The 19th Annual Meeting
The Korean Society for Psoriasis

PROGRAM BOOK

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

인사말씀

회원 여러분 안녕하십니까?

메르스 사태로 어느 해보다 뜨겁게 시작한 여름입니다. 금년에도 여러 회원님들의 지지와 성원으로 대한건선학회는 이제 성년을 바라보는 제19차 학술대회를 개최하게 되었습니다. 이번 학술대회도 예년과 같이 알찬 프로그램으로 준비하였습니다.

우선 제2회 KSP 건선 학술상 수상자인 한양대학교 노영석 교수님의 연구 결과가 수혜자 강연을 통해 발표됩니다. 더불어 제3회 KSP 건선 학술상 수상자 선정 결과가 공개되오니 많은 기대 바랍니다. 대한건선학회 탄생의 산파역을 해주시고 건선학회 발전의 산 증인이신 경희대학교 김낙인 교수님이 정년을 맞이하셨습니다. 그간의 노고에 감사드리고 영예로운 정년을 미리 축하드립니다. 이를 기념하여 특별 강연의 자리를 마련했습니다. 작년에 기존의 교육 강연을 대체하기 위해 마련한 Clinician's viewpoint는 금년에도 흥미로운 주제로 여러분을 찾아 뵐 예정입니다. 특히 대만 건선 학계에서 주목받고 있는 Dr. Tsai가 참여하여 패널 및 청중과 열띤 토론을 진행할 예정입니다.

이 대회를 준비하기 위해 애쓴 대한건선학회 임원진과 후원해 주신 관계자 제위께 지면을 빌어 감사의 말씀 드리며 9월 12일 학술대회장에서 뵙기를 기대합니다.

2015. 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.

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

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PROGRAM

MORNING SESSIONS

09:30-10:00 **등 록**

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

축 사 **이규석** (대한피부과학회 회장)

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[1]*Department of Dermatology, Seoul National University College of Medicine*
[2]*Department of Health Policy and Management, Seoul National University College of Medicine*

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Department of Dermatology, Seoul National University College of Medicine and Seoul National University Bundang Hospital

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[1]*Department of Dermatology, Haeundae Paik Hospital, Inje University*
[2]*Department of Internal Medicine, Haeundae Paik Hospital, Inje University*

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Departments of Dermatology, Chonnam National University Medical School

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[1]*Department of Dermatology, Gifu University Graduate School of Medicine, Japan*
[2]*Department of Dermatology, Gifu Prefectural General Medical Center, Japan*
[3]*Department of Pathology, Gifu Prefectural General Medical Center, Japan*

11:00-11:20 [Retirement Lecture] 좌장: **이규석** (계명의대)

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[4]*Department of Dermatology, Hallym University Medical Center*
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[10]*Department of Dermatology, Seoul National University Bundang Hospital*

11:50-13:40 **점심식사(학회제공) 및 평의원회**

AFTERNOON SESSIONS

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Department of Dermatology, Chosun University Medical School

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

14:40-15:00 [KSP 건선학술상 2014년 연구계획서부문 수상자 결과 보고] 좌장: **이주흥** (대한건선학회 회장)

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15:00-15:20 *Coffee Break*

15:20-17:00 [Clinician's viewpoint and debate] 좌장: **윤재일** (국립의료원), **김광중** (한림의대)

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Dr. **Dino Tsai** *(Department of Dermatology, Far Eastern Memorial Hospital, Taiwan)*

CV-2 What Can Dermatologists Do to Maximize the Success Rate of Phototherapy in Psoriasis? (20min) ····· 25

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JANG Yong-Hyun *(Department of Dermatology, Kyungpook National University School of Medicine)*

How Would I Treat It? (panel and open discussion)
- Clinical Debate for Tricky Problems Encountered in Daily Practice (40min)

17:00-17:30 **폐회 및 총회**

RETIREMENT LECTURE

RL

나와 건선학회

김낙인

경희대학교 의과대학 피부과학교실

피부질환 중에서 건선은 흔히 면역학적 만성질환이라고 합니다. 우리 피부과 의사들이 다루기 힘든 질환 중에 하나이기도 하구요. 제가 건선 질환을 주요 진료질환으로 표방하고 진료를 한지 약 25년의 세월이 지난 것 같습니다.

교수 정년을 맞이한 지금도 건선치료에 어려움이 있고 저 또한 환자 진료에 도움이 되지 못하여 송구스러운 마음뿐입니다.

저의 전공의 시절 경희대학 피부과교실에는 임수덕 교수님께서 계셨습니다. 교수님은 피부면역학을 넘어 면역학을 평생 연구하셨던 분이었기에 저를 비롯한 교실원들은 자연스럽게 피부면역을 공부하게 되었습니다. 소문을 듣고는 많은 난치성 피부질환자가 내원을 하였지요. 예를 들면 나병, 베체트병, 홍반성루프스, 각종 수포성질환 등은 물론 건선질환도 있구요. 그 후 교수생활을 하면서 면역과 관계된 연구를 하려고 찾아간 곳이 미국 미시간의대 피부과였습니다. John Voorhees, Kevin Coopeer 등 훌륭한 교수진 및 연구원과 연구시설도 훌륭하고 건선연구에 관한 논문도 많이 출판되고 잘나가는 교실이었습니다. 귀국 후 건선환자 진료에 관해서 여러 대학교수 분들과의 연구 및 치료에 의견교환이 필요하다는 생각이 들었습니다. 그 당시는 미국, 일본 정도만 건선학회 활동을 한 것으로 알고 있고, 우리나라도 건선에 관한 연구자들의 모임이 필요하다고 느끼는 관심 있는 교수님들과 건선학회를 결성한 것이 약 20년 전 입니다.

오늘 이 자리는 “나와 건선학회”라는 주제로 지난날을 돌아보는 시간입니다. 소중한 시간을 할애해 주셔서 감사드립니다. 요즈음의 우리 건선학회는 많은 발전을 거듭하고 있으며 앞으로도 건선연구 및 치료 분야에서 할 일이 많은 중요한 학회가 될 것이라고 확신합니다.

