The 18th Annual Meeting
The Korean Society for Psoriasis

PROGRAM BOOK

September 13, 2014

Bear-Hall, Seoul, Korea

Organized by
The Korean Society for Psoriasis
Co-sponsored by
The Korean Dermatological Association

인사말씀

대한건선학회 회원 여러분

장마와 혹서의 계절에 모두 안녕하십니까?

여러분의 성원으로 대한건선학회는 이제 18회 연례학술대회를 개최하게 되었습니다. 우리 학회는 본격적인 성숙기에 들어서고 있다고 생각합니다. 사람으로 따지면 청소년기입니다. 이를 위해 학술대회도 과감한 변신을 시도하고 있습니다. 명망 있는 해외 초청 연자를 모시는 것은 과거와 같습니다. 일본 Shinshu University의 Ryuhei Okuyama 교수는 건선의 표피 이상에 대한 연구로 잘 알려져 있으며 이번에 'Complication of Keratinocyte Regulation in Psoriasis'이라는 제목으로 특강을 할 예정입니다. 아울러 그동안 한국과 일본의 건선 연구 및 학술 교류에 있어서 핵심적인 교량 역할을 해 주었던 Tokai University의 Akira Ozawa 교수의 정년을 기념하여 회고의 성격을 갖는 기념 강연을 마련하였습니다. 대한건선학회는 작년에 산하학회로는 유일하게 총 상금 2,000만원 규모의 'KSP 건선학술상'을 제정하였고 연구계획서 부문 연세대학교의 이민걸 교수 외 세 분이 제1회 수상자로 결정되었습니다. 이번 학술대회에서는 이민걸 교수의 연구 결과를 청취하면서 학술상 제정의 의미를 되새기는 자리를 마련하였습니다. 이번 학술대회에서 처음 시도되는 세션으로 'From the Society'가 있습니다. 학회 주도의 연구 결과 및 공적 논의가 필요한 이슈를 함께 나누는 시간입니다. 이번에는 작년에 그 개요가 발표되었던 대한건선학회 주도의 역학 연구인 EPI-PSODE 연구의 자세한 분석 결과가 발표될 예정입니다. 한국에서는 최초로 전국 단위의 건선 역학조사를 한 것이며 다기관이 참여한 연구의 성과로서 시사하는 바가 매우 크다고 하겠습니다. 그간 오랫동안 학술대회의 일부로 자리하였던 교육강연은 상대적으로 전문의 위주의 논의의 장이 부족하다는 판단에서 폐지하는 대신 진료 현장에서 느끼는 의학적 문제를 사례 중심으로 교수들과 개원 회원들이 함께 고민하는 'Clinician's Viewpoint'라는 세션을 개설하였습니다.

대한건선학회가 의욕적으로 마련한 새로운 학술 프로그램이 여러분과 함께 하는 풍성한 잔치의 자리가 되었으면 하는 바램을 가지고 9월 13일 서울 삼성동 베어홀에서 만나뵙기를 희망합니다.

2014. 9.

대한건선학회 회장 **이 주 흥**

INFORMATION

◆ **등록비**

정회원: 현장등록 3만원, 사전등록 2만원

비회원: 현장등록 6만원, 사전등록 5만원(회원 가입시 정회원과 동일하며 회원 가입 첫 회 회비 면제) 전공의 및 65세 이상 회원 면제

◆ **연회비**

정회원: 2만원

65세 이상 면제

회원 가입 첫해 면제

◆ Official Language

모든 발표자료는 영어로 작성되어야 하며, 연제 발표 시 국내 연자는 한국어를 사용하고 외국인 연자는 영어를 사용하여 발표합니다.

◆ **학회장: Bear-Hall Seoul**

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◆ **발표자들께 알리는 말씀**

모든 발표자료는 beam projection만 가능하며 필름 슬라이드는 사용할 수 없습니다.

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모든 발표자들께서는 발표 1시간 전까지 발표자료(파워포인트 파일)를 CD-ROM, 또는 USB memory에 수록된 형태로 제출하여 주시기 바랍니다.

발표자가 지참한 노트북은 발표 시 직접 연결하여 사용할 수 없습니다.

PROGRAM

MORNING SESSION

09:30-10:00 **등 록**

09:55-10:00 **개회사** **이주흥** (대한건선학회 회장)

축 사 **은희철** (대한피부과학회 회장)

10:00-11:00 Free Communication (I) 좌장: **최지호** (울산의대), **송해준** (고려의대)

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Department of Dermatology, Asan Medical Center, University of Ulsan College of Medicine

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JANG Si-Hyeok, YOON Sang-Woong
Department of Dermatology, Seoul National University Bundang Hospital

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JUNG So-Young[1], KIM Sang-Hyun[1], WANG Han-Yeong[1], PARK In-Ho[2], SEOL Jung-Eun[2], KIM Hyo-Jin[2]
[1]*Department of Dermatology, Haeundae Paik Hospital, Inje University*
[2]*Depertment of Dermatology, Busan Paik Hospital, Inje University*

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Derpartment of Dermatology, National Medical Center

11:00-11:45 [Special Lecture] 좌장: **은희철** (서울의대)

"Complication of Keratinocyte Regulation in Psoriasis" ····· 15

Prof. **Ryuhei Okuyama** *(Shinshu University, Japan)*

11:45-13:30 **점심식사(학회제공) 및 평의원회**

AFTERNOON SESSIONS

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"The Korean Society for Psoriasis & Me" ····· **20**
Prof. **Akira Ozawa** *(Tokai University, Japan)*

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CHOI Jee-Ho *(Department of Dermatology, University of Ulsan College of Medicine)*

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SONG Hae-Jun *(Department of Dermatology, Korea University)*

14:20-14:35 [KSP 건선학술상 2013년 연구계획서부분 수상자 결과 보고] 좌장: **이주홍** (대한건선학회 회장)

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LEE Min-Geol *(Department of Dermatology, Severance Hospital, Cutaneous Biology Research Institute, Yonsei University College of Medicine)*

14:35-15:00 *Coffee Break*

15:00-16:00 Free Communication (II) 좌장: **김태윤** (가톨릭의대), **한승경** (우태하한승경피부과)

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[1]Department of Dermatology, School of Medicine, Pusan National University Hospital
[2]Department of Nuclear Medicine, Biomedical Research Institute, Pusan National University Hospital

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[1]Department of Dermatology, Severance Hospital, Yonsei University College of Medicine
[2]Department of Dermatology, National Health Insurance Service Ilsan Hospital

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Department of Dermatology, Konkuk University School of Medicine

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[1]Department of Dermatology, Severance Hospital, Cutaneous Biology Research Institute, Yonsei University College of Medicine

[2]Department of Dermatology, National Health Insurance Service Ilsan Hospital

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Department of Dermatology, College of Medicine, Hallym University

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KU Sang-Hyeon, KIM Kwang-Joong

Department of Dermatology, College of Medicine, Hallym University

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Department of Dermatology, Konkuk University School of Medicine

