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Journal Watch

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Long-term efficacy and safety of brodalumab in psoriasis through 120 weeks and after withdrawal and retreatment: subgroup analysis of a randomized phase III trial (AMAGINE-1)

Papp K, Menter A, Leonardi C, Soung J, Weiss S, Pillai R, et al.
Br J Dermatol 2020;183:1037-48.

Brodalumab is a monoclonal antibody that selectively targets interleukin (IL)-17A, a cytokine responsible for development of psoriasis. This was a randomised, cohort study of the long-term efficacy and safety of bodalumab in treatment of moderate-to-severe plaque psoriasis through 120 weeks. In this study, 222 patients were treated with brodalumab 210 mg (or 140 mg) every 2 weeks and 220 patients were treated with placebo for 12 weeks. They were then re-randomised to either brodalumab 210 mg or placebo if they achieved static Physician's Global Assessment (sPGA) 0/1. Rescue brodalumab (210 mg) treatment would be offered if psoriasis flared up (sPGA score ≥3). Patients receiving initially placebo would switch to brodalumab 210 mg treatment after 12 weeks.

Ninety-six percent, 94%, 96% patients achieved Psoriasis Area and Severity Index (PASI 75) in continuous brodalumab group, placebo after brodalumab group, brodalumab after placebo group respectively at week 120. Seventy-four percent, 75%, 66% patients achieved PASI 100 in continuous brodalumab group, placebo after brodalumab group, brodalumab after placebo group respectively at week 120. The most common side effects were headache and arthralgia.

It was concluded that brodalumab is effective and safe for continuous long-term treatment of moderate-to-severe psoriasis.

A multicentre, randomized, double-masked, parallel group, vehicle-controlled phase IIb study to evaluate the safety and efficacy of 1% and 3% topical minocycline gel in patients with papulopustular rosacea

Webster G, Draelos ZD, Graber E, Lee MS, Dhawan S, Salman M, et al.
Br J Dermatol 2020;183:471-9.

Papulopustular rosacea is an inflammatory skin disorder with central facial erythema, papules and pustules. This study assessed the safety and efficacy of once-daily 1% and 3% topical minocycline gel in treatment of papulopustular rosacea patients (≥ grade 3 on a 5-point Investigator's Global Assessment including erythema, IGAe). It was a prospective 12-week, double-blinded study of 270 adult patients (age >18) patients done in United States. Patients were randomised to either 1% minocycline, 3% minocycline or placebo group. The primary and secondary endpoints were mean change in inflammatory lesions and achieving an IGA assessment of clear' or 'almost clear' with 2 grade reduction of IGA score (IGA success) respectively at week 12.

The mean baseline inflammatory lesion counts were 24.6, 25.1 and 24.3 in 1% minocycline, 3% minocycline and placebo group respectively. These had reduced to 12.6, 13.1 and 7.9 in 1% minocycline, 3% minocycline and

placebo group respectively by week 12. IGA success was achieved in 39%, 46%, 31% of patients in 1% minocycline, 3% minocycline and placebo group respectively at week 12. Minocycline topical gel was well-tolerated at concentrations of 1% and 3%.

It was concluded that inflammatory lesion counts were by minocycline topical gel which was also well-tolerated. In addition, 3% minocycline gel was significantly more efficacious.

Oral minoxidil treatment for hair loss: A review of efficacy and safety

Randolph M, Tosti A.
J Am Acad Dermatol 2021;84:737-46.

In this review, a total of 17 studies with 634 patients on the use of oral minoxidil as the primary treatment method of hair loss were identified by a Pubmed search.

This review found that oral minoxidil has promising results as a safe and effective treatment option for a variety hair disorders, including androgenetic alopecia, chronic telogen effluvium, alopecia areata, chemotherapy-induced hair loss, loose anagen syndrome, traction alopecia. Androgenetic alopecia in females was the most studied condition with dose between 0.25 mg to 1.25 mg with good efficacy. On the other hand, in male androgenetic alopecia, lower dose oral minoxidil (0.25 mg) were found to be less effective although effective treatment was seen with 2.5 mg or 5mg daily minoxidil in men.