FROM
THE SOCIETY

FS

Optimal Maintenance Treatment with Calcipotriol/Betamethasone Dipropionate Gel in Korean Patients with Psoriasis Vulgaris

LEE Joo-Heung[1], YOUN Jai-Il[2], KIM Nack-In[3], KIM Kwang-Joong[4], CHOI Jee-Ho[5], SONG Hae-Jun[6], KIM Tae-Yoon[7], CHOE Yong-Beom[8], PARK Chul-Jong[9], YOUN Sang-Woong[10]

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Background: Psoriasis is difficult to cure and usually recurrent, therefore continuous management with effective and safe method is important. Combination topical therapy with corticosteroid and vitamin D analogue or fixed ratio compound has been claimed to have better efficacy and safety but little study has been conducted to investigate optimal regimen in the maintenance phase.

Objective: To investigate optimal maintenance regimens for the topical treatment of Korean patients with psoriasis vulgaris

Methods: After 8-week induction treatment with calcipotriol/betamethasone dipropionate gel once daily, only responders who achieve "clear" or "almost clear" based on IGA were randomized to one of three treatment groups: Group1(PRN - once daily as needed), Group2(Continuous - once daily) and Group3(Weekends - twice weekly) for additional 8-week maintenance treatment. Safety and efficacy assessments will be performed on the subjects at baseline, Week 4, 8, 12 and 16.

Results: Percentage of responder according to IGA at Week 16 was 63.89% for Group1, 67.5% for Group2 and 31.43% for Group3. For primary end point, Group1 and 2 were statistically superior to Group3, whereas Group1 and 2 didn't differ significantly.

Regarding safety aspect, during induction period, total 56 adverse events were reported among 45 subjects (23.32%) and there was no severe AE. During maintenance period, total 19 AEs (Group1: 9, Group2: 8, Group3: 2) were reported among 17 subjects (14.66%) (Group1: 7(18.92%), Group2: 8(20%), Group3: 2(5.13%)). No significant differences were seen among three groups.

Conclusion: Calcipotriol/betamethasone dipropionate gel used as 'PRN' and 'continuous' regimen during maintenance period was well tolerated and more effective than 'weekend' regimen.

KSP 건선학술상
2014년 연구계획서부문
수상자 결과 보고

KSP

A Comparison of Clinical Characteristics and Response to Cyclosporine Treatment in Patients with Psoriasis and Psoriatic Arthritis

RO Young-Suck

Department of Dermatology, Hanyang University College of Medicine

Background: Psoriatic arthritis (PsA) is comparatively common among psoriasis patients with a prevalence rate ranging from 7-40%. Even with recent developments of new therapeutic modalities, cyclosporine (CS) remains an important option in treating psoriasis and PsA. However, relatively little is known about the difference between PsA and psoriasis in terms of clinical features and treatment response to CS.

Objective: The aims of this study were to compare clinical characteristics and response to CS between psoriasis and PsA patients in Korea.

Methods: At total of 72 patients with moderate to severe chronic psoriasis or PsA received CS at an initial dose of 4-5 mg/kg/day for 12 weeks and were allowed to apply mid-potency topical steroids or topical vitamin D analogues. The investigation of demographic data and laboratory tests were performed at initial visit. Clinical outcomes were based on the Psoriasis Area Severity Index (PASI) and modified Nail Psoriasis Severity Index (mNAPSI) scores. To evaluate the severity and treatment response of arthropathy, swollen and tender joint counts (SJC, TJC) and Psoriatic Arthritis Response Criteria (PsARC) were utilized.

Results: Psoriasis onset age, proportion of female patients, frequency of nail involvement, and erythrocyte sedimentation rate elevation were greater in PsA patients. After 12 weeks of CS therapy, PASI and mNAPSI scores were decreased significantly in both groups. However, the difference in the reductions in those parameters between the two groups was not statistically significant. In the case of PsA, there was a significant reduction of SJC, and 44.4% of patients showed PsARC in response to CS therapy.

Conclusion: In this study, there were several clinical differences between psoriasis and PsA. In addition, CS efficacy on psoriatic skin lesions including nail involvement was not different in both psoriasis and PsA patients. CS could be considered an effective treatment for not only psoriasis, but also early PsA.

CLINICIAN'S VIEWPOINT AND DEBATE

CURRICULUM VITAE

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Curriculum Vitae:

1995~2002	M.D., Chang Gung University, Taoyuan, Taiwan
2003~2007	Resident, Dept. of Dermatology, Far Eastern Memorial Hospital, Banqiao, Taiwan
2007~2008	Head, Dept. of Dermatology, Keelung Hospital, Keelung, Taiwan
2010	Clinical Researcher, the Psoriasis, Phototherapy and Skin Treatment Clinic, UCSF, USA
2010	International Fellow, Baumann Cosmetic Research Institute, Miami, USA
2008~2015	Psoriasis Clinic, Dept. of Dermatology, Shin Kong Memorial Hospital, Taipei, Taiwan
2015	Clinical Researcher, Dept. of Dermatology, Tokai University, Kanagawa, Japan
2015~Present	Psoriasis Clinic, Dept. of Dermatology, Far Eastern Memorial Hospital, Banqiao, Taiwan
2015~Present	Pregnancy Dermatoses

Activity in Societies:

2007~Present	Member, Taiwan Dermatological Association(TDA)
2007~Present	International Fellow, American Academy of Dermatology(AAD)
2014~Present	Member, Japanese Society for Psoriasis Research (JSPR)
2014~Present	Member, Cosmeceuticals committee, Taiwan Dermatological Association(TDA)
2015~Present	Secretary General, Laser and Photonics Medicine Society of the R.O.C.

Clinical Interests: Psoriasis, Cosmeceuticals, Skin Disease in Pregnancy

CV-1

What Can Dermatologists Do to Maximize the Success Rate of Topical Treatment in Psoriasis?