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SHIN Eun-Jae, KIM Tae-In, BAE Myong-Il, CHOI Jeong-Hwee, SHIN Min-Kyung, KIM Nack-In

Department of Dermatology, School of Medicine, Kyung Hee University

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KIM Sang-Jin[1], SONG Hyo-Sang[1], JANG Yong-Hyun[2], LEE Eun-So[1]

[1]Department of Dermatology, Ajou University School of Medicine

[2]Department of Dermatology, Kyungpook National University Hospital

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SONG Sang-Hyun, NA Chan-Ho, KIM Min-Sung, SHIN Bong-Seok

Department of Dermatology, Chosun University Medical School

16:00-17:00 [Clinician's Viewpoint] 좌장: **김광중** (한림의대)

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PARK Hai-Jin *(Department of Dermatology, Ilsan Paik Hospital, College of Medicine, Inje University)*

Discussion

17:00-17:30 **폐회 및 총회**

SPECIAL LECTURES

CURRICULUM VITAE

Ryuhei Okuyama, M.D., Ph.D.
Department of Dermatology,
Shinshu University School of Medicine,
Japan

Education:

1989 M.D. Tohoku University School of Medicine, Sendai, Japan
2005 Ph.D. Tohoku University Graduate School of Medicine, Sendai, Japan

Postdoctoral Training:

1997-2000 Postdoctoral Fellowship, Cutaneous Biology Research Center, Massachusetts General Hospital/Harvard Medical School, Charlestown, MA, USA

Licensure and Certification:

1989 Medical license of Japan #319764
2004 License of dermatological specialist #6719
2007 License of interim cancer specialist #071341
2013 License of advising doctor of clinical pharmacology #14019

Academic Appointments:

1991-1995 Graduate Student, Department of Dermatology, Tohoku University Graduate School of Medicine, Sendai, Japan
1995-1995 Clinical staff, Department of Dermatology, Tohoku University School of Medicine, Sendai, Japan
1997-1997 Junior assistant professor, Department of Dermatology, Tohoku University School of Medicine, Sendai, Japan
2000-2003 Junior assistant professor, Department of Dermatology, Tohoku University School of Medicine, Sendai, Japan
2003-2005 Senior assistant professor, Department of Dermatology, Tohoku University School of Medicine, Sendai, Japan
2005-2009 Associate professor, Department of Dermatology, Tohoku University School of Medicine, Sendai, Japan
2010-Present Professor and Chairman, Department of Dermatology, Shinshu University School of Medicine, Matsumoto, Japan
2014-Present Associate director, Department of Dermatology, Shinshu University Hospital, Matsumoto, Japan

Hospital or Affiliated Institution Appointments:

1989-1991 Resident, Department of Dermatology, Tohoku University School of Medicine, Sendai, Japan

1995-1996 Clinical staff, Division of Dermatology, Iwaki Kyoritsu Hospital, Iwaki, Japan

Professional Societies:

Japanese Dermatological Association (Assistant branch chief of the East Division of Japanese Dermatological Association)

Japanese Society for Investigative Dermatology (Administration officer)

Japanese Society for Psoriasis Research (Councilor)

Japanese Society for Dermatoallergology and Contact Dermatitis (Councilor)

Japanese Skin Cancer Society (Councilor)

Japanese Cancer Association

Japanese College of Rheumatology

Molecular Biology Society of Japanese

Editorial Activity:

Journal of Dermatological Science: Section Editor

Journal of Dermatology: Section Editor

Awards and Honors:

1997 Research Award of Institute of Development, Aging and Cancer, Tohoku University

2001 Basic Research Award of Japanese Dermatological Association

2005 Fellowship Shiseido Award of Japanese Society for Investigative Dermatology

2008 Research Award of Tohoku University School of Medicine

Major Research Interests:

Mechanistic, diagnostic and therapeutic implications in psoriasis

Mechanistic, diagnostic and therapeutic implications in melanoma

Molecular cellular biology of epithelial cells

Signal transduction

SL

Complication of Keratinocyte Regulation in Psoriasis

Ryuhei Okuyama, M.D., Ph.D.

Department of Dermatology, Shinshu University School of Medicine, Japan

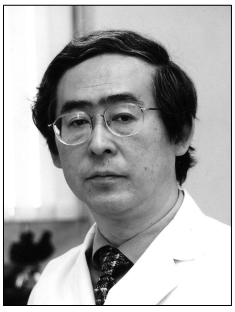
Psoriasis is a common, chronic skin disease. It is important to the dermatologists because patients are embarrassed about the appearance of their skin and have a decreased quality of life. Recently, it is clarified that cross-talk between epithelial keratinocytes and immune cells shapes and maintains the inflammatory milieu. We chiefly focus on keratinocyte regulation in psoriasis. This time, we introduce molecular roles of two molecules, FABP5 and Notch, in the pathomechanism of psoriasis.

FABP, fatty acid binding protein, can bind fatty acids, and maintain efficient transport within cells. FABP5, an isoform of FABP, is overexpressed in the epidermis of psoriasis. We have found that higher amount of FABP5 leads to increase of linoleic acid in the keratinocytes. Linoleic acid generates 13-HODE, which activates NF-kB signal pathway. NF-kB activationseems to contribute to dysregulation of keratinocyte differentiation and cytokine production in psoriasis. Furthermore, we have established ELISA system for measuring FABP5 amount. FABP5 levels in the skin-strippings are significantly higher in lesions than in healthy skin. Because FABP5 levels of skin-strippings reflect the skin condition, the skin-stripping FABP5 helps predict improvement and relapse during the therapies.

Notch is a transmembrane receptor, and we possess 4 Notch proteins, Notch1~4. Notch signal cascade has diverse effects, which include maintenance of stem cells, cell fate specification, differentiation, proliferation, and apoptosis. Both Notch1 and Notch2 are decreased in the epidermis of psoriasis. The Notch downregulation is likely to lead to cytokine production as well as suppression of keratin 1/10 expression in the epidermis of psoriasis. Notch signal is an interesting cascade as targets of the therapeutic approach, because Notch exerts pronounced effects on keratinocytes.

