective for 41% of patients. Tralokinumab demonstrated effectiveness in just over one third of patients who had previously discontinued dupilumab. It was generally well tolerated with few side effects. New treatments for AD with novel mechanisms of action are required for patients who do not respond to existing biologic therapies.





Development of an innovative technology based on synthetic mRNA for restoring skin elasticity

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Introduction & Objectives:

Elastin is pivotal for the elasticity of tissues and organs. Its production predominantly occurs during the neonatal period, halting in adulthood. Consequently, injuries, genetic disorders, and aging can lead to elastin damage and a permanent loss of skin integrity and elasticity due to limited elastin turnover and insufficient natural repair mechanisms, which leads to a loss of firmness, sagging, and wrinkles. Novel interventions to replenish depleted elastin are therefore essential to support the regeneration of damaged skin.

Regenerating elastic fibers in aging or environmentally damaged skin can help diminish wrinkles, sagging, and reduced firmness, thereby enhancing both skin function and appearance. Tropoelastin (TE) is the soluble precursor and fundamental building block of elastin. This study aimed to investigate whether codon optimization and nucleotide modification of synthetic TE mRNA could improve elastin synthesis in vitro and in vivo while maintaining safety profiles—a significant step toward developing effective therapies for wound healing, scar prevention, and cosmetic treatments.

Materials & Methods:

- **Codon Optimization & Nucleotide Modification** Synthetic TE mRNA was subjected to codon optimization and nucleotide modification (e.g., $me1\Psi$).
- In Vitro Testing After transfecting cells with various TE mRNA constructs, cell viability was measured via Presto Blue. TE expression was quantified using ELISA, enabling the selection of the most efficient and least toxic mRNA candidates.
- In Vivo Pig Skin Model Chosen TE mRNA variants (3, 10, and 30 µg) were injected intradermally into porcine skin. After 48 hours, elastin was visualized using an elastin-specific fluorescent stain (ElaNIR) and an in vivo imaging system (IVIS).
- **Human Full-Thickness Skin Model** The most promising TE mRNA candidates (30 µg) were tested for potential toxicity using a human full-thickness skin model to ensure clinical safety.

Results:

- Enhanced Translation & Viability Codon optimization markedly improved protein production without compromising cell viability in vitro, while nucleotide modifications further increased translation efficiency and minimized cytotoxic effects.
- **Dose-Dependent Efficacy** In porcine skin, 30 μg of native TE mRNA containing me1Ψ or 10 and 30 μg of unmodified, codon-optimized TE mRNA led to robust TE protein synthesis. Remarkably, only 3 μg of codon-optimized TE mRNA with me1Ψ modification was sufficient to enhance elastin expression.
- **Safety Profile** Intradermal injections of 30 µg of select TE mRNA constructs in a human full-thickness skin model showed no discernible toxicity, indicating strong potential for clinical use.

Conclusion:

For the first time, intradermal administration of synthetic TE mRNA has been shown to effectively boost dermal elastin synthesis in vivo. Moreover, codon optimization and nucleotide modification identify a promising lead candidate with

superior protein expression and a favorable safety profile.

Future studies will focus on elucidating the regenerative and therapeutic potential of this optimized TE mRNA to improve wound healing, prevent and treat scar formation, and restore skin elasticity. Its elastin-regenerative capability may also provide innovative non-invasive options for cosmetic procedures aiming to counteract signs of aging and improve overall skin structure.







A Perforating Breakthrough: Successful Treatment of Reactive Perforating Collagenosis with Dupilumab - A Case Report

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Introduction & Objectives:

A Perforating Breakthrough: Successful Treatment of Reactive Perforating Collagenosis with Dupilumab - A Case Report

Reactive perforating collagenosis (RPC) is a rare skin disorder characterized by the extrusion of dermal collagen through the epidermis, often presenting as umbilicated papules, plaques, and crusted lesions with pruritus. It is commonly associated with systemic conditions such as diabetes, renal failure, or obesity, but can also occur idiopathically. Standard treatments, including topical corticosteroids and systemic therapies, are often ineffective.

This case reports a 66-year-old male with a medical history of hypertension, type 2 diabetes, previous rectal carcinoma, and alcohol excess, presenting with a 2-year history of widespread pruritic, excoriated erythematous papules. The symptoms resulted in a significant adverse impact on his physical and mental health.

Materials & Methods:

The patient underwent various treatments, including antihistamines, topical steroids, bandages, doxycycline, allopurinol, prednisolone, phototherapy (PUVA), and inpatient dermatology care. A medication review was performed to exclude drug reactions, but limited improvement was noted.

A skin biopsy revealed hyperkeratosis and thickened bundles of eosinophilic collagen. Based on clinical features and biopsy results, the patient was diagnosed with RPC.

Given the substantial impact on his quality of life, a decision was made to trial Dupilumab, with a 600 mg loading dose followed by maintenance 300 mg injections every 2 weeks.

Results:

Within 2 months, the patient reported significant reduction in pruritus, with visible improvement in lesions. After 4 months, there was complete resolution of RPC with no adverse side effects and he continues to remain clear 12 months later. Clinical photographs were also taken to document this progress.

Conclusion:

This case highlights the potential of Dupilumab as an effective treatment for RPC, particularly in patients with underlying systemic conditions. While the pathogenesis of RPC is not fully understood, immune dysregulation is believed to play a role. Dupilumab's targeted action on IL-4 and IL-13 pathways may address this dysfunction alongside its antipruritic properties, leading to rapid clinical improvement.







Abrocitinib for Concurrent Treatment of Alopecia Universalis and Atopic Dermatitis: A Case Report

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Introduction & Objectives:

Alopecia universalis (AU) is an advanced form of hair loss, often associated with considerable psychological distress. AU is primarily driven by a type 1 inflammatory response, with T cells producing interferon-γ. Atopic dermatitis (AD) is a chronic, relapsing skin condition, driven by a type 2 inflammatory process involving the activation of T-helper type 2 cells, basophils, and group 2 innate lymphoid cells, which produce type 2 cytokines (IL-4, IL-13). Studies have shown that type 1 and type 2 cytokines are involved in AD and AU. Janus kinase (JAK) inhibitors block JAK/signal transducer and activator of transcription-mediated inflammatory signaling pathways, which regulate multiple cytokines. Here, we present a case demonstrating the successful use of the JAK inhibitor abrocitinib in treating both AU and AD simultaneously, while observing the pattern of hair regrowth.

Materials & Methods:

We present the case of a 22-year-old male with a long-lasting history of AD since childhood. At the age of 9, he developed localized alopecia areata (AA), which progressively worsened over the years, ultimately leading to AU, with complete loss of scalp, facial, and body hair. Despite treatment with topical minoxidil, topical steroids, and antihistamines, his conditions remained refractory. A 3-month course with baricitinib, sourced from India, yielded no improvement. Dermatological status revealed generalized xerosis, multiple eczematous patches affecting his torso, and upper extremities. He also exhibited severe hair loss on the scalp, eyebrows, eyelashes, face, chest, the upper and lower extremities. His quality of life was severely impacted by his alopecia. Dermoscopy of the scalp revealed mainly yellow dots and short vellus hairs. Given the lack of response of both AU and AD to multiple therapies, the patient was started on abrocitinib at a daily dose of 200 mg orally.