Hypertrichosis was the most common side effect and was seen in under 10% of patients with 0.25 mg minoxidil. However, most patients considered this to be a minor problem and almost never stopped minoxidil because of this. Cardiovascular adverse effects were rare and included lower limb oedema which was reported in 3% of patients, mainly with the 5 mg preparation. Rarer side effects included dizziness, mild blood pressure changes and postural hypotension. It was concluded that oral minoxidil may be considered in healthy patients who are unable to tolerate topical minoxidil.

Role of phototherapy in the era of biologics

Torres AE, Lyons AB, Hamzavi IH, Lim HW.
J Am Acad Dermatol 2021;84:479-85.

Although phototherapy is a safe and effective treatment modality for many dermatologic conditions, its use has declined with the availability of biologics. For example, between 1993 and 1998, there has been 85% decline in PUVA usage and 90% decrease for phototherapy overall.

Phototherapy acts by induction of cytokine modification, immunosuppression and apoptosis. A study found that the improvement in health-related quality of life scores in patients treated with NB-UVB were equivalent to those treated with adalimumab. Compared to biologics, long-term data are available for phototherapy and apart from PUVA, does not require prior laboratory work-up. NB-UVB is also safe for pregnant women and children.

On the other hand, long-term data for biologics is sparse and its adverse effects have to be considered during patient selection. As a result, regular laboratory monitoring is needed. Another advantage of phototherapy over biologics is cost. Phototherapy is much less costly than biologics but its drawbacks are the higher demands on patient time, need for specialised equipment and staff. Overall, it is a safe treatment option for a variety of dermatological conditions and NB-UVB is safe for pregnant patients as well as in children and the elderly. Therefore, despite the current advances in dermatological treatments, phototherapy is still a key therapeutic modality and should be used when appropriate.

Surgical interventions for patients with vitiligo: A systematic review and meta-analysis

Ju HJ, Bae JM, Lee RW, Kim SH, Parsad D, Pourang A, et al.
JAMA Dermatol 2021;157:307-16

Surgical interventions are an alternative therapeutic option in patients with vitiligo that is resistant to conventional medical approaches. This systematic review and meta-analysis investigates the treatment response of different surgical modalities in patients with vitiligo.

A search of the MEDLINE, Embase, Web of Science, and Cochrane Library databases was conducted. Rate of repigmentation response (greater than 90%, 75%, and 50%) was the primary outcome. The factors associated with treatment response to the surgical intervention were evaluated as secondary outcomes.

One hundred and seventeen studies and 8776 patients were included in the analysis. Of the total number of cases analysed, repigmentation over 90% after any surgical intervention was seen in 52.69% (95%CI, 46.87%-58.50%), over 75% in 64.72% (95%CI, 59.52%-69.92%); and over 50% in 81.01% (95%CI, 78.18%-83.84%) of cases. According to the surgical intervention type, over 90% repigmentation was achieved in 72.08% (95%CI, 54.26%-89.89%) for thin skin grafting, 45.76% (95%CI, 30.67%-60.85%) for punch grafting, 61.68% (95%CI, 47.44%-75.92%) for suction blister grafting, 47.51% (95%CI, 37.00%-58.03%) for non-cultured epidermal cell suspension, 36.24% (95%CI, 18.92%-53.57%) for non-cultured follicular cell suspension, and 56.82% (95%CI, 48.93%-64.71%) for cultured epidermal cell suspension. Treatment response was more likely with younger patient age, non-acral area and segmental vitiligo.

It was concluded that in cases with the appropriate criteria, surgical interventions can be effective and safe in refractory stable vitiligo.

Identifying subgroups within at-risk populations that drive late HIV diagnosis in a Southern U.S. state

Nduaguba SO, Ford KH, Wilson JP, Lawson KA, Cook RL.
Int J STD AIDS 2021;32:162-9.

This was a retrospective study of HIV diagnosed cases performed between1996-2013 to identify subgroups in terms of age, racial/ethnic, and transmission categories that are associated with an increased risk of late HIV diagnosis (LHD). Cases with LHD (AIDS diagnosis within 365 days of HIV diagnosis) were stratified according to transmission category, race/ethnicity, and age and analysed by logistic regression to identify groups/subgroups at risk for LHD. The analysis was divided into the following periods: 1996-2001, 2002-2007, and 2008-2013 to assess the change in risk with time.