RETIREMENT LECTURE

CURRICULUM VITAE



Akira Ozawa
Department of Dermatology,
Tokai University School of Medicine, Kanagawa,
Japan

Curriculum Vitae:

1968-1974	Medical Student: School of Medicine, Nagoya City University, Aichi, JAPAN
1974-1975	Resident: Dept. of Dermatology, Keio University, Tokyo, JAPAN (Chairman: HATANO Hitoshi)
1975-1984	Instructor: Dept. of Dermatology, Tokai Univ. School of Med., Kanagawa (Chairman : OHKIDO Muneo)
1979-1980	Assistant Professor: Dept. of Derma., Med. College of Georgia, U.S.A. (Chairman: SMITH J Graham, Jr.)
1984-1999	Assistant and Associate Professor: Department of Dermatology, Tokai Univ. School of Medicine, Kanagawa
1999-	Chairman and Professor: Department of Dermatology, Tokai University School of Medicine, Kanagawa

Activity in Societies:

1989	Secretary: The 4th Annual Meeting of the Japanese Society for Psoriasis Research
1991-1995	Secretary general: The Japanese Society for Psoriasis Research
1995	Secretary: The 94th Annual Meeting of the Japanese Dermatological Association
2001-	Attendance: The 5th Annual Meeting of the Korean Society for Psoriasis
2002-	Honorary member: The Korean Society for Psoriasis
2003-	Board member: The Japanese Society for Psoriasis Research
2006-2008	Director: The Tokyo Division of the Japanese Dermatological Association (JDA)
2008	President: The 71st Annual Meeting of Tokyo Division of the JDA
2009	President: The 24th Annual Meeting of the Japanese Society for Psoriasis Research
2014	President: The Tokai International Psoriasis Summit 2014

Award:

1979	The MINAMI Memorial Prize of the Japanese Dermatological Association "The major histocompatibility antigens in psoriasis~HLA-DR antigens"
2011	Special award for the Japanese Medical Association

RL

The Korean Society for Psoriasis & Me

Akira Ozawa

Department of Dermatology, Tokai University School of Medicine, Kanagawa, Japan

In the 18th Annual Meeting of Korea psoriasis Society, it is a great honor for me to having a "Retirement Lecture", and I sincerely would like to thank from my heart the president Dr. LEE Joo Heung, the board members and all members of the Korean Society for Psoriasis.

After I attend to the 5th Annual Meeting of the Korean Society for Psoriasis as a special lecturer, I have been participated at the Annual Meeting every year.

So, in this lecture, I will talk about what I have learned from the Korean Society for Psoriasis. And, I would like to thank many friends obtained from the Korean Society for Psoriasis.

I sincerely hope that the Korea Society for Psoriasis developed more and more and the activities become more international. Thank you.

FROM THE SOCIETY

FS-1

EPI-PSODE Study I: Introduction Nationwide Cross-Sectional Study for the Clinical Profile of Psoriatic Patients in Korea

CHOI Jee-Ho

Department of Dermatology, University of Ulsan College of Medicine

Background: Psoriasis is associated with serious physical, psychological and sociofunctional disorders, as well as increased medical cost and reduced productivity, having a major impact on health-related quality of life (HRQoL). The United States and several countries in Europe recently conducted HRQoL survey among psoriatic patients, but national large-scale study on clinical profiles of psoriatic patients, including their HRQoL, has not been studied in Korea.

Objectives: This nationwide cross-sectional study was aimed at determining epidemiologic characteristics of psoriasis, disease severity and HRQoL among psoriatic patients in Korea. In addition, we also investigated demographic, disease-specific, socio-economic, therapeutic and clinical factors that may affect disease severity and HRQoL of psoriatic patients in Korea.

Methods: This study was conducted from February 2013 to June 2013 in psoriatic patients, aged 20 or older, recruited from 25 centers across the country. Data were collected on demographic factors, such as age, sex, height, body weight, and waist circumference; disease-specific factors, such as PASI score, BSA, onset age, clinical types, area of lesion, family history, and past and present medical history; drinking and smoking histories; presence of comorbidity (blood pressure, CRP, LFT, BUN, creatinine, fasting glucose, TG, total cholesterol, HDL-C, LDL-C); and the rate of patients suggesting psoriatic arthritis (PASE questionnaire). SF-36, DLQI, WPAI:PSO, and MSQ were used to determine HRQoL of psoriatic patients. Statistical significance was analyzed by ANOVA, Kruskal-Wallis test, student's t-test, chi-square test, and Fisher's exact test.

Results: will be presented in EPI-PSODE study 2.

Conclusions: This is the first nationwide survey of psoriatic patients in Korea and shows epidemiologic characteristics and clinical profiles of Korean psoriatic patients. Psoriasis also has a profound impact on quality of life including physical and psychological well-being in Korean patients.

***Support:** This study was conducted with support from Janssen Korea Ltd.

FS-2

EPI-PSODE Study II: The Profile of Patients with Psoriasis in Korea

SONG Hae-Jun

Department of Dermatology, Korea University

Nation-wide cross-sectional studyto elucidate epidemiologic characteristics, disease severity, and HRQoL, and treatment modalities used in Korean psoriasis patents was conducted by Korean Society for Psoriasis (KSP) in 2013. Total 1260 patients aged 20 years or older were investigated at 25 university hospitals across the Korea during February to June 2013. Mean age of the patients was 47.1±14.5 (range, 20-89) and age distribution was peaked at 50s (25%) The sex ratio of the patients was 1.47:1 (male 59.4%, female 40.6%). There were dual peak age of onset (21-25 years and 46-50 years). 34% of patients developed psoriasis before 30 years of age. Family history of psoriasis was observed in 12.7% of patients. 24% of patients showed PASI score of more than 10. 46% of patients showed involvement of more than 10% of BSA. Surprisingly, 54% of patients revealed DLQI scores of more than 10. Short-form health survey (SF-36) revealed significantly low scores in both of physical and mental aspect (PCS 48.8±8.0 and MCS 42.6±11.2, each). Clinically plaque type was 85.8% and guttate type was 8.4%.24% of patients showed the scores of more than 44 in PASE questionnaire. Average BMI was 23.9±3.5 kg/m^2. The patients showed abnormal fasting blood sugar level in 27.6% and abnormal triglyceride level in 23.4%. Severe psoriasis group showed significantly higher blood pressure than mild group. Topical steroids and vitamin D3 agents were used to treat patients in 74.4% and 78.3%of patients. Systemic treatments with CsA, MTX and acitretin were 29%, 22.2%, 23.8% respectively. NB-UVB phototherapy was used in 44.8% of patients. 6.3% of patients were treated by biologics. 58.6% of patients satisfied with their treatment, but 26.1% were not. Patients revealed 31.6% of impairment in work activity and 37.2% of impairmentin daily regular activity and showed increasing tendency as disease severity increased.

KSP 건선학술상
2013년 연구계획서부분
수상자 결과 보고

KSP

Programmed Death-Ligand 1,2 Expressions are Decreased in the Epidermis of Psoriasis

LEE Min-Geol

Department of Dermatology, Severance Hospital, Cutaneous Biology Research Institute, Yonsei University College of Medicine