Results:

After three months of treatment, the patient showed notable hair regrowth on both the scalp and eyebrows, along with improvement in his AD. Regrowth first occurred in the eyebrows, followed by patches of terminal hairs in the vertex, frontal, and temporal regions of the scalp. As treatment progressed, hair began to regrow in the parietal, occipital, and nuchal areas, which had been the initial sites affected by alopecia. By month nine, the patient achieved full hair regrowth across all affected areas. No AD flare-ups were observed. No significant adverse effects in terms of clinical symptoms or abnormal laboratory findings were observed.

Conclusion:

AD is a high-risk factor for developing AA/AU. Recent population-based studies have shown a bidirectional association between AA/AU and AD, with shared underlying mechanisms. JAK inhibitors are effective for AA, presumably by downregulating cytokines critical in the development of AA/AU. In this case, abrocitinib at 200 mg daily was effective for both moderate AD and AU, broadening the potential use of JAK inhibitors. We assume that highly selective JAK inhibitors like abrocitinib might be more effective than tofacitinib for AU, with a favorable safety profile. Our case provides a new perspective on the role of JAK inhibitors in the pathological mechanism of AU. While JAK inhibitors show promising results, several important questions remain, including optimal treatment duration, whether drug discontinuation leads to relapse, and whether reintroducing the drug after adverse events would be as effective as initial treatment.







Dupilumab in Severe Prurigo Nodularis Patients with Complex Comorbidities: A Four-Patient Case Series

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Introduction & Objectives: Prurigo nodularis (PN) is a neuroinflammatory and fibrotic dermatosis that often coexists with atopic dermatitis and autoimmune conditions. Dupilumab, an IL-4/IL-13 pathway inhibitor approved by the FDA and EMA in 2023 for PN, has shown promise in reducing lesion severity and pruritus while maintaining a favorable safety profile. We present four patients with refractory PN and complex comorbidities including psoriatic arthritis with severe psoriasis, Tourette syndrome with compulsive scratching, endometrial adenocarcinoma, and severe atopic dermatitis, to assess dupilumab's effectiveness and tolerability in this high-risk subgroup.

Materials & Methods: A descriptive, observational, longitudinal study was conducted in a tertiary-care hospital. At baseline, data were collected on sex, age, disease duration, body mass index, lifestyle habits including smoking and alcohol, and comorbidities. Dupilumab was administered at an induction dose of 600 mg, followed by a maintenance dose of 300 mg every two weeks. Clinical follow-up visits took place at weeks 0, 8, 16, 24, and 52, where three main scales were recorded: Investigator Global Assessment (IGA) for lesion severity, Numerical Rating Scale (NRS) for pruritus intensity and Dermatology Life Quality Index (DLQI).

Results: Four patients, three female and one male, with a mean age of 52 years and a mean disease duration of 18 years were included, all of whom had failed prior topical and systemic therapies. At baseline, 50% of patients were overweight and 50% were obese; one patient reported both tobacco and alcohol use. Regarding comorbidities, one suffered from psoriatic arthritis with severe psoriasis, another had endometrial adenocarcinoma, a third had Tourette syndrome marked by severe compulsive scratching, and the remaining patient had severe atopic dermatitis. All patients initially had IGA 3 (severe lesions), a mean NRS of 9.75 ± 0.5 (severe pruritus), and a mean DLQI of 23 ± 2.94 (severe impact). By week 8, half the patients improved to moderate pruritus with a mean NRS of 4.75 ± 2.06 , and 75% showed mild DLQI scores with a mean of 8.5 ± 4.72 . At week 16, three patients were evaluated and all of them presented an IGA of 1, indicating significantly reduced lesion severity. Pruritus dropped to a mean NRS of 2.3, considered mild, and the DLQI declined to a mean of 4.67. At weeks 24 and 52, data were available for a single patient who reached IGA 0, sustained mild pruritus, and retained a mild DLQI, with no adverse events observed during any follow-up assessment.

Conclusion: Despite the small sample size, this four-patient series suggests that dupilumab is both effective and safe in patients with refractory PN who also have significant comorbidities. It provided progressive reductions in IGA, NRS, and DLQI, with no adverse effects recorded. Larger prospective studies are needed to confirm these findings and to establish safety profiles for dupilumab in PN.







The Role of Senotherapeutics in Aesthetic Dermatology: A Novel Approach to Skin Aging - A Systematic Review

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Introduction & Objectives: Cellular senescence is a hallmark of skin aging, driven by the accumulation of senescent fibroblasts, chronic inflammation, and extracellular matrix degradation. Senotherapeutics—agents that selectively target and eliminate senescent cells—represent an emerging paradigm in regenerative dermatology, offering potential benefits in improving dermal thickness, enhancing collagen synthesis, and reducing skin inflammation. As interest in senolytics and senomorphics grows, a critical evaluation of their efficacy, safety, and regulatory landscape in aesthetic dermatology is warranted.

Materials & Methods: A systematic literature search was conducted across PubMed, EMBASE, and Cochrane Library databases for studies published between 2010 and 2024. Inclusion criteria encompassed randomized controlled trials (RCTs), cohort studies, and systematic reviews investigating the impact of senotherapeutics, including senolytics (fisetin, dasatinib, quercetin, rapamycin) and senomorphics (metformin, nicotinamide riboside), on skin rejuvenation. Exclusion criteria included non-English publications, studies lacking primary clinical data, and in vitro-only studies. Data extraction focused on histological evidence of collagen remodeling, clinical efficacy, adverse event profiles, and regulatory status within the EU.

Results:

A total of 45 studies involving 1,856 patients met the inclusion criteria. Findings indicate:

- Senolytic agents such as dasatinib and quercetin demonstrated a 28% reduction in senescent fibroblast burden leading to improved dermal elasticity and wrinkle depth reduction (p<0.01).
- Senomorphics like rapamycin enhanced mitochondrial function and increased skin hydration by 22% over six months (p<0.05).
- Adverse effects were minimal, with transient erythema and localized irritation reported in 6% of patients.
- Regulatory assessments indicate that senotherapeutics remain classified as investigational agents in aesthetic
 medicine, with ongoing discussions about their integration into cosmeceutical formulations in the EU/UK.

Conclusion:

Senotherapeutics offer a novel approach to addressing intrinsic skin aging at the cellular level. Their ability to selectively eliminate senescent fibroblasts while modulating inflammatory pathways suggests a promising role in aesthetic dermatology. Despite encouraging preclinical and clinical data, variability in study designs, optimal dosing, and long-term safety concerns necessitate further controlled trials. Additionally, regulatory frameworks must evolve to accommodate the transition of these compounds from experimental treatments to standardized dermatological interventions.

This review highlights senotherapeutics as a **next-generation anti-aging strategy**, with the potential for **integration into personalized regenerative treatments**. Future research should focus on optimizing dosing regimens, assessing long-term outcomes, and clarifying regulatory pathways to facilitate safe and effective clinical application.







The Role of Omalizumab in the Management of Mastocytosis: A Systematic Review of Clinical Evidence

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Introduction & Objectives:

Mastocytosis is a rare disorder characterized by excessive mast cell accumulation, leading to symptoms such as anaphylaxis, gastrointestinal disturbances, and cutaneous lesions. It is classified into cutaneous mastocytosis (CM) and systemic mastocytosis (SM), with severe cases often requiring targeted therapies beyond standard antihistamines and corticosteroids. Omalizumab, a monoclonal anti-IgE antibody, has shown promising efficacy in reducing mast cell activation and alleviating symptoms, particularly in cases of severe anaphylaxis and mast cell activation syndrome (MCAS). By downregulating FceRI expression, omalizumab reduces mast cell mediator release, improving patient outcomes. This systematic review examines the current clinical evidence on omalizumab's effectiveness, limitations, and future role in mastocytosis management.