Dino Tsai

Department of Dermatology, Far Eastern Memorial Hospital, Taiwan

The top 3 key factors of successful psoriasis treatments are: efficacy, safety, and compliance; however the top 3 key factors of poor treatment outcomes are: compliance, compliance, and compliance. Patients' compliance actually comes from patient-doctor relationship and mutual trust. We as a dermatologist have to understand: treating life-long chronic diseases like psoriasis is not just about giving out the medications; it's more like trying to be teammates with your patients and battle with them. More than 80% of psoriasis patients have mild psoriasis and topical agents are the main weapons they use; but even those moderate-to-severe psoriasis patients they still need topical agents in conjunction with other treatment modalities, such as phototherapy, oral agents, or biologics. However, it's common to see that giving the same topical agents to the same patient, but from different doctors, may lead to different treatment results. So there must be something other than the topical agents themselves that make differences. One of the key factors is "compliance", that is, the patients' willingness to stick with the instructions doctor gave them. To increase the patients' compliance is like playing mental games with the patients. Doctors have to understand what the patients want, what they don't want, what they are afraid of, what they are interested in, and what the weaknesses they usually encounter so that we can pick the most suitable topical agents for each patient; letting the patients know how to accurately execute the "application of topical agents" will also greatly impact the results; lastly, on their way of receiving topical treatment, we, as their teammates, have also to be their cheerleaders, so that they will have the courage to go on and on.

CV-2

What Can Dermatologists Do to Maximize the Success Rate of Phototherapy in Psoriasis?

JO Seong-Jin

Department of Dermatology, Seoul National University Hospital

Phototherapies are well-known treatment options for moderate to severe psoriasis, both as monotherapy and in combination with other treatments. At present, NBUVB is commonly used for the treatment of psoriasis because it has been found to be a comparatively effective and relatively safer alternatively to PUVA.

To achieve a complete clearance of psoriasis and avoid possible adverse events, optimization of phototherapy schedule is necessary. Before the treatment, all patients should be given basic phototherapy education that includes education about the use goggles and genital shields. It is also important to meter UVB machine on the regular base. The initial dose of NBUVB may be administered according to MED or Fitzpatrick skin type. According to the guideline by AAD, initial dose can be 50% of MED or 130, 220, 260, 330, 350, and 400 mJ/cm^2 for skin type I to VI, respectively. The frequency of UV exposure is considered from twice to five-times a week and the dose increment is determined depending on the erythema response. It is recommended to decrease the dose of UV if subsequent treatments are missed for some weeks and to start over if treatments are missed for more than 3-4 weeks. Previous studies on Caucasian patients suggest that a frequency of three times per week with 20% increment is a reasonable protocol. Potential value of maintenance therapy with NBUVB has been suggested for prolongation of remission period by several studies.

In this talk, some practical considerations will be discussed to maximize the success rate of phototherapy, which remains one of the main strategic options for the treatment of psoriasis.

CV-3

What Can Dermatologists Do to Maximize the Success Rate of Systemic Treatment in Psoriasis?

JANG Yong-Hyun

Department of Dermatology, Kyungpook National University School of Medicine

Unmet Needs for Systemic Treatments of Psoriasis

Psoriasis is a common chronic condition that often develops in early adulthood with typical lifetime duration of more than 30 years. In addition, an individual's severity of the disease, the resultant burden and response to therapies, as well as access to care are likely to vary over time. Patients want a safe, convenient therapy that will rapidly clear their disease and keep it in remission.

Recent surveys of patients with psoriasis have confirmed the substantial negative impact of the disease on patients' physical and emotional well-being. However, many patients report being frustrated with the management of their disease and they perceive conventional therapies as being ineffective. These findings hold true especially for patients with more severe disease, which is not adequately treated with topical therapies. To add to their frustration, patients often trial a therapy for several months before their treatment is altered because of an inadequate response and treatment satisfaction.

Points for Discussion

In the United States, an estimated 4.5 million individuals have psoriasis, but there are only about 1 million visits per year to dermatologists for this problem. Treatment dissatisfaction is associated with lower levels of adherence. Treatment choice should take into consideration the order in which drugs are prescribed, a person's stage in life, associated comorbidities and variation in disease severity.

Today, we will discuss in detail the efficacy and safety, and offer recommendations for the use of systemic agents. We will also discuss the best use of systemic therapies and role of dermatologists for maximizing the success rate of systemic treatments in psoriasis.

FREE COMMUNICATIONS

FC-1

A Case of Photosensitive Psoriasis

KIM Hong-Lim, SUH Hyun-Yi, KIM Kyung-Ho, JEON Jae-Wook, AHN Ji-Young, PARK Mi-Youn, YOUN Jai-Il

Department of Dermatology, National Medical Center

Photosensitive psoriasis (PP) is a clinically well-known, but rare and poorly defined, psoriasis subset. A beneficial reaction to sunlight and artificial ultraviolet (UV) radiation is a common feature in most cases of psoriasis. However, it can lead to an exacerbation of psoriatic skin disease or new psoriatic lesions in some patients.

We report here a patient with PP in whom the aggravation of psoriatic lesion could be induced by sun exposure and UV irradiation. The patient, 34-year-old woman was diagnosed with psoriasis vulgaris 18 years ago. She has no heredity of photosensitivity and history of medication possibly inducing photosensitivity. After sun exposure or therapeutic narrow band UVB, she occasionally has experienced an exacerbation of lesions, especially the lesion on the arm and leg. The symptom remarkably develops in the spring or early summer. She has visited our clinic periodically and the lesions have been controlled with topical agents, steroid and vitamin D3 analogue.

Patients with PP have a statically significant higher frequency of skin type 1, heredity of photosensitivity, advanced age, difficulties in therapy, and face and hands involvement compared with non-photosensitive patients. We report the impressive case of photosensitive psoriasis.

FC-2

Psoriasis Developed after Tattooing

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Koebner phenomenon was initially reported as the formation of psoriasiform lesions after cutaneous trauma in the uninvolved skin of people with psoriasis in 1877 by Heinrich Koebner. More recently, the definition has been extended to include lesions developed after trauma in people with no pre-existing dermatosis.