Psoriatic keratinocytes are key components to amplify and maintain chronic inflammation. We hypothesized that lack of proper regulatory functions of keratinocytes can be responsible for chronic inflammation in psoriasis.PD-L1,2 are expressed on keratinocytes and expressions by nonlymphoid cells are important for mediating peripheral T cell tolerance. In our study, we investigated whether PD-L1,2 expressions are altered in keratinocytes of psoriatic epidermis compared to normal epidermis. Epidermis was separated and analyzed for PD-L1,2 expressions in mRNA and protein levels. Immunohistochemical staining were done in skin biopsy samples from psoriasis, normal skin, allergic contact dermatitis(ACD), pityriasisrosea(PR) and lichen planus(LP). Expressions of PD-L1,2 mRNA levels were significantly decreased in psoriatic epidermis compared to normal epidermis. In protein levels, PD-L1 expression was significantly decreased in psoriatic epidermis. However, PD-L2 expression was not detected in both normal and psoriatic epidermis. Immunohistochemical stain revealed significantly less PD-L1,2 expressions in psoriatic epidermis compared to normal epidermis. Next, we hypothesized that psoriatic keratinocytes can also have reduced capability to induce PD-L1 in response to interferon-ɣ (IFN-ɣ, well-known inducer of PD-L1) compared to normal keratinocytes. After culturing psoriatic and normal human keratinocytes in vitro, cells were incubated with IFN-ɣ. Psoriatic keratinocytes did not show reduced induction of PD-L1 compared to normal keratinocytes as we expected. In conclusion, psoriatic epidermis showed reduced expression of PD-L1,2, but psoriatic keratinocyte did not have intrinsic defect to up-regulate PD-L1 in response to IFN-ɣ. Nevertheless, we suggest that decreased expression of PD-L1,2 on epidermis of psoriasis can contribute to its chronic uncontrolled inflammatory nature. However, exact mechanism of reduced expression of PD-L1,2 in psoriatic epidermis and their pathophysiologic roles need to be elucidated in near future.

CLINICIAN'S VIEWPOINT

CV-1

Methotrexate vs. Cyclosporin: Preference

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Despite the continuing development of the biological therapies, traditional systemic agents are a key part of the management for patients with moderate-to-severe psoriasis and in those not responding to conventional topical therapy. Methotrexate and cyclosporine are often used in daily clinical practice and there are some evidences that both agents are similarly effective. The choice of treatment is influenced by several factors, including the effectiveness of a given medication and its side effects, long-term adverse effects, ease of administration and the age and sex of patients, etc. The contraindications of methotrexate include impaired kidney function, severe anemia, leukopenia and/or thrombocytopenia, significant liver function abnormalities, hepatitis (active and/or recent), excessive alcohol intake, significantly reduced pulmonary function, pregnancy or lactation. So regular monitoring is required to prevent significant bone marrow suppression and hepatotoxicity. Ideally, cyclosporine should be used for short courses of 3 to 4 months duration. Contraindications of cyclosporine are impaired renal function, uncontrolled hypertension, immunodeficiency, concomitant immunosuppressive therapy, past or present malignancy, history of excessive photo(chemo)therapy (>200 PUVA treatments), radiotherapy. Close assessment of renal function and blood pressure is essential.

Today, we will discuss about the preference between methotrexate and cyclosporine in daily clinical practice among dermatologists.

CV-2

Selecting Biologics for Psoriasis Treatment: Anti-TNF-α vs. Anti-IL12/23

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Biologics have revolutionized the treatment of psoriasis since their introduction up to 10 years ago. Despite these advances, substantial deficits remain in the guidance on which biologic to use. Biologics target a specific step in the pathogenesis of psoriasis and these can be classified into two main categories: TNF-α inhibitors and IL-12/-23 inhibitors. TNF-α inhibitors (etanercept, adalimumab, infliximab) today represent one of the most effective classes of drugs in psoriasis which is inadequately controlled with conventional systemic agents (methotrexate, cyclosporine, and phototherapy) or if these agents are contraindicated. Recent studies on psoriasis pathogenesis were focused on early steps of the inflammatory cascade, i.e. activation of T cells with a recently described phenotype Th17 and consequent expression of IL-12 and -23. IL-2 and IL-23 have a common p40 subunit that is a target of a new therapeutic class, fully human monoclonal antibodies anti IL-12/-23, ustekinumab.

How should we select upon a first-line biologic in patients with psoriasis? It is clear that we are lack of data to support any particular policy in initiating biologics, but a pragmatic approach to therapy is supported by the case reports described within my presentation. As more evidence emerges from long-term studies and registry data, a clearer picture should emerge on how best to use biologics in different situations to aid successful treatment outcomes.

CV-3

Steroid in Psoriasis: Pros and Cons

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Topical steroids are commonly first-line therapy in mild to moderate psoriasis and still the mainstay of topical therapy. But, the use of systemic steroids in the treatment of psoriasis is not recommended or even explicitly prohibitedby dermatological textbooks and guidelines, because the disease tends to relapse promptly and may rebound in the form of erythrodermic and pustular psoriasis after dose reduction or withdrawal.

Nevertheless, several authorsrevealed that systemic corticosteroids were among the most prescribed systemic medication for psoriasis in Germany (by German analysis of a nationwide database) and US (by National Ambulatory Medical Care Survey database). Because of the striking contrast between the guidelines for psoriasis management and actual practice, they suggested that there is a need to better understand the use of systemic corticosteroids for psoriasis. So they argued that registry studies and clinical trials may be valuable to better define the benefit-risk assessment of systemic corticosteroid use for patients with psoriasis.

Then, what about us? Have you ever prescribed systemic corticosteroids in psoriasis? So, when did you prescribe? Have you ever experienced the steroid withdrawal aggravation and progression to GPP? Let's think about that together.

FREE COMMUNICATIONS

FC-1

Treating Severe Plaque Type Psoriasis Accompanying Elephantiasis Nostras Verrucosa

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Severe psoriasis may be complicated by lymphedema of extremities and are very challenging in both aspects of daily life and treatment of patients. Elephantiasis nostras verrucosa (ENV) is a rare complication resulting from chronic lymphedema, characterized by verrucous, lichenified eruption. A 29-year old obesemale presented with severe plaque type psoriasis on his whole body except upper trunk area (BSA 70%, PASI score=54.4). Psoriasis was begun 5 years ago and progressively aggravated since last 3 years.He has been smoking heavily and his diet and life style was extremely poor due to economic problem. He was suffered from severely itchy malodorous thick scaly plaques with bloody fissures. His lower extremities showed severe non-pitting edemato such an extent as to prevent knee bending and normal walking and were covered with very thick gypsum like gray crusts.Laboratory test revealedhighly elevated ESR (83 mm/hr) andvery low BUN (4.5 mg/dl). Management was begun withfocus on correcting his life stylefirst (sleeping in supine position, dietary supplement of protein). Daily 20 mg of acitretin and 300 mg of roxithromycin was prescribed for 3 weeks and extensive application of moisturizer was encouraged. After 3 weeks of treatment, his scaly plaques and itching sensation were markedly improved. His leg edema was also improved to enable crouching down posture. Etretinate and acitretin showed beneficial effect ofon ENV. It is expected that macrolide antibiotics exerted multiple actions (antibiotic, anti-inflammatory, and anti-proliferative) in psoriasis treatment. Our case demonstrated that acitretin and roxithromycin combination treatment was tolerable and effective against severe psoriasis complicated by elephantiasis nostras verrucosa.

FC-2

A Case of Acrodermatitis Continua Accompany with Osteolysis and Atrophy of the Distal Phalanx that Evolution into Generalized Psoriasis with Pustules

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Acrodermatitis continua is classified as a form of acropustular psoriasis. This disease is characterized by sterile, pustular eruptions that initially affect the tips of fingers or less often on the toes and tend to expand locally and slowly for months or years. Involvement of nail folds, nail matrix and nail bed may lead to nail destruction and in a later stage it can affect bones resulting in atrophy of the distal phalanx as a complication.

