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< Pso Pscience >

October 2022: Issue Two

A bi-annual review digest of research associated with psoriasis and psoriatic arthritis

Welcome to issue two of *Pso Pscience* from PAPAA!

Over the past two-decades there has been a revolution in our understanding of psoriasis and psoriatic arthritis, both in terms of basic immunology, disease mechanisms and therapeutics.

This newsletter is designed to provide a summary of recently published research.

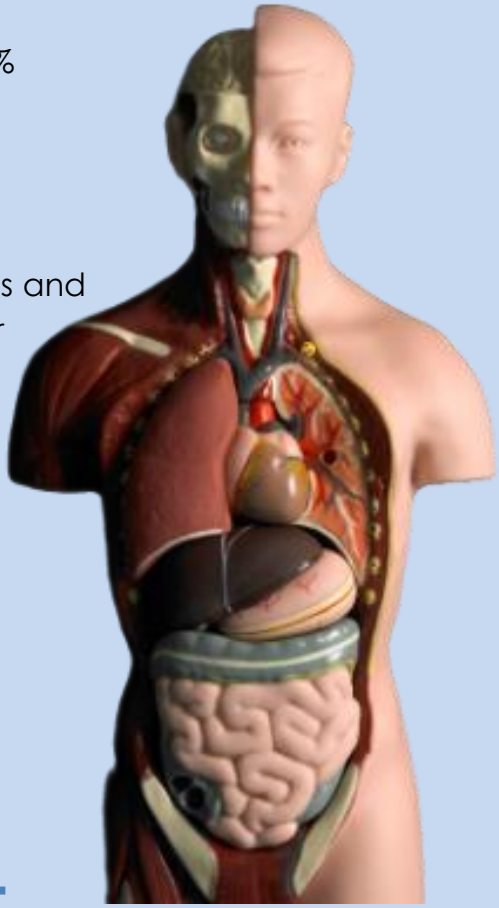
Of course, it's never a good time to have psoriasis or psoriatic arthritis, but if you have to have it, there has never been a better time!

The Global Psoriasis Atlas (GPA)

This excellent resource on psoriasis was first published in 2019 and provides detailed information about the worldwide epidemiology of psoriasis. The website contains data on the number of psoriasis cases in adults and children in every country of the world, as well as personal accounts of people with psoriasis worldwide.

It shows that:

- Western Europe has the highest prevalence of disease (1.52 %)
- East Asia the lowest (0.14%)
- Norway has the highest rate in Western Europe (2.36%)
- Switzerland the lowest (0.11%)
- The UK has a prevalence of around 2%



Comment

This is an extremely useful tool for clinicians and researchers, but perhaps not so helpful for the individual psoriasis patient.

Probably the most helpful section is the personal stories of individuals from many parts of the world.

Find the Atlas here

https://www.globalpsoriasisatlas.org/en/

Gamechanger in psoriasis treatment

A novel drug – bimekizumab - almost entirely cleared moderate to severe psoriasis in over 60% of the patients who took part in two clinical trials, carried out by the University of Manchester and Salford Royal NHS Foundation Trust.

The new drug is an addition to the already large group of biologics – drugs which target specific parts of the inflammatory pathways, which lead to psoriasis.

Bimekizumab is given by subcutaneous injection and works by blocking the action of two Interleukins – specifically IL 17A and IL 17F – both of which are involved in the inflammatory response.

The clinical trials compared bimekizumab with two other existing biologics – adalimumab and secukinumab. Researchers assessed the efficacy of the treatments using the Psoriasis Area Severity Index (PASI) with PASI 100 indicating clear skin.

At week 16 In the first trial, 230 patients (61.7%) on bimekizumab reached complete skin clearance (PASI 100), whereas only 181 (48.9%) of those taking secukinumab achieved the same result. At week 16 in the second trial, 275 or 86.2% of the patients on bimekizumab achieved a PASI 90, whereas only 75 of the patients on adalimumab-(47.2%) had the same result.

Side effects were rare, though oral thrush - usually an easily treatable mouth infection - occurred in some patients.