A 26-year-old man visited our clinic for erythematous scaly papuloplaques on the left arm around tattoo and forehead. He had tattoos on his arm before 5 months. The skin lesions on the forehead had appeared first since the 4 month and then on his forearms around tattoos, they had been appeared since 1 month. The lesions were mild itchy. He had no family history of skin problems and no previous skin conditions. A skin biopsy was performed in the left forearms. Skin biopsy in lesion showed parakeratosis, perivascular inflammatory and the exogenous pigment of the tattoo is in the dermis. We treated with topical steroid agent for his skin lesion. We report this impressive case that getting a tattoo in the patient without pre-existing dermatosis should induce psoriasis by Koebner phenomenon.

FC-3

Paradoxical Psoriasis Induced by Biologic Therapies: TNF-α Inhibitor and IL-12/23 Inhibitor

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Biologic therapies currently approved for the treatment of moderate-to-severe plaque psoriasis work well. Administrations of those are beneficial in a variety of chronic inflammatory conditions. Recent reports have illustrated the paradoxical development of psoriasis after biologic therapies.

A 30-year-old man presented widespread scaly erythematous patches on the whole body involvement after treatment with the third dose of infliximab. He was diagnosed with palmoplantar psoriasis 6 years ago. He had been widespread psoriatic lesions on the whole body and had been treated either neotigason or cyclosporine with excimer phototherapy for 2 years 6 months before visiting our psoriasis clinic. He was started on the injections of infliximab in other hospital. After receiving third dose of infliximab, the patient had experienced worsening of his plaque psoriasis on the whole body. We changed other biologics, anti-IL-12/23 p40 monoclonal antibody. He was treated with ustekinumab. Although receiving the second dose of ustekinumab, the skin lesions were not improved and got worse rapidly with pustules on the palm and sole and with psoriatic lesions on the whole body. After discontinuing biologics, we treated with cyclosporin and with calcipotriol agent (Daivonex® cream) for his skin lesions. Herein, we report this impressive case of induced paradoxical psoriasis after treating on TNF-α inhibitor and IL-12/23 inhibitor.

FC-4

A Case of Paradoxical Flare of Psoriasis Treated with Ustekinumab, Which Responded with Combination Therapy with Low Dose Cyclosporine

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Ustekinumab, the most recent biological agent approved for treatment of patients with moderate to severe psoriasis, is a human monoclonal antibody that binds to the p40 subunit of interleukin (IL)-12 and IL-23. Carefully selected combination therapies may lead to greater efficacy while minimizing toxicities. None of the available biologic drugs are associated with hypertension or nephrotoxicity, and there are no reported drug interactions between the biologics and cyclosporine.

A 79-year-old man with a 5-year history of plaque type psoriasis and psoriatic arthropathy had been treated with cyclosporine, phototherapy and topical agent in our clinic. His condition was suboptimally controlled with treatments. Treatment strategy was changed into the subcutaneous injection of ustekinumab 45mg according to conventional dosing schedule. He was started on subcutaneous injection of ustekinumab 45mg and other previous treatments were discontinued. Prior the second dose of ustekinumab 1 month later, the patient noted flare on trunk and both upper extremities like erythroderma. After second injection of ustekinumab with low dose cyclosporine, the patient's lesions dramatically improved.

Herein we report a case of paradoxical flare of psoriasis treated with ustekinumab, which responded with combination therapy with low dose cyclosporine.

FC-5

Clinical Features of Psoriatic Arthritis in Korean Patients of Psoriasis

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Background: Psoriatic arthritis (PsA) is an inflammatory arthritis associated with psoriasis. The prevalence and clinical characteristics of PsA in patients with psoriasis shows ethnic variation and studies on Korean population have rarely been reported.

Objective: To investigate the clinical characteristics of PsA in Korean patients with psoriasis

Methods: Patients diagnosed with PsA between 2011 and 2015 at Pusan National University Hospital were included. Patients were only recruited from a dermatology outpatient clinic. Clinical characteristics of PsA, comorbidities, and treatment patterns were investigated.

Results: Twenty-six psoriasis patients diagnosed as PsA (20 male, 6 female, mean age 45.6) were included. Diabetes, hypertension, hyperlipidemia were common in PsA compared with general population. Distal interphalangeal predominant pattern was the most common manifestation of PsA. Nail change, scalp and intergluteal involvement were found in 73.1%, 88.5% and 47.8% respectively. Methotrexate was the most common treatment for PsA, followed by non-steroidal anti-inflammatory drugs, biologics, and sulfasalazine.

Conclusion: Clinical features of patient with PsA were similar compared with previous report in the Korea, but distal interphalangeal predominant pattern was more common in present study.

FC-6

Efficacy of Ustekinumab in Improving Symptom of Depression with Moderate to Severe Psoriasis: An Open Label Trial Validated by ^{18}FDG Positron Emission Tomography-Computed Tomography

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Psoriasis is a chronic skin disease associated with psychiatric co-morbidity, especially depression. The prevalence of depression in patients with psoriasis is between 10 and 62%, and is higher than that seen in other dermatological diagnosis. There is increasing awareness that early detection of psychological vulnerability in patients with psoriasis seems to be of great clinical importance and has a significant impact on the patient's quality of life.

The depressive mood has been assessed on Beck Depression Inventory (BDI) and psychiatric interview using Hamilton Depression Rating Scale (HDRS) and significantly greater improvements in symptoms of anxiety and depression were observed in patients with psoriasis treated with some biologics.

Recently, several reviews focused on neuro-imaging techniques including single photon emission computed tomography (SPECT) and positron emission tomography (PET) have been used to investigate the influence and mechanism of various mental factors such as depression. Advances in neuro-imaging techniques have led to some interesting data concerning alteration in brain structure and functions in several chronic illness with psychiatric symptoms.

Herein, we sought to analyze the effect of ustekinumab on symptoms of depression in patients with 14 moderate to severe psoriasis patients. Further, we tried to investigate the relationship between depressive symptom and FDG uptake in the brain by FDG PET/CT.