It has been known to have chronic course with slow proximal extension along the digit and spontaneous improvement has rarely been observed. In some cases, especially in long-term acrodermatitis continua and in the elderly, outbreaks of generalized eruptions on the entire body can occur.

51-year-old female visited our department with features of generalized psoriasis with pustules that showed multiple well demarcated erythematous plaques with pustules on the trunk, extremities, palm and fingers. She had a long history of psoriasis on the finger and palm for 14 years that eruptively spread to the trunk and extremities. Interestingly she had dystrophic finger nails with deformed finger tips that looked shortened. On the x-ray it showed bony absorption on distal phalangeal tuft that imply osteloysis and atrophy of distal phalanx.

We report this rare case of acrodermatitis continua accompanied with atrophy and osteolysis of the distal phalanx that evolution into generalized psoriasis with pustules.

FC-3

Clinical Features of Psoriatic Arthritis in Korean Patients with Psoriasis: A Cross-Sectional Observational Study of 214 Patients with Psoriasis Using Psoriatic Arthritis Screening Questionnaires

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Background: The prevalence and clinical characteristics of psoriatic arthritis (PsA) in patients with psoriasis vary widely in different countries and studies on Korean population are rarely reported.

Objective: The aim of this study was to evaluate the prevalence and clinical characteristics of PsA in a Korean population of patients with psoriasis by using psoriatic arthritis screening questionnaires.

Methods: A cross-sectional observationalstudy was conducted and consecutive psoriatic patients were evaluated for PsA by using two kinds of psoriatic arthritis screening questionnaires (PASE and PEST). Psoriatic patients with higher score in screening questionnaires were referred to rheumatologist for confirmative diagnosis of PsA. Demographic and medical parameters were recorded.

Results: Among 214 psoriasis patients screened by PASE and PEST, 15 patients had PsA, of which 60% was newly diagnosed. Compared with patients without PsA, patients with PsA had more extensive psoriasis (Severe extent (BSA>10%) 40% vs. 15.5%), higher frequency of pustular (13.3% vs. 1.1%) and inverse (20.0% vs. 0.6%) type of psoriasis. Spondylitis (53.3%) was the most common manifestation pattern, followed by polyarthritis (20.0%), oligoarthritis (13.3%) and predominant distal interphalangeal (DIP) arthritis (13.3%).

Conclusion: The findings are consistent with a low prevalence of PsA among patients with psoriasis in Asia and confirm a spondylitis as the most common pattern of PsA in Korea. Also, PsA screening qustionnaires can be a simple and useful tool to screen PsA in patients with psoriasis.

FC-4

Paradoxical Flare of Plaque Psoriasis after Ustekinumab Therapy

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Psoriasis is a chronic, inflammatory, immune-mediated disease resulting in great morbidity in affected patients. Patients with psoriasis have significant impairment of health-related quality of life, especially in the severe and nonresponder forms. Although conventional treatments such as cyclosporine, retinoids and methotrexates are reserved for moderate to severe psoriasis, these medication often cause various side effects over long term treatment. The advent of biologics which are target specific molecules in the immune system has revolutionized the treatment of psoriasis. Ustekinumab, the most recent biological agent approved for treatment of patients with moderate to severe plaque psoriasis, is a human monoclonal antibody that binds to the p40 subunit of interleukin (IL)-12 and IL-23. Many cases are reported that treatment with ustekinumab for severe psoriasis have been shown remarkable improvement without severe adverse effects. The common side effects of ustekinumab are generally known as upper respiratory infection, headache, tiredness, arthralgia, and few cases are reported a paradoxical flare after ustekinumab therapy.

A 24-year-old male patient had suffered from plaque type psoriasis vulgaris for 7 years. Although he had been treated with conventional treatment such as NBUVB phototherapy, acitretin, methotrexate and cyclosporine, his lesion was not improved sufficiently. He complained of side effects such as dry mouth, nausea, abdominal discomfort when we treated with methotrexate or cyclosporine. Treatment strategy was changed into the subcutaneous injection of ustekinumab 45 mg according to conventional dosing schedule. His lesions dramatically improved after second injection, but new lesions started to appear slowly after third injection. After fourth injection, a flare of plaque type psoriasis was shown on face, trunk and extremities. The treatment was changed to systemic steroid and NBUVB phototherapy however he discontinued treatments arbitrarily and did not come our department again.

Herein, we reported a rare case of patient with psoriasis who experienced a paradoxical flare of plaque psoriasis after ustekinumab therapy.

FC-5

Paradoxical Psoriasis Induced by TNF-α Inhibitor Therapies

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Tumor necrosis factor alpha (TNF-α) is a central cytokine for the inflammatory and pathological responses in the rheumatoid arthritis, Crohn's disease, and psoriasis and psoriatic arthritis. TNF-α-directed biologic immunotherapy is a target for the treatment of many inflammatory diseases. Adalimumab is a recombinant human immunoglobulin G1 monoclonal antibody that inhibit tumor necrosis factor-α. Administration of that is beneficial in a variety of chronic inflammatory conditions. Recent reports have illustrated the paradoxical development of psoriasis after TNF-α inhibitor therapies.

A 54-year-old woman with rheumatoid arthritis and no personal or family history of psoriasis was treated with adalimumab. After 5 months of treatment, she developed scattered erythematous patches and plaques on the lower back, both buttocks and legs. Erythematous papules with pustules were appeared on the hypothenar area of the left palm. We implemented punch biopsy in the left knee. A skin biopsy result was consistent with psoriasis. Base on the above, we diagnosed psoriasis. We treated with calcipotriol agent (Daivonex® cream) for her skin lesion. She changed the biologics and has continued treatment with tocilizumab (IL-6 receptor antagonist) for arthritis. Herein, we report the impressive case that is the paradoxical reaction of a disease induced by the medication for the treatmenet.

FC-6

Koebner Phenomenon Related to Cupping Therapy in a Psoriasis Patient

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Psoriasis is a chronic, immune-mediated inflammatory disease. Many different injuries may induce a Koebner response in psoriasis. Cupping therapy is an ancient Chinese form of alternative medicine in which a local suction is created on the skin. A partial vacuum is created in cups placed on the skin either by means of heat or suction. It can leave temporary bruised painful marks on the skin. Chinese medical practitioners think cupping therapy is effective because it can increase circulation around the area of cupping and eliminate the toxins trapped in the tissues.

A 38-year-old man had a more than 3-year history of psoriasis. He had no family history of skin problems. He presented with several erythematous scaly plaques and patches with crust from back to buttock after he had been given two sessions cupping therapy once a week due to GI problem. These psoriatic plaques that developed at the cupped sites were the same area as the glass cups used. Clinically, we treated with calcipotriol and betamethasone for his skin lesion. We report impressive cases of Koebner phenomenon related to cupping therapy in a psoriasis patient.