Comment

Bimekizumab (who thinks these names up?!), showed significantly higher rates of skin clearance compared with secukinumab and adalimumab are very impressive and set a new standard in psoriasis treatment. Bimekizumab is currently available in the UK and offers an attractive treatment option for patients with moderate-severe psoriasis.

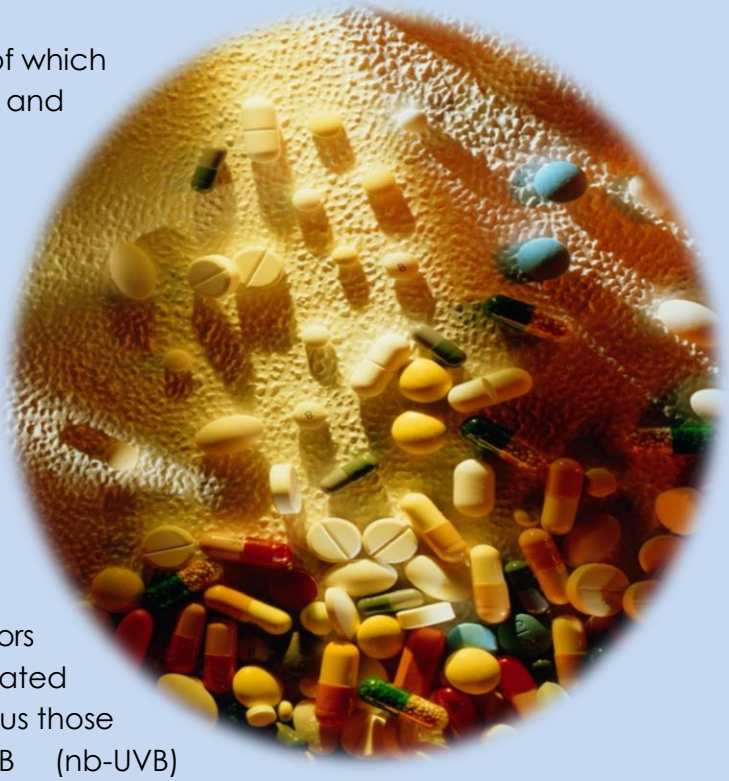
References

Warren RB, Blauvelt A, Bagel J et al. Bimekizumab versus adalimumab in plaque psoriasis. N Engl J Med: 2021; 385:130-141.

Reich K, Warren RB, Lebwohl M et al. Bimekizumab versus secukinumab in plaque psoriasis. N Engl J Med: 2021; 385:142-152.

Does drug treatment influence the development of psoriatic arthritis?

In most cases, diagnosis of plaque psoriasis may precede that of psoriatic arthritis (PsA) by an average of 5–10 years. In only a minority of cases PsA precedes the skin disease or occurs simultaneously. The question of whether different treatments may influence the development of PsA is clearly of great importance, and two recently published studies have helped to provide an answer. In the first (Acosta et al), researchers compared the incidence of psoriatic arthritis (PsA) in patients with psoriasis according to three different treatments: (1) topicals – i.e., topical applications/phototherapy/no treatment; (2) conventional disease-modifying drugs (cDMDs) such as methotrexate and cyclosporine, and (3) biologicals (bDMDs) such as adalimumab and secukinumab.



A total of 1719 patients with psoriasis were included, of which 1387 (81%) were in the topicals, 229 (13%) in cDMDs and 103 (6%) in the bDMDs group.

Results showed that the risk of developing PsA in patients with psoriasis treated with bDMDs was significantly lower compared with topicals, but not compared with cDMDs

Thus, treatment with biological drugs was associated with a lower risk of developing psoriatic arthritis when compared with topical treatments – though not with conventional disease - modifying drugs.

In the second study (Gisondi et al), investigators compared the risk of PsA development in patients treated with biological disease-modifying drugs (bDMDs) versus those treated with narrow-band, ultraviolet light B (nb-UVB) phototherapy. Once again, a lower risk of developing PsA was found in those treated with biologic drugs, compared with those treated with nb-UVB phototherapy.