FC-7

Factors Associated with Using Systemic Corticosteroids in Psoriasis Patients

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Background: The use of systemic corticosteroid (SC) in the treatment of psoriasis is not recommended according to the textbooks and guidelines because of the risk of disease deterioration after dose reduction or withdrawal. However, recent analyses using data from Germany and the United States nationwide healthcare insurance revealed that SCs were the most frequently prescribed drugs for psoriasis.

Objective: To assess how often SCs are prescribed in psoriasis treatment and to figure out the socio-economic factors associated with the use of SCs

Methods: We used the 2011 National Inpatient Sample (NIS) database to determine the extent of prescribing systemic medications for psoriasis. Psoriasis patients with SC prescription were analyzed separately according to socio-economic factors.

Results: The prescription rate of SC was 12.0% among outpatient visit cases diagnosed with psoriasis. Female patients (14.9%) and aged 40 to 64 years group (15.4%) showed higher SC prescription rates than male patients and other age groups. Medical aid recipients (24.9%), patients who visited hospital (14.8%), and patients living in non-metropolitan areas (14.2%) were more likely to get SC prescription than National Health Insurance patients (11.4%), patients who visited general (2.6%) or tertiary hospital (0.8%), and patients living metropolitan area (10.3%), respectively.

Conclusion: Psoriasis is often treated with SCs in Korea although it is not recommended despite current guidelines. Data are needed on the risks and benefits so that physicians and patients can make evidence-based decisions about their use.

FC-8

Correlation Between Histopathologic Findings of Psoriasis Determined Using Quantitative Computer-Aided Analysis and Elements of the Psoriasis Area and Severity Index

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In recent years, the development of image analysis software has allowed researchers to quantitatively measure histopathologic findings. However, bioengineering devices to objectively assess the severity of psoriasis using histopathological samples have not yet been developed. This study aimed to determine whether histopathological findings in psoriasis could be measured using quantitative computer-aided image analysis and whether these findings correlate with the clinical severity of psoriasis. We retrospectively collected clinical data and corresponding photomicrographs from 55 patients with psoriasis. Histopathological parameters, including epidermal thickness, horny layer thickness, rete ridge counts, cellular infiltration, and vessel counts, were assessed using Image J software (National Institutes of Health [NIH], Bethesda, MD). These parameters corresponded with Psoriasis Area and Severity Index (PASI) components erythema, thickness, and scale. When the values for the histopathological parameters, as determined by quantitative computer-aided image analysis, were compared with the PASI parameters, only the dermal vessel counts showed meaningful correlation with PASI erythema component. The PASI thickness component was influenced by epidermal thickness, the rete ridge count, and the vessel dilatation grading. Only horny layer thickness was associated with the PASI scale component. To our knowledge, this is the first attempt to objectively and quantitatively assess the relationship between histopathological findings and the clinical severity of psoriatic lesions. In the current study, using quantitative computer-aided image analysis for histopathological analysis, we demonstrated correlations between histopathological severity and clinical severity of psoriasis.

FC-9

A Case of Generalized Pustular Psoriasis Mimicking Acute Generalized Exanthematous Pustulosis

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As the clinical manifestations and histopathologic findings are similar, differentiating between acute generalized exanthematous pustulosis (AGEP) and generalized pustular psoriasis (GPP) is extremely difficult. Herein, we report a patient with pustular eruption initially diagnosed as AGEP, and changed to GPP.

A 60-year-old woman visited the emergency department with generalized erythematous pustular eruption, generalized edema and fever. She had been treated with methylprednisolone and antihistamine for the treatment of drug eruption by herbal medicine. However, the skin lesions were wax and wane over 2 weeks. She visited another hospital and took dapsone and zaltoprofen. After taking dapsone and zaltoprofen for 5 days, the pustular eruption was rapidly exacerbated and generalized edema and fever occurred. The patient was on long-standing treatment for hypertension and diabetes mellitus, there was no previous history of drug allergy or psoriasis. On the physical examination, numerous non-follicular pustules on the erythematous background were seen on whole body. The body temperature measured as 38.7 ℃. Laboratory tests revealed leukocytosis(15,510/mm^3) with neutrophilia(85.9%) and elevated CRP(16.88mg/dL). The histopathologic examination showed subcorneal spongiform pustule mainly filled with neutrophils. Based on these findings, she was diagnosed as AGEP. After treatment with systemic steroid for 3 days, fever and skin lesions were improved. However, new pustular lesions were aggravated immediately after reduction of steroid. As this clinical manifestations seemed to be more compatible with GPP, acitretin was started and steroid was slowly tapered. The pustular lesions and scales had improved.

This case showed the importance of differential diagnosis between AGEP and GPP in order to treat the condition appropriately.

FC-10

Experience of Neoral® Therapy in Moderate-to-Severe Plaque Psoriasis

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Psoriasis is a chronic inflammatory skin disease, and cyclosporine is one of standard drugs for moderate-to-severe psoriasis. Neoral® (Novatis) is a micro-emulsified cyclosporine, containing an aqueous solvent and ethanol in a gelatin capsule. We would like to share our experience of Neoral® for moderate-to-severe plaque psoriasis, including its efficacy and adverse reaction. A 17-year-old girl with severe plaque psoriasis (PASI: 17.7) had no response to topical treatment and NBUVB. She was switched with Neoral® at a start dose of 3.5mg/kg per day. She responded well to Neoral®, showing the decrease of PASI from 17.7 to 10.4 within 3 weeks. During last 10 months, she was maintained with Neoral® at a mean daily dose of 1.7mg/kg per day, showing PASI 90 response. There were no major adverse reactions to the drug.

A 22-year-old man with moderate psoriasis (PASI: 9.7) was treated with Neoral® 3.5 mg/kg/day, reaching PASI 75 within 3 weeks (PASI: 2.6). After 3 months, however, Neoral® was changed into methotrexate due to acneiform eruption and gastrointestinal upset.

The last patient, a 59-year-old man with a 20-year history of plaque psoriasis visited our clinic. During the last 6 months, he responded well to Neoral® with a mean daily dose of 2.7 mg/kg, showing the decrease of PASI from 9.4 to 2.4 (PASI 75 response). Due to hypertrichosis, Neoral® was discontinued.

