E-Poster

Dermatology Summit 2022





7th Global Summit on

Dermatology and Cosmetology

March 14, 2022 | Webinar

7th Global Summit on
Dermatology and Cosmetology
March 14, 2022 | Webinar

Oxidative stress parameters in psoriasis and psoriatic arthritis patients in comparison to the healthy controls: A preliminary study conducted in Sri Lanka

Fatema Shabbir Abbasbhoy[1], Senaka Rajapakse[2], Janaka Akarawita[3], Chalukya Gunasekara[3], Sisira Pathirana[1], Shiroma Handunetti[1], Narmada Fernando[1]

[1]Institute of Biochemistry, Molecular Biology and Biotechnology (IBMB), University of Colombo, Sri Lanka
[2]Institute of medicine, University of Colombo, Sri Lanka
[3]Skin clinic, National Hospital of Sri Lanka, Sri Lanka

Psoriasis is a chronic skin disorder which affects 2-3% of the global population. One of the manifestations of long-term psoriasis condition is psoriatic arthritis. This study aimed to compare the oxidative stress parameters of patients with psoriasis (PP) and psoriatic arthritis (PA) with the healthy controls (HC). A total of 20 patients were recruited including 9 of PP and 11 of PA from the National Hospital of Sri Lanka (a tertiary care hospital). Age and gender matched- HC were recruited from the community (n=20). Serum and leukocytes were isolated from the blood samples collected from patients and HC. Phagocytes were separated from the total leukocytes prior to the experiments. Reactive nitrogen species (RNS) and total antioxidant capacities were measured in the sera isolated. Cellular production of reactive oxygen species (ROS) and RNS levels were measured using isolated cells. Results revealed that the serum RNS levels were significantly high in both groups of patients (PP and PA) compared to HC (0.71±0.32 & 0.97±0.26 Vs 0.51±0.81; p<0.001)while their antioxidant levels were similar to that of the HC. However, no significant difference was detected either in serum RNS or AOC levels between the two groups of patients. The cellular production of ROS and RNS levels by phagocytes isolated from PP (269.5±206, 257.6±32 respectively) and PA (346.6±319, 251.3±77 respectively) were also significantly higher than those of the HC (89.4±98, 66.3±46 respectively; p=0.005, p=0.002 respectively). Nevertheless, the cellular production of ROS and RNS levels between the two groups of patients were comparable. Overall, it was observed that the serum oxidative stress parameters and cellular production of them were significantly higher in both groups of patients with psoriasis over HC. Similar levels of serum oxidative stress parameters and corresponding cellular productions were detected in both groups of patients despite the presence of arthritis, in one group.

Speaker Biography

Fatema Shabbir has completed here master of science degree in cellular and molecular immunology at institute of biochemistry, molecular biology and biotechnology (IBMBB), University of Colombo. She is currently employed as the assistant lecturer in immunology at IBMBB, University of Colombo. She studied the role played by the oxidative stress parameters and the inflammatory mediators in bringing about the pathogenesis of psoriasis as a part of her MSc. Research study project. Apart from assisting the students in lectures and practical classes, she is also involved supervision of MSc research projects aiming at the immunopathogenesis of psoriasis.

e: fsad7861102152@yahoo.com

Notes:

Accepted Abstracts

Dermatology Summit 2022





7th Global Summit on

Dermatology and Cosmetology

March 14, 2022 | Webinar

7th Global Summit on
Dermatology and Cosmetology
March 14, 2022 | Webinar

Study of calprotectin gene polymorphism and serum level in Acne vulgaris patients

Azza G A Farag, Samar G Helal, Azza Z Labib and **Heba A S Bazid**
Menoufia University, Egypt

Background: Acne vulgaris (AV) is an inflammatory skin disease of the pilosebaceous unit. S100A8 and S100A9 (the light subunits of calprotectin) gene polymorphism has been known to be associated with inflammatory disorder. Till now, no study investigated calprotectin gene polymorphism in acne patients.

Methods: This case-control study included 50 patients having variable degrees of acne vulgaris (AV) severity, in addition to a control group of 26 age and sex matched seemingly healthy volunteers.

Results: Acne vulgaris patients had considerably greater ($p<0.001$) mean serum calprotectin levels than the control group (3.86±2.58 pg/ml vs 0.29±0.14). AA genotype of Calprotectin S100 A8 (rs3806232) was significantly predominated than AG or GG genotypes in patients compared to the controls and A allele was significantly ($p<0.001$) predominated in patients (80%) while A and G alleles were equally distributed in controls, also there was a significant higher serum calprotectin level in calprotectin AA genotype than in AG or GG ($p<0.001$) in acne vulgaris patients.