Materials & Methods:

A comprehensive PubMed search was conducted to evaluate the clinical efficacy of omalizumab in managing mastocytosis. The search incorporated EMTREE and MESH terms to ensure broad coverage, including studies from database inception to January 2025. Selection criteria included clinical trials, case reports, and observational studies assessing omalizumab's impact, particularly in anaphylaxis and MCAS. All studies were screened and analyzed following PRISMA guidelines, resulting in the inclusion of 28 relevant publications. Data extraction focused on patient outcomes, dosing regimens, and adverse effects, providing a comprehensive overview of omalizumab's therapeutic role in mastocytosis.

Results:

A systematic review of the literature identified multiple studies evaluating omalizumab's efficacy in mastocytosis management. Findings highlight the potential of targeted biologic therapy in controlling mast cell-mediated symptoms, particularly in refractory cases. Several case reports document patients with indolent systemic mastocytosis (ISM) who responded positively to omalizumab after failing conventional treatments. Additional studies suggest that omalizumab Reduces the frequency of anaphylaxis, improves gastrointestinal symptoms and mitigates mast cell activation syndrome (MCAS). However, variability in patient response underscores the need for further controlled trials to establish standardized treatment protocols. Overall, omalizumab appears to be a promising option for managing mastocytosis, particularly in severe, treatment-resistant cases. Future research should focus on dose optimization and biomarker-driven patient selection.

Conclusion: Omalizumab represents a promising targeted therapy for mastocytosis, particularly for refractory anaphylaxis, MCAS, and cutaneous symptoms. While it has demonstrated effectiveness in symptom control and quality of life improvement, variability in patient response and rare but serious adverse effects highlight the need for further randomized controlled trials (RCTs).







Latent tuberculosis in a patient treated with Interleukin-17 for Hidradenitis Suppurativa

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Introduction & Objectives:

Hidradenitis suppurativa (HS) is a chronic inflammatory disease of the skin and subcutaneous tissue that affects intertriginous areas. Its clinical presentation is marked by the appearance of painful inflammatory nodules, subcutaneous tunnels, comedones and scars as a result of interleukin-17 (IL-17) disorder. Secukinumab is the anti-IL-17 approved for the treatment of moderate-to-severe HS in Brazil. However, there is evidence that its use may be related to an increased risk of developing and/or reactivating pulmonary tuberculosis (TB). The objective of this study is to report the appearance of latent TB in a previously screened patient after starting treatment with anti-IL 17.

Materials & Methods:

A 42-year-old female patient was evaluated at a dermatology office on 09/2021 with a history of multiple episodes of abscesses in the axillae, groin, and inframammary region since the age of 16. She was diagnosed with HS Hurley III. The patient had undergone treatment with topical/oral corticosteroids and antibiotics, as well as oral isotretinoin, with partial improvement but frequent recurrences. She had undergone more than 10 surgical excisions, and the rest of her tests were unchanged. On 11/2021, treatment was started with Adalimumab, an anti-TNF- α drug, which was discontinued after 6 months due to changes in liver enzymes. During this period, the disease worsened, requiring treatment with topical, oral, and injectable antibiotics and corticosteroids, calcineurin inhibitors and topical immunomodulators. In 11/2022, after a new screening with negative tuberculin skin test (PPD), treatment was started with secukinumab 150 mg (two syringes per month), with a 90% improvement in the clinical picture. The patient continued to receive monthly medical follow-up.

Results: ### On 01/2024, the patient underwent tests to renew the medication dispensing and the patient had a 5mm PPD with afternoon fever and persistent cough. Following the treatment guidelines for HS with anti-IL-17, suspension of the medication was necessary while the possibility of active or latent TB was assessed.. The use of immunobiologicals was discontinued and the patient was referred to a pulmonologist, who diagnosed latent TB and the patient showed a significant worsening of the skin condition, with multiple abscesses in the armpits, intermittent fever and difficulties in maintaining her daily activities and started treatment for latent TB with Isoniazid and Rifampicin for 90 days, being allowed to reintroduce Secuquinumab after 30 days. Anti-IL 17 was reintroduced on 06/2024 after a negative IGRA test. The patient progressed with 75% improvement without complications.

Conclusion: ### This case indicates the possibility of developing pulmonary TB in patients using anti-IL-17 to treat HS, highlighting the need to suspend the immunobiological until the infection was completely resolved.





Dual paradox: eczema and psoriasis in a Crohn's disease patient treated with Infliximab

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Introduction & Objectives:

Biological therapies have revolutionized the treatment of chronic immune-mediated diseases. TNF- α inhibitors are widely used for inflammatory rheumatic, gastrointestinal, and dermatological conditions. However, paradoxical reactions, particularly cutaneous manifestations such as psoriasis and eczema, are increasingly reported. Notably, the association of these two occurring in the same patient has not been previously reported.

Materials & Methods:

We present the case of a 33-year-old female patient with Crohn's disease successfully treated with Infliximab at 5 mg/kg, who developed both eczema and psoriasis lesions during therapy.

Results:

At the ninth week of biologic therapy, she developed pruritic palmar vesicles, followed by intensely pruritic imprecisely demarcated erythematous-squamous plaques across the trunk, limbs, and scalp. Despite treatment with topical corticosteroids and antihistamines, the lesions persisted. By week 12, a paradoxical reaction was suspected, leading to Infliximab discontinuation. However, new lesions continued to appear, raising the differential diagnosis of adult-onset atopic dermatitis. To clarify, Infliximab was reintroduced, and systemic corticosteroids were administered, leading to lesion resolution. Yet, one week after the Infliximab perfusion, eczema-like lesions reappeared, along with an well-demarcated erythematous-squamous scalp plaque with alopecia. A scalp biopsy revealed a diagnosis of psoriasis vulgaris, leading to the permanent discontinuation of infliximab. Following cessation, eczema lesions resolved with systemic glucocorticoids for 3 weeks while the psoriatic scalp plaque showed partial improvement with a topical combination of betamethasone and salicylic acid. Given the co-occurrence of Crohn's disease and psoriasis, Risankizumab was initiated, leading to sustained remission without new dermatological lesions over 11 months follow-up.

Conclusion:

This case underscores the complexity of paradoxical skin reactions associated with TNF- α inhibitors, highlighting the necessity for thorough clinical assessment when unexpected dermatological manifestations occur.

While there are separately reported cases of eczema or psoriasis induced by Infliximab, to our knowledge this is the first case of co-existence of both diseases. The simultaneous presence suggests an immune dysregulation mechanism triggered by biologic treatment and warrants further research to identify the patients that are at risk of developing such reactions. The atopic status might be a predictive factor for developing eczema as a paradoxical reaction, while the onset of psoriasis is still not understood.

The successful transition to Risankizumab supports the potential of alternative biologic therapies in managing both inflammatory bowel disease and associated dermatologic conditions. Clinicians should remain vigilant for paradoxical skin reactions and tailor treatment strategies accordingly to optimize patient outcomes.