Comment

This may look a bit of a dreary study, but it's actually very important. Given that the use of biologic agents is becoming more common, it is reassuring to know that their use may actually reduce the risk of developing PsA in patients with moderate-to-severe, chronic plaque psoriasis. This fact should be taken into account when considering the risks and benefits of various treatment options.

References

Acosta Felquer ML, LoGiudice L, Galimberti ML, et al. Treating the skin with biologics in patients with psoriasis decreases the incidence of psoriatic arthritis. Ann Rheum Dis 2022; 81: 74-79

Gisondi P, et al. Biological disease-modifying antirheumatic drugs may mitigate the risk of psoriatic arthritis in patients with chronic plaque psoriasis Ann Rheum Dis 2022; 81:68–73.

Obstructive Sleep Apnoea and Psoriasis

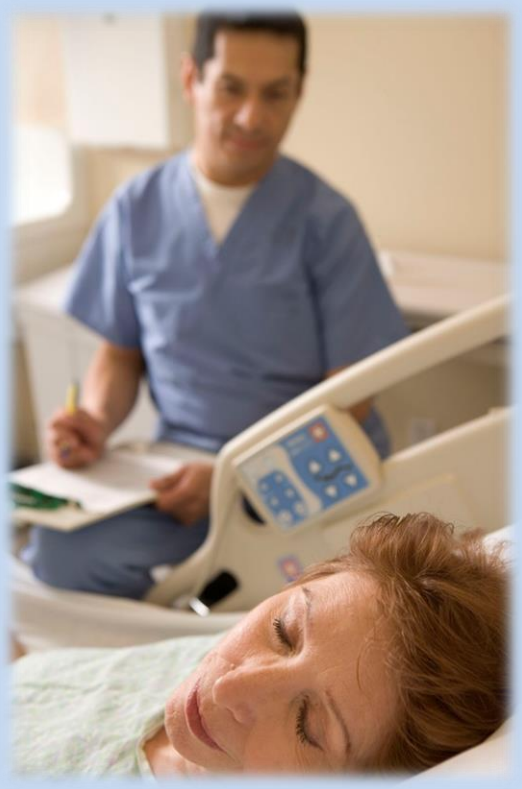
This study examined the relationship between two commonly associated conditions, obstructive sleep apnoea (OSA) and psoriasis, in a huge population of more than 5.5 million subjects.

Psoriasis is an autoimmune disease, characterised by systemic inflammation. Various comorbidities have been linked to it including obesity, cardiovascular disease, and type 2 diabetes.

Obstructive sleep apnoea (OSA), is a chronic disorder of intermittent upper airway collapse during sleep, resulting in reduced oxygen supply. Typical symptoms include loud snoring, recurrent awakening, and excessive daytime sleepiness. Moderate to severe OSA is a common condition and occurs in 10–17% of middle-aged men and 3–9% of middle-aged women. The main risk factors for OSA include obesity, aging, male gender, and heavy alcohol consumption. OSA is important because it is associated with an increased risk of hypertension, cardiovascular disease, and various metabolic disorders, especially type 2 diabetes.

The generally accepted view is that OSA is primarily due to obesity, which is an inflammatory condition. This inflammatory response then increases the risk of psoriasis, which is known to be more common among obese subjects. Thus, obesity is seen as a common origin for both conditions.

The findings of this study, challenge that assumption.



Investigators found a bi-directional relationship between psoriasis and OSA. In other words, psoriasis may increase the risk for sleep apnoea and sleep apnoea may increase psoriasis risk. Importantly, the association between OSA and psoriasis was independent of body weight. This suggests that underlying inflammation is a common pathway for both psoriasis and OSA.

Comment

The fact that inflammation is fundamental to both OSA and psoriasis, does not diminish the importance of achieving and maintaining a healthy weight. Weight loss not only reduces inflammation, but by reducing fatty deposits in the neck and tongue, also improves the mechanical dysfunction of the upper airways in OSA.

Reference

Tzong-Yun Ger; Yun-Fu; Ching-Chi Chi. Bidirectional association between psoriasis and obstructive sleep apnoea: A systematic review and meta-analysis. Nature Scientific Reports; 2020, Volume 10, article number: 5931