A total of 77,844 HIV cases were studied, of which 78%, 27%, 38%, and 31% were male, White, Black, and Hispanic respectively. LHD was present in 39% of cases initially which was follow by a 6.7% (OR: 0.93; 95% CI: 0.93-0.94, $p<0.01$) reduction per year thereafter. There was a significant association between older age and an increased odds of LHD (OR range: 1.90-4.55). There was a significantly higher odds of LHD between 1996-2001 and/or 2002-2007 in Hispanic cases (OR range: 1.31-2.58), men who have sex with men (MSM) (OR:1.14) and Black female heterosexuals (OR: 1.33). Between 2008-2013, this was significantly limited to Black MSM (30-39 years), MSM/IDUs (30-59 years), and heterosexuals (18-29 years) and Hispanic MSM (all ages). It was concluded that as there is an increased risk for LHD in Hispanic MSM and with increasing age older individuals and Hispanics (MSM), in order to decrease the rate of LHD, HIV testing is recommended for these groups.

Association of secukinumab treatment with tuberculosis reactivation in patients with psoriasis, psoriatic arthritis, or ankylosing spondylitis

Elewski BE, Baddley JW, Deodhar AA, Magrey M, Rich PA, Soriano ER, et al.
JAMA Dermatol 2021;157:43-51.

The global burden of latent tuberculosis infection (LTBI) is estimated to be 23%. As data are limited on the risks of tuberculosis (TB) and LTBI reactivation with use of newer biologics, this pooled cohort study was performed to assess the association of LTBI activation, development of active TB, and TB reactivation with secukinumab treatment in patients with psoriasis, psoriatic arthritis, or ankylosing spondylitis.

Data from 28 clinical trials of secukinumab was analysed and pooled as follows: psoriatic arthritis (5 phase 3 trials), psoriasis (5 phase 3, 12 phase 3b, and 2 phase 4 trials), and ankylosing spondylitis (4 phase 3 trials). Follow-up data was available for up to five years. Patients were screened for active TB prior to randomisation and active TB cases were excluded. LTBI cases were treated accordingly.

This study recruited a total of 12 319 patients treated with secukinumab, of which 684 patients (5.6%) had a positive LTBI test result at screening. LTBI during secukinumab treatment was reported in 13 (0.1%) of 12 319 patients (psoriatic arthritis: 3 cases, psoriasis: 8 cases, ankylosing spondylitis: 2 cases) over 5 years. Six out of the 13 cases had a prior positive LTBI test result, and seven were newly diagnosed cases of LTBI. There were no reported cases of active TB.

It was concluded that reported LTBI after secukinumab is uncommon and that it is not associated with an increased risk of active TB and TB reactivation in cases with a past history of LTBI.

Hepatitis A susceptibility in newly attending men who have sex with men to an urban sexual health centre

Fitzpatrick C, Finnerty F, Williams D, Richardson D.
Int J STD AIDS 2021;32:276-9.

This study was performed to estimate the susceptibility of hepatitis A in MSM. Anonymous clinical data of new cases of MSM between 2010-2019 was retrieved electronically and reviewed. A total of 6884 cases were analysed of which 1401/6884 (20%) were tested for hepatitis A IgG during first attendance. Of these, susceptibility was detected in 626/1401 (45%; 95% CI:42%-47%). Compared to MSM aged over 35, MSM of age 35 years or less had a significantly higher susceptibility (OR 3.42; 95%CI:2.71-4.31, $p<0.0001$). Despite an increase in testing rates between 2010-2019 (OR=67.79; 95%CI:39.09-117.60, $p<0.0001$), there was no significant change in susceptibility (OR=0.98; 95%CI: 0.33-2.89, $p=0.98$). A significantly higher susceptibility was detected in UK-born cases when compared to non-UK born cases (OR 1.5; 95%CI:1.21-1.86, $p=0.0002$).

It was concluded that susceptibility of hepatitis A is higher in MSM and that an active approach is required to avoid future outbreaks.