Conclusion: The serum levels of calprotectin were considerably greater in AV patients than in controls. AA genotype and A allele of the S100 A8 gene were significantly higher in patients, which was associated with significantly higher calprotectin serum levels. Thus calprotectin both gene and serum level might participate in disease pathogenesis which needs further studies.

Keywords: Calprotectin, Acne vulgaris, Gene Polymorphism.

e: azzagaber92@yahoo.com

7th Global Summit on
Dermatology and Cosmetology
March 14, 2022 | Webinar

Human beta-defensin 1 circulating level and gene polymorphism in non-segmental vitiligo Egyptian patients

Azza Gaber Antar Farag MD, Mohamed Abd AlMoneam Shoeib MD, Azza Zagloul labeeb MD, Amany Salah Khalifa MD, Mustafa Elsayed Elshaib, Hayam Mohamed Aboelnasr Hanout MD and **Hagar Mahmoud AbdElkader Khallaf**
Menoufia University, Egypt

Background: Vitiligo represents an acquired depigmented skin disorder. It has a genetic and an auto immune background. Human beta defensin-1(HBD-1) plus its gene polymorphism were linked to some autoimmune disorders.

Results: There was a significant lower HBD-1 serum levels in NSV cases than controls ($p<0.001$). There was a significantly predominance of GG DEFB1 genotype and G allele in NSV patients than controls ($p<0.001$). The levels of serum HBD-1 and DEFB1 genotypes were not associated or correlated significantly with any of the personal and clinical parameters of vitiligo patients.

Conclusions: DEFB1 gene polymorphism (GG genotype and G allele) may modulate vitiligo risk and contribute to vitiligo development in Egyptian populations. Decreased circulating HBD-1 levels might have an active role in vitiligo etiopathogenesis that could be mediated through its possible anti- inflammatory effects.

Keywords: Human beta-defensin; gene polymorphism; non-segmental vitiligo.

e: azzagaber92@yahoo.com

7th Global Summit on
Dermatology and Cosmetology
March 14, 2022 | Webinar

The anti-inflammatory effect of Aptamin C on house dust mite Extract-Induced inflammation in keratinocytes via regulation of IL-22 and GDNF production

Jae Seung Kang[1], Dahae Lee[1], Yejin Kim[1], Hyejung Jo[1], Cheolhyeon Go[1] , Yoojin Jang[1], Kwanjin Park[1], Dongmin Kang[2] and **Yoon-Seong Kim[3]**

[1] Seoul National University, Korea

[2] Boston University, Korea

[3] Nexmos Co Ltd., Korea

Atopic dermatitis (AD), a chronic inflammatory skin disease, is characterized by eczemous lesions on the skin that manifest as severe itching and last a long time. AD is thought to be a response to local allergens, including house dust mites (HDMs). Aptamin C is a modified form of vitamin C comprised of aptamers (DNA fragments) that bind specifically to vitamin C and inhibit its oxidation, thereby increasing its stability and antioxidant effects. It is already known that vitamin C shows an anti-inflammatory effect on skin inflammation. Oxidative stress is one of the major causes of inflammatory diseases, including HDM-induced skin inflammation, suggesting that the antioxidant activity of Aptamin C could regulate inflammatory responses to HDMs in the skin keratinocyte cell line HaCaT and primary skin keratinocytes. Aptamin C not only inhibited HDM-induced proliferation of both type of cells, but suppressed HDM-induced increases in interleukin (IL)-1α and IL-6 production by these cells. In addition, Aptamin C suppressed the production of IL-17 and IL-22 by T cells, which are closely associated with AD pathogenesis, as well as HDM-induced IL-22Rα expression. Aptamin C also reduced the production of thymus and activation-regulated chemokine (TARC) by suppressing the interaction between IL-22 and IL-22Rα, as well as reducing T cell migration. Although HDM treatment markedly increased the expression of glial cell line-derived neurotrophic factor (GDNF), which is associated with itching in AD skin lesions, this increase was reduced by Aptamin C treatment. Taken together, these results suggest that Aptamin C can effectively regulate inflammatory lesions, such as AD, by regulating the production of inflammatory cytokines and GDNF induced by HDM.

e: yk525@rwjms.rutgers.edu