Title: Delayed Inflammatory Reactions to Hyaluronic Acid Fillers in a Patient Undergoing Dupilumab Therapy: A Case Report

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Introduction & Objectives

The demand for nonsurgical cosmetic procedures has surged in recent years, with hyaluronic acid (HA) dermal fillers emerging as the second most popular nonsurgical technique globally. These fillers are widely used for facial rejuvenation and contouring due to their safety and efficacy, with serious adverse reactions being rare. HA fillers improve skin quality by enhancing hydration and maintaining the extracellular matrix. However, delayed inflammatory reactions, though uncommon, can occur, particularly in patients undergoing immunomodulatory therapies such as Dupilumab. This case report highlights a rare instance of delayed inflammatory reactions to HA fillers in a patient receiving Dupilumab for chronic rhinosinusitis with nasal polyposis (CRSwNP), aiming to bridge a gap in the literature regarding such interactions.

Materials and Methods

A 34-year-old female with a history of CRSwNP refractory to surgical treatments and prior uneventful HA filler use presented for intradermal HA filler injections in the malar region. The procedure involved cross-linked HA administered via intradermal microdroplet injections under sterile conditions. The patient developed delayed inflammatory reactions, including facial warmth, pain, and hyperpigmented nodules, following Dupilumab administration. The Adverse Drug Reaction Probability Scale (Naranjo) was used to assess causality, and hyaluronidase injections were employed to manage the nodules. Clinical evaluations and intradermal tests were conducted to rule out hypersensitivity reactions.

Results

The patient experienced delayed inflammatory reactions approximately one hour after her first Dupilumab dose, with symptoms progressing to persistent nodules within a day. Similar, albeit milder, reactions occurred after subsequent Dupilumab doses. Hyaluronidase injections led to a reduction in nodule size, but reactions recurred after each Dupilumab dose. By the third Dupilumab dose, the nodules persisted but were less severe. Clinical findings included firm, mildly tender nodules without erythema or infection. Hyaluronidase treatment significantly reduced nodule size, though complete resolution required multiple sessions. Delayed inflammatory reactions to HA fillers are rare but can occur due to immune responses, biofilms, or injection techniques. Dupilumab, an IL-4Rα inhibitor, is generally well-tolerated but may contribute to granuloma formation by enhancing Th17 activity. In this case, Dupilumab likely acted as an immune adjuvant, triggering macrophage-mediated responses to HA degradation products. The absence of histological confirmation is a limitation, as biopsies were avoided for patient comfort. Management included hyaluronidase injections, which effectively reduced nodule size, though recurrence after Dupilumab doses suggests a complex interaction between the filler and immunomodulatory therapy.

Conclusion

Delayed inflammatory reactions to HA fillers, though rare, can occur and may be exacerbated by immunomodulatory therapies like Dupilumab. Prompt identification and treatment with hyaluronidase are essential for managing such reactions. This case underscores the importance of patient education and practitioner awareness, particularly in patients on immunomodulators. Despite the risks, HA fillers and Dupilumab remain valuable treatments, and further research is needed to refine management strategies and enhance patient safety.







Child chronic inducible urticaria:treatment options

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Introduction & Objectives: In clinical practice the most children with chronic inducible urticaria (CIndU) do not have an adequate response to non-sedating H1- antihistamines (H1-AN) even in 2-4 high doses. Recently, a growing body of research indicates the efficacy of omalizumab therapy in patients with CIndU. But even the biological therapy does not provide proper control over disease, which depends on the type of CIndU. The question of the optimal doses and duration of this therapy in CIndU children also remains open.

Materials & Methods: 14 children that had only CIndU without CSU, aged 12 to 17 years, took part in our research. As for CIndU subtypes there were: cholinergic urticaria in 4 children (1 girl, 3 boys), cold urticaria in 4 children (3 girls, 1 boy), solar urticaria in 1 boy, dermographic urticaria in 2 children (1 girl,1 boy) and dermographic urticaria with delayed pressure urticaria in 3 children (1 girl,2 boy). The diagnose of CIndU based on patients' history and challenge test results (ice cube test, walking on the treadmill until sweating began, moderate pressure, using a smooth flat object). Determination of the total IgE level was carried out by means of the enzyme immunoassay. All children were prescribed omalizumab at a dose of 300 mg every four weeks.

Results: 3 patients with cold urticaria, 1 patient with solar urticaria and 1 patient withcholinergic urticaria had hay fever comorbidity.1 patient with dermographic urticaria had autoimmune thyroiditis. According to patients' history all children did not respond to H1-AN (licensed and increased doses).10 patients also were unsuccessfully treated with corticosteroids and montelucast. All patients responded to omalizumab. But there was correlation between duration of omalizumab treatment and CIndU types. Thus, we observed more effective and shorter (from 6 months to 10 months) anti - IgE-treatment in children with cold urticaria, meanwhile for patients with cholinergic and solar urticaria therapy was a bit longer (from 12 months to 18 months). The longest omalizumab treatment was necessary for patients with dermographic urticaria and dermographic urticaria with delayed pressure urticaria due to difficulties of symptoms control, because every time after cancelling therapy, the symptoms of the disease returned. In patients with disease control, the dynamics of the IgE level increased in the first months of treatment, followed by the achievement of baseline values.

Conclusion: In order to be controlled over disease, children with all CIndU types need omalizumab treatment at a dose of 300 mg every four weeks. The duration of the biological therapy for each patient should be chosen individually depending first of all on CIndU subtype.Patients with dermographic urticaria and dermographic urticaria with delayed pressure urticaria demand a longer observation period of symptoms control.







Management of severe plaque psoriasis in renal transplant patients with IL-23 inhibitors: a case study and a review of the literature

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Introduction & Objectives:

Renal transplant recipients often present as complex patients with multiple co-morbidities, requiring multidisciplinary management. Interestingly, poorly controlled inflammatory skin conditions, such as psoriasis, are relatively uncommon in this population due to the immunosuppressive therapies prescribed to prevent transplant rejection. However, some patients experience persistent psoriasis after solid organ transplantation and management can be challenging.

We present the case of a renal transplant patient with severe psoriasis and latent tuberculosis (TB), treated successfully with risankizumab, an IL-23 inhibitor, while a literature review was performed summarising the efficacy and safety of biologics in renal transplant patients.

Materials & Methods:

Presentation of a case-study. Moreover, a literature search was conducted from the databases PubMed, MEDLINE and EMBASE until 1st February 2025, using the keywords "transplant" AND "psoriasis", "renal transplant" AND "psoriasis" AND "treatment."

Results:

A 41-year-old Bangladeshi male attended our biologics clinic after experiencing a flare of his plaque psoriasis, two months following his renal transplantation due to IgA nephropathy. The patient had an 8-year history of severe plaque psoriasis which cleared for only a month post-transplant. Previous treatments included topicals, phototherapy and acitretin which were ineffective. He had a complex past medical history, including latent TB and hypertension. On examination he had severe psoriasis (PASI:13.1, DLQI:30). He was discussed at our multidisciplinary team meeting. Due to receiving isoniazid in preparation for his renal transplant for at least a month as well as due to his other comorbidities, risankizumab SC was selected for safety and efficacy reasons. Following the initiation dose, his skin was already clear (PASI:0, DLQI:0), which has been maintained over a period of six months with no reported adverse events.

We performed a literature search, which yielded 43 articles. 18 articles were included in the analysis. Currently, there are no guidelines for the treatment of severe psoriasis in transplant patients, and only a few case reports or case series on the use of biologics have been reported in the literature. These primarily showed the safe and effective use of etanercept (anti-TNF). Whilst there is minimal data on the use of IL-23 inhibitors, reported experience has been positive.

Conclusion:

Managing psoriasis in immunosuppressed transplant patients can be challenging and a careful risk-benefit assessment is required when selecting an advanced treatment. A multidisciplinary approach is crucial to ensure effective and safe management. We suggest that IL-23 inhibitors could potentially serve as a promising option for this category of patients due to their efficacy and safety profile, although further research is required.