FC-7

Imatinib Induced Psoriasis in a Patients with a Gastrointestinal Stromal Tumor

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Imatinib mesylate (Gleevec^{TM}) is a small molecular inhibitor that selectively inhibits the tyrosine kinase family, including mutated KIT oncoproteins in gastrointestinal stromal tumor. Cutaneous reactions to imatinib are common and occur in 7% to 88.9% of patients. While non-specific skin rashes, facial edema and pruritus have been most commonly reported, psoriasiform rash is known to be rare side effect of imatinib. We herein report a 66-year-old male patient presented with new onset psoriasis on his trunk and extremities. The rash appeared 2 months after treatment with imatinib (400 mg/day) for gastrointestinal stromal cell tumor. He was able to continue on imatinib with topical calcipotriol cream. The skin lesions had almost disappeared after discontinuation of imatinib.

FC-8

A Case of Psoriasiform Eruption Associated with Graft-Versus-Host Disease

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Graft-versus-host disease (GVHD) is a common complication of bone marrow transplantation (BMT) that can be classified as acute or chronic. The skin is the most frequently affected organ in GVHD. Characteristic cutaeneous manifestations of acute GVHD, which generally occur within 3 months following BMT, include maculopapular exanthema and perifollicular papular lesions. Whereas chronic GVHD, which usually occurs more than 3 months after BMT, include typical lichenoid or sclerodermatous lesions.

Although GVHD may display various cutaneous manifestations, the association between psoriasiform eruptions and GVHD has rarely been described except for limited clinical conditions, such as development of psoriasis after BMT from a psoriatic donor or resolution of psoriasis after BMT for chronic myelogenous leukemia, implicating the transfer of disease-inducible immunity.

Thirty three years old woman, who was diagnosed with hemophagocytic lymphohistiocytosis 10 years ago, visited our outpatient clinic. She received allogenic BMT from her sibling, who had no obvious history of psoriasis, 7 months ago. At first, her skin lesions started on the trunk 3 months ago, and she was treated with oral antihistamine and topical steroid under the impression of lichenoid eruption. Even with the treatment, her skin lesions did not improve, progressed to whole body appeared as psoriasiform eruption, thus, she was referred to our clinic for skin biopsy and management. Skin biopsy was done on the lesion and the result favored GVHD.

FC-9

Squamous Cell Carcinoma of the Sole in a Patient Treated with Ustekinumab for Psoriasis

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Ustekinumab is anew biologic agent for psoriasiswhich was approved in 2009, the safety data of this agent was reported for up to 5 years. Although ustekinumab may induce development of squamous cell carcinoma (SCC) in the patients who had pre-existing risk factor such as PUVA or actinic keratosis, there was no increase in malignancy risk in the patients treated with ustekinumab for 5 years.

A 53-year-old Korean woman presented with non tender erythematous plaque with oozing on the left sole. One month ago she noticed the lesion as erythematous tiny papule and it grew rapidly. She was diagnosed with psoriasis 30 years ago, was treated with ustekinumab 45 mg subcutaneously for 6 times. She had no previoushistory of arsenic keratosis or PUVA treatment for psoriasis. Histopathologic examination of the lesion confirmed SCC.

We report a case of SCC during the use of ustekinumab in psoriasis patient. To our knowledge, this is the first report in Korea.

FC-10

Relation Between the Peripherofacial Psoriasis and Scalp Psoriasis

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Facial psoriasis is pretty commonly seen in the psoriasis patient with long disease duration and known to be one of the clinical manifestation that indicate the severity of the psoriasis. It is thought to be that the severity is more closely associated with certain distribution of the lesion. Peripherofacial (PF) psoriasis has been well recognized by dermatologists, and is believed to extend from scalp psoriasis.

The purpose of this study was to analyze the epidemiologic characteristics and clinical features of patients with facial psoriasis who visit NMC psoriasis clinic to find out whether there is any relationship between clinical subtype and scalp involvement. It was the questionnaire-based study involving 142 patients with psoriasis with facial involvement who visited National Medical Center psoriasis clinic during Sep 1st, 2012 to May 31st, 2014.

Total 142 patients, 83 males (58%) and 59 females (42%) were enrolled and there mean age was 42. Classifying in to three subtypes, there were 37 PF psoriasis patients (31.1%), 48 Centrofacial (CF) psoriasis patients (40.3%) and 34 patients with Mixed type facial (MF) psoriasis (28.6%).

In our study there was no significant difference of whole body BSA and PASI between PF psoriasis and CF psoriasis but scalp BSA and PASI was much higher in PF psoriasis compared to CF psoriasis. (BSA: 40.9 vs. 22.2, PASI: 17.9 vs. 10.1). According to the questionnaire, patient's objective feeling about the spreading of scalp lesion to facial area was more prominent in the PF psoriasis patients compared to other subtypes. (PF: 58.3%, CF: 38.1%, MF: 25.9%).

We reached to the conclusion that PF psoriasis tends to be more associated with extention, severity and duration of the scalp psoriasis than the CF psoriasis.

FC-11

Usefulness of ^{18}FDG Positron Emission Tomography-Computed Tomography for Detecting Systemic Inflammation with Moderate to Severe Psoriasis

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There is increasing awareness that psoriasis is a systemic, immune-mediated disorder, characterized by inflammatory skin and joint manifestations. The presence of systemic inflammation in patients with psoriasis may advance to inflammatory process in the function of various cells and tissues, leading the development of co-morbidities, which, themselves, have a significant impact on the patient's quality of life.

Recently, several reviews focused on biomarkers indicating the systemic dimension of psoriasis. Traditional markers of systemic inflammation, such as high sensitivity C-reactive protein and erythrocyte sedimentation rate, only modestly correlate with psoriasis severity and do not provide regional information about disease involvement. However, the development of [18F]-fluorodeoxyglucose positron emission tomography-computed tomography (FDG PET/CT), enables highly precise, novel measurements of inflammatory activity, including vascular, visceral, and whole-body inflammation in vivo.

Herein, we assessed 22 moderate to severe psoriasis patients to detect and quantify systemic inflammation in patients with psoriasis by FDG PET/CT. Further, we tried to investigate the relationship between psoriasis severity and FDG uptake in the liver, musculoskeletal structures, and aorta.

FC-12

Expression of Toll Like Receptors 3, 7, 8, and 9 in Peripheral Blood Mononuclear Cells from Patients with Psoriasis

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Psoriasis is an immune-mediated inflammatory skin and joints disorder which is related to a T-helper (Th)-1, Th17 and regulatory T cells (Treg) dysfunction. A role for the innate immune system in driving the autoimmune T-cell cascade has also been proposed. An increasing body of evidence implicates Toll-like receptors (TLRs)-dependent signaling in immune-mediated inflammatory disorders. A number of studies have investigated TLRs expression in psoriatic skin. In a study regarding TLR 2 and 4 expressions on peripheral blood mononuclear cells (PBMC) in patients with psoriasis, a clear increase in TLR4 gene expression was observed together with a moderate increase in TLR2 expression.