In this presentation, we would like to share our therapeutic experience of Neoral® for plaque psoriasis, and review on the efficacy and side effects of Neoral®.

FC-11

Cutaneous B Cell Pseudolymphoma in A Psoriasis Patient Treated with Cyclosporine

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We report a case of a 65-year-old Japanese man with psoriasis vulgaris, who had been treated by oral cyclosporine (2.0-3.0mg/kg/day) for 20 years. He developed the erythematous plaque on the nose since Jan, 2014. As the eruption slowly spread to cheeks and ears, he arrived at our department in Apr, 2014. Laboratory examination shows slight elevation of soluble interleukin-2 receptor level (588 U/ml). The pathological examination of the specimen of skin biopsy from an erythematous plaque of the chin shows nodular dermal infiltration by lymphoid cells with formation of germinal centers, which were negative for EBER. A diagnosis of B cell psuedolymphoma was made. After the pathological diagnosis, oral cyclosporine therapy was discontinued. Skin lesions were disappeared after 5 months and they did not recur. The multiple type B cell pseudolymphoma, as a case we report here, sometimes is difficult to distinguish from lymphoma, especially primary cutaneous marginal zone lymphoma and primary cutaneous follicle center lymphoma. We also need to be attentive to cases with long-term and low-dose therapy of cyclosporine, which might develop the lymphoproliferative disorders.

FC-12

New Susceptible Loci in *IL-17F* and *JAK2* in Korean Patients with Psoriasis

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Background: Psoriasis is a most common immune-mediated skin disorder. Advances have been made in understanding the genetic basis of psoriasis by genome wide association studies and/or linkage analysis. Genetic variants in the *IL23A, IL23R, IL12B* of IL23/Th17 axis have been revealed as associated with psoriasis. Emerging data identify a subset of helper T cells, Th17 cells play a critical role for the pathogenesis of this disease, but the gene encoding molecules in the Th17 pathway have remained to be elucidated. IL-23 signal undergoes JAK-STAT pathway in Th17 cells and produces IL-17A, and IL-17F which signal via IL-17R of the keratinocytes. Therapies targeting IL-17, IL-17R, JAKs are currently under investigation for the treatment of psoriasis as well as other inflammatory condition. The improvement of psoriasis by these targeted drugs suggest essential role of these molecules in psoriasis.

Objective: To identify new psoriasis susceptible loci, we conducted a genome wide association and linkage disequilibrium study of IL-17A, IL-17F, IL-17R, IL-22 and JAK-STAT pathway.

Methods: A total of 208 patients with psoriasis and 266 normal controls were included. We analyzed 39 single nucleotide polymorphisms which had been studied in other autoimmune disorders including inflammatory bowel disease, and rheumatic arthritis of *IL-17A*, *IL-17F, IL-17RA, IL-22, JAK1, JAK2, JAK3, TYK2* and *STAT3*.

Results: The patients with psoriasis had a significantly higher allele frequency compared to normal controls for the *IL-17F* gene on chromosome 6p12 (rs763780: P=0.04, odds ratio (OR) = 3.27) and *JAK2* gene on chromosome 9p24 (rs2274471: P=0.02, OR= 2.66). In haplotype analysis, *JAK1* gene on chromosome 1 rs310241A/rs2780889T type showed protective effect (P=0.03, OR=0.73).

Conclusion: Therefore we could conclude that polymorphism in *IL17F* and *JAK2* are susceptible loci for psoriasis in Korean population. We also found a protective haplotype of *JAK1*.

FC-13

Experimental Study of NF-κB and PTEN Expression in Psoriasis Patient Skin

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Background: Psoriasis is a chronic inflammatory condition characterised by epidermal hyperplasia and dysregulated apoptosis of keratinocytes. Pathogenic mechanisms remain unclear, but inflammatory pathways such as NF-κB have been proposed to modulate intracellular signalling pathways involved in cell growth, proliferation, and survival.

Objectives: We sought to determine whether PTEN and Akt pathway inhibition may play a role in driving cellular hyperplasia and aberrant apoptosis in psoriasis. We further hypothesised that NF-κB signalling might interact with the PI3K/Akt pathway, providing a link between PTEN dysregulation and chronic inflammation.

Methods: Lesion and non-lesional skin tissue biopsied from 10 individuals diagnosed with psoriasis were comparatively analysed by western blotting and immunohistochemistry to determine expression and activation levels of PTEN, Akt, and NF-κB.

Results: We observed elevated levels of disinhibited, nuclear NF-κB and decreased levels of PTEN expression in psoriatic lesions relative to non-lesion patient tissue. Our study further confirms that reduced levels of PTEN are associated with increased activation of Akt and that these changes can be localized to the same psoriatic cells that exhibit enhanced activation of NF-κB in the epidermis.

Conclusions: These findings raise the intriguing possibility that the NF-κB pathway may be responsible for not only inflammation, but also the hyperproliferation and abnormal apoptosis characteristic of psoriatic lesions via interactions with PTEN and the PI3K/Akt pathway.

FC-14

Expression of REG3A in Korean Psoriasis Patients

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Background: Psoriasis is a chronic inflammatory condition characterised by epidermal hyperplasia and dysregulated apoptosis of keratinocytes. Pathogenic mechanisms remain unclear, but several inflammatory pathways have been proposed to modulate intracellular signalling pathways involved in cell growth, proliferation, and survival. And the regenerating islet-derived protein 3-alpha (REG3A), related with immune response and inflammation is highly expressed in keratinocytes during wound repair and in imiquimod-induced psoriatic skin lesions.

Objective: We sought to investigate whether expression level of REG3A protein may be increased in psoriatic skin lesions than non-psoriatic skin lesion of psoriasis patients.

Methods: Lesion and non-lesional skin tissue biopsied from 5 individuals diagnosed with psoriasis were comparatively analysed by western blotting and immunohistochemistry to determine expression and activation levels of REG3A.

Results: We observed elevated levels of REG3A protein in psoriatic skin lesion than non-psoriatic skin lesions of psoriasis patients. And distribution of REG3A protein in epidermis was different with lesion and non-lesion of psoriatic patients skin.