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Patient Outcomes and Safety of Combination Biologic Therapy with Dupilumab: A Systematic Review

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Introduction & Objectives:

Dupilumab is a biologic therapy approved for the treatment of various chronic inflammatory conditions. Clinically, it has been used in combination with other biologic agents for patients who are refractory to biologic monotherapy or who require immunotherapy for multiple conditions. However, the safety and efficacy of such combinations remain unclear. Our objective is to examine the safety profile, adverse effects (AEs), and clinical outcomes in these patients.

Materials & Methods:

A systematic search of Ovid Medline, Embase, PubMed, and Web of Science was conducted from inception to April 2024. English-language primary studies assessing patients treated with dupilumab and at least one other biologic agent were included. Additional studies were identified through citation chaining and handsearching.

Results:

A total of 27 studies comprising 156 patients were analyzed. 51.9% were treated for a single condition, and 48.1% for comorbid conditions. The most common indications for combination biologic therapy were respiratory (66.0%) and dermatologic (37.8%) disorders. Mild AEs were reported in 94.9% of cases, with injection site reactions, upper respiratory infections, and headaches being most frequent. Severe AEs were rare and none were directly attributed to biologic therapy. Clinical outcomes were generally favorable, with improved disease control observed in 62.1% of cases.

Conclusion:

Combination biologic therapy with dupilumab is well-tolerated in select patients, showing promising efficacy in addressing comorbid conditions, refractory disease, and AEs from monotherapy. Long-term effects and disease-specific AEs remain unclear. Additional research is needed to determine the efficacy and safety profiles of specific biologic combinations.







Efficacy of Nemolizumab in Atopic Dermatitis and Prurigo Nodularis: A Systematic Review and Meta-Analysis

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Introduction & Objectives:

Atopic dermatitis (AD) and prurigo nodularis (PN) are chronic inflammatory skin conditions characterized by severe pruritus, which greatly affects patients quality of life. Interleukin-31 plays a key role in both conditions, with elevated levels observed in affected individuals. Nemolizumab, a humanized monoclonal antibody targeting the Interleukin-31 receptor, has been investigated for its potential to provide rapid relief from pruritus, reduce inflammation, and improve skin barrier function. This systematic review and meta-analysis aims to evaluate the efficacy of Nemolizumab in the treatment of AD and PN, with the goal of improving treatment strategies and patient outcomes.

Materials & Methods:

PubMed, Embase and Cochrane databases were searched from inception until January 2025 for randomized trials comparing Nemolizumab to placebo in patients with AD or PN. In total, 735 articles were screened following the PRISMA protocol. Outcomes of interest were: Investigator's Global Assessment (IGA) scale success (clear/almost clear) at week 16, 75% improvement in the Eczema Area and Severity Index score from baseline (EASI-75) at week 4 and 16 and 90% improvement in the Eczema Area and Severity Index score from baseline (EASI-90) at week 4 and 16. A random-effects model with 95% confidence intervals (CI) was used. Subgroup analyses were conducted based on disease type (AD vs. PN) for the outcome of IGA success, to evaluate differences in treatment efficacy between the two conditions. Heterogeneity was examined with I² statistics. Significance was defined as a p-value < 0.05. Statistical analysis was performed using R software version 4.4.2.

Results:

A total of 7 studies were included in the meta-analysis, comprising 3047 patients with AD and PN. At 4 weeks, Nemolizumab demonstrated significant improvement in EASI-75 (RR 2.19; 95% CI 1.66-2.89; P<0.001; I^2 =0%) and EASI-90 (RR 1.96; 95% CI 1.18-3.25; P=0.009; I^2 =0%) compared to placebo, indicating rapid disease improvement and near-complete clearance in some patients. By 16 weeks, the therapeutic benefit was sustained, with continued improvement in EASI-75 (RR 1.51; 95% CI 1.33-1.71; P<0.001; I^2 =0%) and EASI-90 (RR 1.54; 95% CI 1.28-1.85; P<0.001; I^2 =0%). IGA success at this time point also favored Nemolizumab (RR 2.67; 95% CI 1.70-4.20; P<0.001; I^2 =76.3%), with subgroup analyses showing significant improvements for both AD (RR 1.50; 95% CI 1.29-1.74; P<0.001; I^2 =0%) and PN (RR 5.11; 95% CI 2.90-9.00; I^2 =40.9%; P<0.001).

Conclusion:

This meta-analysis demonstrates that Nemolizumab significantly improves clinical outcomes in both AD and PN. The treatment provides early and sustained relief, with noteworthy improvements in EASI-75, EASI-90, and IGA success at both 4 and 16 weeks. These findings highlight the potential of Nemolizumab as an effective therapy for these chronic pruritic conditions, offering both rapid onset and enduring therapeutic benefit.

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Acquired epidermodysplasia verruciformis-like eruptions associated with upadacitinib treatment for atopic dermatitis: a case series of three adult patients

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Introduction & Objectives:

Epidermodysplasia verruciformis (EDV) is a rare autosomal recessive condition which predisposes individuals to difficult-to-treat flat warts due to human papillomavirus (HPV) infection. In recent years, acquired EDV has been reported as a result of immunosuppression in the context of chronic infection or long-term use of systemic immunomodulatory agents. Herein, our case series reports the emergence of EDV-like eruptions in three adult patients with atopic dermatitis (AD) on upadacitinib, an oral Janus kinase (JAK)-1 inhibitor.

Materials & Methods:

We conducted a retrospective chart review of a single-center in Canada (Calgary, Alberta). This case series identified three patients who received upadacitinib for the treatment of AD and had onset of EDV-like eruptions. All patients underwent histopathological confirmation of diagnosis and had subsequent genetic testing for mutations associated with EDV.

Results:

Our case series included a total of three adult patients with EDV-like eruption while on upadacitinib treatment for AD. The mean age was 29.3 years (range: 23-39 years) with 66.7% (2/3) being male. Upadacitinib dosing regimens were 45 mg once daily (33.3%, 1/3), 30 mg once daily (33.3%, 1/3), and either 15 mg or 30 mg as part of the long-term extension of a phase 3 clinical trial (33.3%, 1/3). Only 1 (33.3%) patient had a prior history of extensive digital and plantar warts. Two (66.7%) patients utilized concomitant medications, both being topical (roflumilast 0.3% cream [n=1], clobetasol propionate 0.05% cream [n=1]). The mean latency period to EDV-like eruption was 74 weeks (range: 16-158 weeks). All patients underwent skin biopsy which confirmed EDV-like changes. Subsequent genetic testing for EDV was negative for all patients. Treatment regimens for EDV-like changes included topical cimetidine, topical imiquimod, and topical salicylic acid for one patient (33.3%, 1/3), oral cimetidine with topical imiquimod for one patient (33.3%, 1/3), and oral cimetidine for one patient (33.3%, 1/3). All patients additionally underwent intermittent treatment with liquid nitrogen. As of last follow-up, 66.7% (2/3) of patients continued upadacitinib treatment with no further worsening of the EDV-like eruption.

Conclusion:

While immunosuppression has been recognized as a risk factor for acquired EDV-like changes in the context of human immunodeficiency virus (HIV) infection or use of systemic immunomodulatory agents, such as tumor necrosis factor (TNF)-alpha inhibitors, our case series is the first to highlight EDV-like changes in patients utilizing systemic JAK inhibitors. Of note, all patients had negative genetic testing for EDV mutations. While the mechanism remains unclear, in-vitro

studies have demonstrated certain HPV subtypes may downregulate STAT1/STAT2 signalling to maintain viral replication. Our study highlights that there may be potential for the onset of EDV-like eruption while on upadacitinib. Further mechanistic studies are warranted.