Among many types of TLRs, TLR3, TLR7, and TLR9 seem to be involved in the development of autoimmune diseases. These intracellular TLRs, apart from pathogen recognition and initiation of innate immunity, are capable of recognizing endogenous ligands. In psoriasis patients, impaired apoptosis and invalid cell debris clearance lead to increased concentration of serum nucleic acids (ssRNA, dsRNA, and DNA), which are well known ligands for TLR3, TLR7, and TLR9. The activation of these receptors by specific ligands is thought to initiate autoimmune processes. The aim of this study was to evaluate expression of TLRs 3, 7, 8, and 9 and cytokines in PBMC from patients with psoriasis Secondly, discriminative expression pattern of TLR among cellular subsets of PBMC was assessed with flow cytometry.

TLR 3, 7, 8, and 9 expressions were increased in PBMC of psoriatic patients compared to those of healthy control. Among cytokines known to be crucial in pathogenesis of psoriasis, including TNF-α, IFN-γ, IL-6, 8, 10, 12, 17A, 21, 22, and 23, TNF-α, IFN-γ, IL-10, 12, 17A, 22, and 23, were significantly increased in PBMC of patients with psoriasis. Six color, 2 laser flow cytometry measured TLR 3, 7, 8, and 9 expressions in CD4, CD8, CD14, CD25 positive cells. The expression of TLRs was differentially altered in each cellular subset of PBMC.

FC-13

Serum Vitamin D Levels in Psoriatic Patients

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Vitamin D could have important immunomodulatory effects in psoriasis, and we get most of our vitamin D from exposure to sunlight. Low levels of vitamin D may have important implications in the pathogenesis of psoriasis. Vitamin D3 acts mainly on the vitamin D receptor to regulate keratinocyte growth and differentiation, but also has an influence on immune functions of dendritic cells and T lymphocytes. Previous studies reporting vitamin D deficiency may be common in patients with psoriasis, especially in winter time.

In this study we estimate the prevalence of vitamin D deficiency in patients with chronic plaque psoriasis and analyse the association of vitamin D with clinical features. In addition, we measure the seasonal variation in the deficiency of vitamin D.

FC-14

IL-21-Inducible TRPV6 is Reduced in Psoriatic Skin

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Psoriasis is characterized by hyperproliferation and incomplete differentiation of keratinocytes (KCs) and impaired calcium gradient. Interleukin-21 (IL-21), produced predominantly by $CD4^+$ T cells and natural killer T cells, are highly expressed in psoriatic skin. In order to find psoriasis-specific molecules, a microarray analysis was performed in KCs treated with IL-21, and transient receptor potential vanilloid 6 (TRPV6) was one of the increased genes. Highly calcium-selective TRPV6 channel is known to be important for the differentiation of KCs and the proliferation of epithelial cells. Although TRPV6 is known to be important in KC differentiation, its physiological function in the activation of KCs is unclear.

Therefore, we investigated whether TRPV6 plays a crucial role in differentiation and proliferation of psoriatic KCs. We established a differentiation model of KCs treated with high calcium. The expression of differentiation markers and TRPV6 were increased in accordance with differentiation of KCs. However, expression of TRPV6 was decreased in psoriatic skin. The role of TRPV6 on the proliferation of KCs was evaluated by MTT assay. Decreased TRPV6 function induced by TRPV6 inhibitor, $LaCl_3$, did not significantly enhance the proliferation of KCs. Transfection of KCs with siRNA-TRPV6 confirmed the effects of TRPV6 silencing on calcium-induced differentiation. The level of involucrin was decreased in KCs transfected with siRNA-TRPV6, which means TRPV6 is related to the differentiation of KCs. Therefore we could conclude that TRPV6 was decreased in psoriatic epidermis, which might play a role not in the proliferation of KCs but in reduced differentiation of psoriatic KCs.

FC-15

A Study of Awareness and Screening Behavior of Cardiovascular Risk Factors in Patients with Psoriasis and Dermatologists

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Background: A number of literatures have suggested that the frequency of cardiovascular (CV) diseases increases in patients with psoriasis.

Objective: In this study, we tried to assess the awareness among patients with psoriasis and dermatologists in private clinics about increased CV risk linked to psoriasis, and examine screening behavior for CV risk factors in patients with psoriasis.

Methods: We distributed the questionnaires to dermatologists in primary clinics and patients with psoriasis about their awareness of increased cardiovascular risk factors in psoriasis patients.

Results: 104 patients and 50 dermatologists were included. 64.4% of patients and 92% of dermatologists answered that they knew that the risk of CV diseases increased in patients with psoriasis. However, each number of dermatologists and psoriasis patients following screening guidelines for CV risk factors was far less than expected. We found that duration (p <0.0001) and severity (p <0.0001) of psoriasis are relevant to patients' awareness. A significant correlation between the awareness in the dermatologists and the number of psoriasis patients they cared for per months was also observed (p <0.024).

Conclusion: This study may help to promote the necessity of educating psoriasis patients about increased CV risk factors and educating dermatologists in screening practices to detect CV risks in patients with psoriasis.

FC-16

The Difference of Cardiovascular Risk Factor Between Mild Psoriasis Patients and Moderate to Severe Psoriasis Patients Group

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Background: Psoriasis is a chronic inflammatory skin disease that is associated with an increased cardiovascular risk profile. The relationship between PASI and cardiovascular risk factor has not been evaluated in Korean psoriasis patients yet.

Objective: To evaluate the relationship between PASI and cardiovascular risk factors in Korean patients

Methods: Physical examination, serum lipid profile analysis, and the medical history of the psoriasis patients were reviewed. The severity of psoriasis was assessed using Psoriasis Area Severity Index (PASI) scores: mild, <10; moderate to severe, ≧10. A total of 96 patients with plaque type psoriasis were included.

Results: Significant differences of prevalence of cardiovascular risk factor and the level of lipid profile according to the severity of the psoriasis were not discovered except triglyceride level.

Conclusion: Our results suggest that there is no close correlation between the severity of psoriasis and cardiovascular risk factor in Korean psoriasis patients.

FC-17

Evaluation of the Beta Stiffness Index and Carotid Intima-Media Thickness in Asian Patients with Psoriasis

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Background: The risk of cardiovascular events is reportedly elevated for psoriasis patients. Evaluation of the beta stiffness index (BSI) and carotid intima-media thickness (IMT) are noninvasive methods of assessing arterial stiffness and subclinical atherosclerosis.

Objective: To compare the carotid arterial stiffness and IMT of Asian psoriatic patients and healthy controls, using high-resolution ultrasonography, to analyze if psoriasis is an independent risk factor for the differences in values, and to determine their correlation with clinical characteristics among psoriasis patients.

Methods: Fifty-four psoriatic patients and 60 age- and gender-matched healthy volunteers were enrolled. The BSI and IMT of the common carotid artery were assessed using a high-resolution, B-mode ultrasonographic echo-tracking system.