Conclusion: We found that increased REG3A expression was observed in hyperproliferative lesional skin lesion of psoriasis as compared with non-lesional skin of psoriasis patients. Observations suggest that the up-regulation of REG3A may be involved in the cellular type.

FC-15

Association of Hepatitis B Virus Infection in Psoriasis

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Psoriasis is a chronic inflammatory disease mainly involving the skin and joints. Recent finding in psoriasis research have shown that psoriasis is not just a skin disease but frequently associated with systemic comorbidities. Viral hepatitis B is associated with chronic inflammation and aberrant immune response. The association of psoriasis with hepatitis B and C virus infections has been reported with conflicting results in literature.

The purpose of this study is to investigate prevalence and association of HBV infection in psoriasis. We analyzed and evaluated laboratory in patients with or without psoriasis who visit department of dermatology, National Medical Center from September 2012 to March 2015. 706 patients with psoriasis and 345 patients without psoriasis were enrolled. 244 patients with psoriasis and 345 patients without psoriasis were evaluated HBV serological makers.

4(1.7%) out of 240 patients with psoriasis were HBs Ag positive while 7(2.07%) out of 345 patients without psoriasis in the control group were HBs Ag positive. There was no significant difference between two groups. 4 patients had hepatitis B virus infection. Among 706 patients with psoriasis, 240 patients evaluated HBs Ag were more severe activity of psoriasis than those not evaluated HBV serological makers. There was no significant associated with hepatitis B virus infection after adjusting for gender, age, and severity of psoriasis. Patients with positive HBs Ag were referred to a hepatologist and their states of liver were checked.

Psoriasis does not appear to be associated with an increased risk of hepatitis B in our study. Epidemiology of viral infections in psoriasis needs to be continually studied and updated given importance in management considerations.

FC-16

A Comparison of Biologics and Conventional Therapy for Psoriasis Disease Burden in Terms of Area Under Curve Value of the PASI-Time Plot

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Psoriasis is a common chronic inflammatory condition that has been treated by topical steroids, narrow band UV-B phototherapy, oral retinoids, and oral immunosuppressives. Tumor necrosis factor (TNF) alpha inhibitors were a breakthrough for the psoriasis treatment, which has improved patient disease burden measured by PASI-75 ratio. PASI-75 is a ratio of the number of patient that the PASI score has been improved at least 75% from the initial measurement to the total study population. It is simple to measure but does not include disease course information. Therefore, we suggest that PASI variation during the disease course should be included when evaluating psoriasis disease burden. This study evaluates the area under curve (AUC) of the PASI-time plot to compare long-term therapeutic efficacy of conventional and biologics therapy in one patient in terms of disease course.

FC-17

Decreased Expression of Antioxidant Proteins in Psoriasis Vulgaris Skin Tissue and Dimethyl Fumarate Contributes to Upregulate Antioxidant Proteins *in vitro*

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Psoriasis is a chronic inflammatory, proliferative skin disease characterized by pathological skin lesions due to various exogenous and endogenous factors. The pathogenesis of psoriasis still remains unclear. Recently it has been suggested that increased ROS production and deficient function of antioxidant systems activities may be involved in the pathogenesis of the disease. Reactive oxygen species (ROS) contribute oxidized proteins were measured by oxyblotting analysis. Protein oxidation, a marker of oxidative stress, was found to be increased in psoriasis vulgaris skin tissue. We evaluate and compare nuclear factor E2-related factor 2(Nrf2), NQO1, HO-1, DJ-1, Daxx, 5 17β-Hydroxysteroid Dehydrogenase (AKR1C3). Protein levels in skin biopsies of subjects with psoriasis vulgaris and controls. Our western blot data show that expression of Nrf2, HO-1, AKR1C3 is clearly downregulated in psoriasis vulgaris skin tissue, but there was no difference in DJ-1, Daxx, NQO1 expression compared with normal tissue. Immunohistochemical staining was carried out to analyze antioxidants expression. Immunohistochemical staining results of antioxidants mirrored those of the western blot analysis. Dimethyl fumarate (DMF) are widely used in Europe for the treatment of psoriasis. In vitro, DMF treatment specifically induced the Nrf2, HO-1, AKR1C3 protein in HaCaT cells. DMF protects from oxidative stress by enhancing Nrf2, HO-1, AKR1C3 protein. Apoptosis was quantitated by flow cytometry using Annexin V translocation and cell death by 7-AAD staining. During DMF treatments, DMF increases apoptotic levels in a dose-dependent manner *in vitro*. Collectively, our data suggest that downregulation of Nrf2, HO-1, AKR1C3 expression in psoriasis vulgaris skin tissues could result in increased oxidative damage and mitochondrial dysfunction and DMF increases Nrf2, HO-1 and AKR1C3 proteins and could protect from oxidative damage.

FC-18

Assessments of Neutrophil to Lymphocyte Ratio and Platelet to Lymphocyte Ratio in Korean Patients with Psoriasis Vulgaris and Psoriatic Arthritis

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Background: There are no simple and clinically useful biomarkers for both psoriasis and PsA patients yet. Recently, the neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR) have been recognized as markers for inflammatory markers of cardiac and noncardiac disease and indicators for poor prognosis in various cancers.

Objective: To assess neutrophil to lymphocyte ratio (NLR) and platelet to lymphocyte ratio (PLR) as inflammatory markers in patients with psoriasis and psoriatic arthritis (PsA)

Methods: This was retrospective cross-sectional study. A hundred and eleven psoriasis patients and 25 PsA patients were compared to 94 healthy controls. Demographic, clinical and laboratory information were collected and analyzed. NLR and PLR were calculated. White blood cell (WBC), neutrophils, eosinophils and NLR were increased in psoriasis patients compared to controls.