Rituximab - A Rescue Therapy for Ocular Manifestations of Mucous Membrane Pemphigoid

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Introduction & Objectives:

Mucous membrane pemphigoid (MMP), previously referred to as cicatricial pemphigoid, is a group of chronic, cicatrizing autoimmune bullous disorders characterized by the development of subepithelial blisters that lead to scarring, primarily affecting the mucous membranes and, less frequently, the skin. Ocular involvement occurs in 64–89% of MMP patients, typically presenting bilaterally but often asymmetrically. The eyes may be the only site affected or may exhibit ophthalmic manifestations alongside other mucosal and/or cutaneous lesions. The most common ocular manifestations include dry eye syndrome, conjunctivitis, and keratitis, which can progress to scarring and permanent vision loss. Ocular inflammation in MMP is chronic, with variable rates of progression. However, patients may also experience localized or diffuse acute exacerbations, leading to rapid disease progression and severe outcomes if not effectively controlled with therapy.

Materials & Methods:

We reviewed the cases of three patients with MMP from our clinic at Elias Emergency University Hospital in Bucharest, Romania. The diagnosis was established through a comprehensive correlation of patient history, clinical presentation, laboratory findings, and histopathological results. Despite prior treatment with systemic immunosuppressants and immunomodulators, all patients exhibited disease progression. Rituximab infusions were initiated as an adjuvant to immunomodulatory and immunosuppressive treatments. Clinical follow-up examinations focused on pre- and post-rituximab treatment response, total number of rituximab infusions, and ocular outcomes, including Foster staging and best-corrected visual acuity.

Results:

All patients had achieved at least a partial response to rituximab therapy at the time of abstract drafting. At the last evaluation, rituximab-based treatment stabilized Foster staging and prevented further deterioration of visual acuity. Additionally, all patients were able to reduce immunosupressive dosages and/or transition to less potent adjuvant therapies.

Conclusion:

Systemic treatment is essential for achieving disease control in most MMP patients, typically involving immunomodulators such as dapsone or sulfasalazine, alongside glucocorticoids and immunosuppressive agents, including azathioprine, mycophenolate mofetil, cyclosporine, methotrexate in more severe cases. Biologic therapies, including rituximab, have shown success in refractory cases. The earlier introduction of rituximab as a rescue and/or maintenance therapy in ocular cicatricial pemphigoid could facilitate earlier disease arrest, preserving patients' vision and enabling tapering of adjuvant immunosuppressive therapies. Further controlled studies are necessary to identify the role of rituximab in the therapeutic arsenal, especially its optimum dose and duration of administration.

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Pityriasis rubra pilaris after COVID-19: case report

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Introduction & Objectives:

The etiopathogenesis of pityriasis rubra pilaris (PRP) still remains unclear, that can be challenging in choosing of targeted therapy for this disease. This clinical case reports the effectiveness of inhibitor IL-17 netakimab for PRP treatment.

Materials & Methods:

We describe a clinical case of PRP manifestation in a 64-year-old woman who had twice suffered COVID-19 infection. She was admitted to the Department of Dermatology and Venerology (Sechenov University) with complaints of skin rashes on her face, trunk, upper and lower extremities, accompanied by severe itching. The absence of any distinctive clinical and histological changes, the torpidity of the skin process and resistance to the therapy made diagnosis harder. After the emergence of characteristic clinical symptoms, as well as the results of repeated histological examination PRP was diagnosed.

Results:

The use of prednisone, methotrexate, topical therapy did not give any results, and therefore it was decided to initiate the netakimab. In 5 injections, the first positive results were obtained in the form of the color paling and a regression in the number of rashes and palmar-plantar keratoderma. In 11 injections, almost complete remission was achieved, and treatment was continued until all symptoms disappeared completely.

Conclusion:

The described clinical case is the fifth example of PRP manifestation in the world after a COVID-19 infection and the first case of the IL-17 inhibitor netakimab successful use for the disease treatment, which shows the association of PRP pathogenesis with activation of IL-17 cytokine.







Dupilumab use for the treatment of cutaneous toxicities associated with immune checkpoint inhibitors: A systematic review

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Introduction & Objectives: The emergence of immune checkpoint inhibitors (ICIs) has revolutionized the landscape of cancer treatment in the modern era, improving outcomes across various malignancies. However, immune-related cutaneous adverse events (ircAEs) are common, significantly affecting patients' quality of life and often leading to treatment discontinuation, which may compromise oncological outcomes. Dupilumab, an IgG4 human monoclonal antibody targeting interleukin (IL)-4 and IL-13 receptors, is widely used for dermatologic conditions but remains unapproved for ircAEs due to the limited and scattered supporting evidence. We aimed to systematically summarize all available evidence regarding the use of dupilumab in patients presenting with ircAEs.

Materials & Methods: This study was registered in PROSPERO (CRD42025644581) and followed the PRISMA guidelines. A systematic search of MEDLINE/PubMed, Scopus and Web of Science was performed from inception to January 2025, using terms related to "dupilumab," "immune checkpoint inhibitors," "cancer," and "immune-related cutaneous adverse events." Two independent authors screened studies, extracted data, and assessed the risk of bias. Disagreements were resolved through discussion with a third author.

Results: A total of 1,988 articles were identified, and after removing duplicates with EndNote, 1,396 were screened by title and abstract. Full-text screening was performed for 140 articles, of which 19 met the eligibility criteria and were included in the systematic review. The included literature consisted of 14 case reports (each reporting 1 patient), 4 case series (>1 patient), and 1 retrospective study. In total, 64 patients (38 males, 28 females) with a mean age of 67.7 years received dupilumab for ircAEs.

The most treated ircAEs were eczematous rashes (30.8%), maculopapular rashes (24.6%), and bullous pemphigoid (20%). The most common indications for ICIs were melanoma/non-melanoma skin cancer (26.6%), whereas pembrolizumab was the most frequently used ICI (42.2%). Regarding efficacy, all studies reported complete or partial clinical responses except for the retrospective study, where 5 out of 39 patients were non-responders. In the same study, one patient discontinued dupilumab due to an injection site reaction, while two patients experienced eye irritation but continued treatment. Additionally, 17 patients showed cancer progression at some point after dupilumab initiation. Cancer progression was also noted in three other cases, though no study raised concerns about a direct link between dupilumab and negative malignancy outcomes.

Conclusion: Those results may be encouraging regarding the use of dupilumab for the management of ircAEs but should be treated with caution since most of the included studies were case reports and small case series, not specifically designed to evaluate safety and survival outcomes of dupilumab in such populations. More research is warranted along with more clinical studies, prospective in design, focused on relevant clinical outcomes of this dupilumab treated subset of patients.







Successful Dual Biologic and JAK Inhibitor Therapy in a Patient with Overlapping Psoriasis and Atopic Dermatitis

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Introduction & Objectives:

Psoriasis and atopic dermatitis (AD) are distinct chronic inflammatory skin diseases; however, cases of overlap present diagnostic and therapeutic challenges. Managing patients with features of both diseases can be particularly difficult when standard treatments fail. This case report highlights the diagnostic complexities and therapeutic approach in a patient with overlapping psoriasis and AD, ultimately achieving disease clearance with combination biologic and JAK inhibitor therapy.