Results: Psoriasis patients exhibited a significantly higher BSI compared with control subjects (means 8.15±3.72 vs. 5.80±2.03; $p < 0.001$). The IMT tended to be higher in patients with psoriasis, but was not statistically significant (means 0.56±0.14 mm vs. 0.53±0.08 mm; $p = 0.076$). There was no significant difference in the presence of carotid plaques between groups. BSI was positively correlated with age, systolic blood pressure, disease severity defined according to the history of systemic treatment, and traditional cardiovascular disease (CVD) risk factors. Psoriasis was independently correlated with BSI.

Conclusion: This study showed that psoriasis was independently associated with arterial stiffness. Increased arterial stiffness in patients with psoriasis suggests that the risk of cardiovascular disease is elevated in relatively non-obese Asian psoriatic patients, as well as in Western psoriatic patients. Arterial stiffness represents a functional vascular change, and allows for earlier detection of CVD than IMT, which represents a structural vascular change. Using BSI to assess CVD may allow patients to benefit from more timely intervention.

FC-18

Analysis of Immune Parameters in the Patients of Psoriasis Treated with Low Dose Cyclosporine

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Background: Cyclosporine (CsA) is a potent immunosuppressive drug which inhibits the expression of cytokines such as interleukin-2 (IL-2) and proliferation of T cells. It also has been reported to have effects on B cells and natural killer (NK) cells.

Objective: To examine the impact of low dose CsA therapy on immune system in patients with psoriasis by the ability of T cell, B cell and NK cell.

Method: We performed a retrospective analysis of 67 psoriasis patients who had been treated with CsA at our hospital between January 2009 and June 2014. Patients were evaluated by laboratory blood test before or after CsA therapy. 11 patients had not been treated with any immunosuppressive drugs before laboratory test. 56 patients had received oral CsA medication with 100 mg to 200 mg a day for average 17 months before laboratory test. The counts of CD4 and CD8 T cells, B cell and NK cell were analyzed and compared between two groups using unpaired t-test.

Result: In the group without administration of any immunosuppressive drugs, CD4 is 858±261/ul, CD8 is 610±169/ul, B cell is 260±144/ul and NK cell is 249±167/ul. In the group treated with cyclosporine, CD4 is 846±308/ul, CD8 is 585±212/ul, B cell is 250±124/ul and NK cell is 346±203/ul. There was no significant difference between the two groups. The whole blood count and lymphocyte percentage of both groups were in the normal range.

Conclusion: Result in this study showed that low-dose CsA therapy in patients with psoriasis does not affect patient's immune system, and it seems to help the treatment by immunomodulation.

FC-19

Acute Generalized Exanthematous Pustulosis and Generalized Pustular Psoriasis: Are They Distinct Pustular Disorders? - A Comparative Immunohistochemical Study

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Background: Generalized pustular psoriasis (GPP) and acute generalized exanthematous pustulosis (AGEP) are categorized into the cutaneous pustular disorders. They exhibit similar features at the clinicopathological levels characterized by extensive pustular eruptions clinically and subcorneal pustules with some necrotic keratinocytes histolopathologically. Despite numerous clinical or histopathological trials to differentiate GPP from AGEP, distinction both diseases is still challenging to dermatopathologist. To find out any difference between GPP and AGEP at the level of immunohistochemistry, clinical evaluation and immunohistochemical study were performed.

Methods: All cases confirmed histopathologically were enrolled and analyzed. Through staining with the anti-interleukin-8 (IL)-8, anti-IL-23, anti-IL-17, anti-IL-36-alpha (α), anti-IL-36 receptor antagonist (IL-36RN), and nuclear factor kappa-light-chain-enhancer of activated B cells (NF-kB) antibody, main location of these cytokines was visualized. And these staining results were scored semi-quantitatively.

Results: In total 32 cases analyzed, 21 cases were diagnosed as GPP and 11 cases as AGEP. The expression of IL-8, IL-23, IL-17, IL-36α, IL-36RN, and NF-kB were also visualized. There were consistent findings that the expressions of IL-8 were visualized on the subcorneal pustules and parakeratotic area, IL-23 expressed throughout epidermis diffusely, IL-17 mainly on the perivascular area in the dermis. In contrast to main expression of IL-36 α on the epidermis diffusely, IL-36RN-postive cells were on the dermal perivascular area as well as epidermis. NF-kB expressed intensely on the epidermis and/or dermal perivascular area. Immunohistochemical results, the expression of IL-36α and NF-kB were more intense in AGEP compared with that of GPP. Other stainings exhibited no significant differences between GPP and AGEP.

Conclusion: Based on this current immunohistochemical results, common pathogenic mechanisms might exist for development of GPP and AGEP.

FC-20

A Study of the Number of Circulating $CD4^+CD25^+Foxp3^+$ Regulatory T Cells and $CD4^+CD25^-Foxp3^+$ T Cells in Psoriasis

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Background: Regulatory T cells (Treg) are able to inhibit the immunological response and to maintain the cutaneous immunological homeostasis, thus preventing autoimmunity against itself. In several studies, the importance of $CD4^+CD25^+Foxp3^+$ Treg in psoriasis has examined in the peripheral blood of patients. But, limited studies on Treg are available and give conflicting results. Recently, $CD4^+CD25^-Foxp3^+$ T cells have been intrigued as peripheral reservoir of $CD4^+CD25^+Foxp3^+$ Treg.

Objective: To investigate differences in the $CD4^+CD25^+Foxp3^+$ Treg and $CD4^+CD25^-Foxp3^+$ T cells count between patients with psoriasis and normal controls

Methods: For phenotypic analysis, proportions and absolute cell numbers of $CD4^+CD25^+Foxp3^+$ Treg and $CD4^+CD25^-Foxp3^+$ T cells in peripheral blood were examined by flow cytometry in psoriasis patients (n=14) and age-matched healthy controls (n=14). The correlation between $CD4^+CD25^+Foxp3^+$ Treg count and the other parameters, such as age of onset, disease duration, BSA, PASI score and clinical stage in psoriasis patients was also analyzed.

Results: Although $CD4^+CD25^+Foxp3^+$ Treg count was increased in peripheral blood of psoriasis patients compared with controls, the difference was not statistically significant (5.89±2.77 vs. 4.70±1.35, $p>0.05$). And the number of $CD4^+CD25^-Foxp3^+$ T cells was decreased slightly in psoriasis, but there was also no significant difference (1.34±0.92 vs. 1.93±1.08, $p>0.05$). $CD4^+CD25^+Foxp3^+$ Treg count was not correlated with any parameter except clinical stage of psoriasis. Mean±numbers of $CD4^+CD25^+Foxp3^+$ Treg in stable phase was higher than in progressive phase (7.88±2.34 vs. 4.78±2.42, $p<0.05$).

Conclusion: These findings suggest that only $CD4^+CD25^+Foxp3^+$ Treg count is insufficient to explain the pathogenesis and severity of psoriasis. It is possible that attempt of the immune system to compensate and functional defect of Treg account for these results. But a decrease of circulating $CD4^+CD25^+Foxp3^+$ Treg is likely to correlated with aggravation of psoriasis.

대한건선학회 임원 및 평의원

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