Materials & Methods:

We present the case of a 70-year-old woman with multiple comorbidities, initially diagnosed with psoriasis vulgaris in 2021, based on clinical findings and histopathology. The patient was first treated with guselkumab in 2022, leading to improvement of trunk lesions but persistent palmo-plantar disease. A second biopsy of plantar lesions revealed hyperkeratotic and dyshidrotic eczema,** and topical corticosteroids and calcineurin inhibitors were introduced. Due to inadequate response, therapy was switched to secukinumab, with partial improvement. A third biopsy in May 2023** suggested eczematized psoriasis, prompting further assessment using Hanéfin and Rajka criteria, which confirmed a coexisting diagnosis of AD. Systemic corticosteroids (prednisone 30 mg/day, tapered over six months)were used to control the palmo-plantar lesions, but disease control was lost over time. Combination therapy with secukinumab and abrocitinib** was then initiated.

Results:

After three months of **dual therapy, the patient achieved** complete resolution of both psoriatic and AD lesions. Clinical improvement was documented through** serial **clinical photographs and ESIF score evaluation**.**

Conclusion:

This case underscores the **importance of recognizing psoriasis and AD overlap**,** particularly in treatment-resistant cases. The success of combined secukinumab and abrocitinib therapy suggests a potential therapeutic approach for similar patients. Further studies are needed to evaluate the efficacy and safety of dual biologic and JAK inhibitor therapy **in** managing psoriasis-AD overlap.







Triangular Nasal Notch Sign: Expanding the Clinical Spectrum in TNF-Inhibitor Therapy

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Introduction & Objectives:

We present a case of triangular nasal notch sign in the context of tumour necrosis factor inhibitor (TNF-i) therapy for Crohn disease.

Materials & Methods:

A 44-year-old female presented with a two-year history of recurrent nasal dermatitis and ulceration. Her medical history included Crohn's disease, childhood atopic dermatitis, rheumatoid arthritis and Albright's hereditary osteodystrophy. Her medications included infliximab (initiated 4 years prior), azathioprine, and esomeprazole. Prior to infliximab, she had been on adalimumab for one year. She described episodic nasal crusting and fissuring, without any clear triggers. Examination revealed erythema, scaling and fissures at multiple points around the nasal orifices, including the apex of the nasal soft triangle. She had bilateral impetiginisation of her pinnae, full skin examination was otherwise unremarkable. Nasal bacterial swabs grew methicillin-sensitive *Staphylococcus aureus*. Improvement in her symptoms was achieved with topical fusidic acid/betamethasone valerate ointment, a short course of oral flucloxacillin (500mg four times daily for one week), followed by oral azithromycin (500mg three times per week).

Results:

The patient was diagnosed with triangular nasal notch sign, a novel clinical sign first described in 2019 in inflammatory bowel disease patients treated with TNF-i, presenting with cicatricial nasal notching. Its pathophysiology remains unclear, but is hypothesied to be a paradoxical reactions seen with TNF-, or a consequence of chronic secondary *Staphylococcus aureus infection*. Interestingly, our patient also exhibited impetiginised dermatitis of the pinnae, a feature not previously reported in association with the triangular nasal notch sign. Azithromycin was prescribed for its immunomodulatory effects, while fusidic acid targeted pro-inflammatory commensal bacteria, leading to clinical improvement.

Conclusion:

This case highlights the triangular nasal notch sign as a clinical finding in patients receiving TNF-i therapy for Crohn's disease. Notably, the concurrent pinnae involvement expands the recognised spectrum of this condition. Azithromycin and topical antimicrobial therapy proved beneficial in symptom management.







Assessing the efficacy of IL-17 inhibitors vs. methotrexate in reducing the risk of new-onset psoriatic arthritis in psoriasis patients: a propensity-matched cohort study

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Introduction & Objectives:

Psoriasis is a chronic inflammatory skin disorder that increases the risk of psoriatic arthritis (PsA), with shared neutrophilic inflammatory pathways contributing to joint involvement. While biologics targeting pathways such as IL-17 have shown efficacy in treating both psoriasis and PsA, limited data exist on their comparative effectiveness against methotrexate (MTX) in preventing new-onset PsA. This study aims to evaluate the incidence of PsA in psoriasis patients treated with IL-17 inhibitors (IL-17i) versus MTX.

Materials & Methods:

A retrospective cohort study was conducted using the TriNetX database. On 11/7/2024, a query identified adult psoriasis patients treated with either MTX (Cohort 1) or IL-17i (Cohort 2). Patients with a prior diagnosis of PsA within four months of psoriasis diagnosis, as well as those with cardiovascular disease, depression, or cancer, were excluded. Propensity score matching was used to generate two balanced cohorts (8,531 patients each), ensuring comparability by age, race, gender, and comorbidities. The primary outcome was the incidence of PsA, analyzed using risk assessment and Kaplan-Meier survival analysis.

Results:

Patients treated with IL-17i exhibited a lower risk of developing PsA compared to those on MTX (6.1% vs. 7.2%), with a statistically significant absolute risk reduction of 1.1% (p=0.010). Kaplan-Meier survival analysis confirmed the protective effect of IL-17i, demonstrating that psoriasis patients receiving IL-17i had a higher probability of remaining PsA-free. By the end of the study period, the survival probability was 61.15% for the IL-17i cohort compared to 72.82% in the MTX cohort (p=0.003). Additionally, hazard ratio analysis showed that MTX was associated with an increased risk of PsA compared to IL-17i (HR=1.214, 95% CI: 1.069–1.379, p=0.000).

Conclusion:

This study provides evidence that IL-17 inhibitors offer a protective effect against new-onset PsA in psoriasis patients compared to methotrexate. The lower incidence of PsA in the IL-17i cohort, supported by risk analysis and survival estimates, highlights the potential of IL-17i as a preferred treatment option, particularly for patients at high risk of PsA. These findings align with prior research demonstrating the efficacy of IL-17i in both skin clearance and PsA prevention. Limitations include retrospective design and reliance on ICD-10 coding. Our results suggest that IL-17i may serve as a first-line therapy in psoriasis patients at risk for PsA. Future longitudinal studies with extended follow-up are needed to further validate the long-term protective benefits of IL-17i.

| Demographics | Cohort 1 (MTX): Mean ± SD | Cohort 2 (IL- 17): Mean ± SD | Patients | % of Cohort |
|-------------------------------------|---------------------------------|---------------------------------|----------|-------------|
| Current Age | 58.3 ± 18.6 | 52 ± 16.4 | 23,274 | |
| Age at Index | 51.7 ± 18.5 | 48.7 ± 16.2 | 23,274 | |
| White | 14,869 | 14,869 5,986 63.8 | | 66.781% |
| Not Hispanic or Latino | 15,457 | 15,457 5,348 | | 61.45% |
| Female | 13,157 | 4,470 | 56.531% | 51.362% |
| Male | 9,625 | 4,068 | 41.355% | 46.743% |
| Unknown Ethnicity | 6,402 | 2,790 | 27.507% | 32.058% |
| Unknown Race | 3,576 | 1,380 | 15.365% | 16.121% |
| Black or African American | 1,399 | 556 | 6.011% | 6.389% |
| Hispanic or Latino | 1,415 | 565 | 6.08% | 6.492% |
| Other Race | 780 | 434 | 3.351% | 4.182% |
| Asian | 2,453 | 1,403 | 10.54% | 16.121% |
| Unknown Gender | 492 | 165 | 2.114% | 1.896% |
| American Indian or Alaska Native | 112 | 38 | 0.481% | 0.379% |
| Nicotine Dependence (F17) | 618 | 208 | 2.655% | 2.39% |

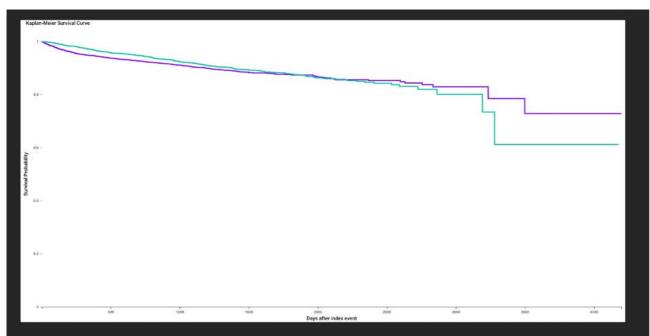


Figure 1. Kaplan-Meier survival analysis. Patients on IL-17 inhibitors (Green, bottom) maintained a higher survival probability without PsA General (61.15%) than those on methotrexate (purple, top) (72.82%) by the end of the observation period, with a significant Log-Rank Test result (P=0.003), further suggesting the protective potential of IL-17 inhibitors.







Association of obesity with adverse events in biologic treated psoriasis patients: a retrospective cohort study

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Introduction & Objectives:

Obesity is a frequent comorbidity in patients with psoriasis and is widely recognized as a factor that can influence both the severity of psoriasis and its response to therapy. However, the safety profiles of biologic treatments for psoriasis in obese patients remain poorly characterized. As the prevalence of both obesity and psoriasis continues to rise globally, it is important to understand the relationship between these conditions, with emphasis on the safety of biologic therapy in these populations. This study aims to analyze the incidence of adverse events (AEs) in obese and non-obese psoriasis patients undergoing biologic treatment, utilizing a large, national database.

Materials & Methods:

We utilized the TriNetX database to identify psoriasis patients who were treated with biologics from January 1, 2004, to December 31, 2023. Patients were categorized as obese (BMI \geq 30 kg/m²) or non-obese (BMI <30 kg/m²) based on their BMI at the initiation of treatment. Exclusion criteria included a history of autoimmune diseases, malignancies, immunodeficiency, organ transplants, tuberculosis, systemic lupus erythematosus, rheumatoid arthritis, and human immunodeficiency virus to minimize bias. Propensity score matching was employed, controlling for age, race, sex, ethnicity, and other comorbidities to minimize potential confounding variables.

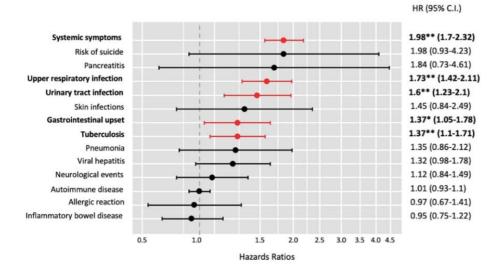
Results:

A total of 8,020 psoriasis patients treated with biologics were included in the analysis. The cohorts of obese and non-obese patients were comparable in terms of age, race, sex, ethnicity, and other comorbidities (all P > 0.33). The incidence of AEs was significantly higher in the obese cohort compared to the non-obese cohort: systemic symptoms (11.80% vs. 6.08%, HR=1.98, 95% CI=1.70-2.32), upper respiratory infections (URIs) (6.63% vs. 3.87%, HR=1.73, 95% CI=1.42-2.11), tuberculosis (4.54% vs. 3.32%, HR=1.37, 95% CI=1.10-1.71), urinary tract infections (UTIs) (3.49% vs. 2.17%, HR=1.60, 95% CI=1.23-2.10), and gastrointestinal upset (3.32% vs. 2.34%, HR=1.37, 95% CI=1.05-1.78). These findings indicate a concerning trend that supports the hypothesis that obesity may adversely affect treatment outcomes in biologic-treated psoriasis patients.

Conclusion:

Our analysis demonstrates that obese patients with psoriasis undergoing biologic treatment experience a higher incidence of AEs compared to their non-obese counterparts. These results suggest that obesity complicates psoriasis management by increasing the risk of AE, which may diminish treatment effectiveness. Our findings highlight the necessity of considering BMI when selecting treatment strategies for psoriasis patients. Future studies should focus on the long-term safety profiles of biologics in obese patients and explore the potential benefits of weight loss on treatment outcomes and AE mitigation.

Figure 1. Risk of adverse outcomes in biologic treated obese versus non-obese cohorts within one year of treatment initiation.



Data are presented as hazard ratio (HR) and 95% confidence interval (CI). Cox regression models were employed. Systemic symptoms included headache, fever (both of unknown origin and drug induced, erythematous conditions, and any abnormalities with breathing). Autoimmune disease included drug induced systemic lupus erythematosus, calcinosis cutis, autoimmune hemolytic anemia, thyroiditis, bullous pemphigoid, vitiligo. Asterisks denote significant values at *P*<0.05.

Table 1. Incidence of adverse outcomes in propensity score-matched obese and non-obese cohorts.

| Adverse outcome Allergic reaction | Non-obese (n=4,010) | | Obese (n=4,010) | | Hazard ratio (95% CI) |
|------------------------------------|---------------------|-------|-----------------|--------|-----------------------|
| | 56 | 1.40% | 55 | 1.37% | 0.97 (0.67-1.41) |
| Autoimmune disease* | 986 | 24.6% | 1,005 | 25.1% | 1.01 (0.93-1.1) |
| Gastrointestinal upset | 94 | 2.34% | 129 | 3.22% | 1.37 (1.05-1.78) |
| Inflammatory bowel disease | 129 | 3.22% | 125 | 3.12% | 0.95 (0.75-1.22) |
| Neurological events | 87 | 2.17% | 98 | 2.44% | 1.12 (0.84-1.49) |
| Pancreatitis | 10 | 0.25% | 13 | 0.32% | 1.84 (0.73-4.61) |
| Pneumonia | 33 | 0.82% | 45 | 1.12% | 1.35 (0.86-2.12) |
| Risk of suicide** | 10 | 0.25% | 20 | 0.50% | 1.98 (0.93-4.23) |
| Skin infections | 22 | 0.55% | 32 | 0.80% | 1.45 (0.84-2.49) |
| Systemic symptoms*** | 244 | 6.08% | 473 | 11.80% | 1.98 (1.7-2.32) |
| Tuberculosis | 133 | 3.32% | 182 | 4.54% | 1.37 (1.1-1.71) |
| Upper respiratory infection | 155 | 3.87% | 266 | 6.63% | 1.73 (1.42-2.11) |
| Urinary tract infection | 87 | 2.17% | 140 | 3.49% | 1.6 (1.23-2.1) |
| Viral hepatitis | 76 | 1.90% | 101 | 2.52% | 1.32 (0.98-1.78) |

Data are presented as numbers (percentage). Two-sided Chi-Square test was used. Bold values are significant at P<0.05.

 $[\]star$ = Autoimmune disease: systemic lupus erythematosus, calcinosis cutis, bullous pemphigoid, thyroiditis, autoimmune hemolytic anemia, vitiligo

^{**=} Risk of suicide: suicidal ideations, suicide attempt, suicide attempt (initial encounter), suicide attempt (subsequent encounter), suicide attempt (sequela)

^{***=} Systemic symptoms included headache, fever (both of unknown origin and drug induced), erythematous conditions, and any breathing disorders.