Results: WBC, neutrophils, NLR, monocytes, platelets and PLR were increased in PsA patients compared to both controls and psoriasis patients. ESR and CRP were significantly higher in PsA patients compared to psoriasis patients. Among psoriasis patients, PASI score correlated positively with platelets, NLR and PLR. These parameters were all significantly higher in moderate to severe psoriasis patients (PASI$\geq$10) compared to mild patients (PASI<10). Elevated platelets, NLR and PLR were statistically significant predictors of the increased PASI scores in multivariate analysis. NLR, PLR and ESR were statistically significant predictors for the presence of PsA in psoriasis patients. NLR was the strongest predictor (OR 3.351, P=0.005).

Conclusion: In conclusion, elevated NLR and PLR were significantly associated with psoriasis and PsA. Both NLR and PLR can be used as one of the inflammatory markers in patients in psoriasis and PsA.

FC-19

Decreased PD-1 Positive Blood Follicular Helper T Cells in Patients with Psoriasis

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Follicular helper T (Tfh) cells are recently characterized subset of helper T cells, which are initially found in the germinal centers of B cell follicles. The major role of Tfh cells is to help B cell activation and antibody production during humoral immunity. Recently, several studies indicate that blood Tfh cells are associated with autoimmune disease, such as systemic lupus erythematosus, rheumatoid arthritis, bullous pemphigoid and psoriasis. There is only one study which has investigated Tfh cells in psoriasis patients. Therefore, in this study, we evaluated and analyzed blood Tfh cells in Korean patients with psoriasis. A total of 20 psoriasis patients and 12 healthy controls were enrolled. The frequency and absolute number of CXCR5+PD-1+ Tfh cells were decreased in patients with psoriasis compared to healthy controls. CD4+CXCR5+ T cells and CXCR5+ICOS+ Tfh cells did not show differences. The frequency and absolute number of CXCR5+PD-1+ Tfh cells in psoriasis patients negatively correlated with erythrocyte sedimentation rate and positively correlated with disease duration. The absolute number of CXCR5+ICOS+ Tfh cells also showed positive correlation with disease duration. However, the subpopulations of Tfh cells did not correlate with Psoriasis Area and Severity Index. These findings suggest the decreased function of Tfh cells in psoriasis, which could result in attenuated B cell immune responses in the pathogenesis of psoriasis. However, further investigations are necessary to confirm the function of Tfh cells in psoriasis vulgaris.

FC-20

The Changes of Th17 and Regulatory T Cells in Patient with Psoriasis

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Background: Although the pathogenesis of psoriasis is not fully understood, recent studies suggest an imbalance of T-helper 17 cells (Th17) and $CD4^{+}CD25^{+}Foxp3^{+}$ regulatory T cells (Treg) in psoriasis. Currently, the association between Th17 and Treg cells and psoriasis remain controversial.

Objective: In this study, the Th17 and Treg cells proportion in peripheral blood were evaluated between patients with psoriasis and normal controls.

Methods: Proportions of Th17 and Treg cells in peripheral blood were examined by flow cytometry in psoriasis patients (n=20) and age-matched healthy controls (n=23). The correlation between Th17 and Treg cells and clinical parameters in psoriasis patients were also analyzed.

Results: There were significant increases in circulating Th17 cells proportion and the ratio of Th17 to Treg cells in psoriasis patients compared to control(p=0.001, p=0.002). In contrast to the Th17 cells, there was no significant difference in Treg cells proportion in psoriasis patients compared to control(p=0.310). The ratio of Th17 to Treg cells was increased along with PASI score, but there was no significant correlation (p=0.062). And the ratio of Th17 to Treg cells was positively correlated with BSA (body surface area)(p=0.038).

Conclusion: These findings provide that there exists an imbalance in Th17 and Treg cells in psoriasis, which may contribute to its pathogenesis and disease severity.

FC-21

Dermatological Complications of Anti-TNF Therapy in A Well Defined Cohort of IBD Patients; Cumulative Incidence, Risk Factors, and Outcome Analysis in A Single Center Observational Retrospective Study

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Anti-tumor necrosis factor (TNF) agents, infliximab (IFX) and adalimumab (ADA), are widely used in several diseases including psoriasis. The broader and prolonged use of these immunosuppressive therapies could expose patients to an increased risk of adverse reactions. Among them, dermatological complications include so called “paradoxical psoriasis” have been reported. In many reports, psoriasiform lesions are the most frequent dermatological adverse reactions with the use of anti-TNF therapy.

Pathophysiology of this paradoxical immune-mediated inflammatory disease is still incompletely understood: In their most severe forms, cutaneous side effects can lead to treatment discontinuation and be very disabling; treatment cessation is required in some patients treated with anti TNF. Switching to another anti-TNF leads to recurrence of psoriasiform eruption in many cases.

Through this single center observational retrospective study, we assessed the cumulative incidence of anti-TNF-induced cutaneous adverse reactions in patients with inflammatory bowel disease (IBD) and their risk factors in a well defined cohort of IBD patients in Asan medical center. A total of 500 patients were identified and retrospectively investigated. Eczematiform eruptions (n= 18, 38%) were the most common skin lesion type, followed by psoriasiform lesions (n= 13, 28%). A response to topical steroids was seen in 70% (33/47) of patients with skin lesions, and anti-TNF agents had to be discontinued in 9% (4/47). Concomitant use of thiopurines may decrease the occurrence of adverse skin lesions in patients receiving anti-TNF therapy.

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[주성분] 사이클로스포린 25mg/100mg **[효능 · 효과]** –장기이식(신장, 간장, 심장 및 폐 복합, 폐 및 췌장의 이인자형 장기이식 거부반응 예방 / 다른 면역억제제를 투여중인 환자에서의 장기이식거부반응 치료), –골수이식(조직 이식 거부반응 예방 / 이식편–숙주반응질환(GVHD)의 예방 및 치료) –건선 : 다른 요법이 효과가 없거나 적절하지 않은 중증의 건선 –신증후군 : 기존의 세포증식억제제 치료에 실패한 특발성 스테로이드 의존성 또는 스테로이드 저항성 신증후군의 경우(대부분 생검에서 minimal change disease(MCD) 또는 focal segmental glomerulosclerosis(FSGS)를 보임) 단, 신기능지수가 최소 50%는 정상이어야 함. 이들 환자에서 관해의 유도 또는 코르티코스테로이드를 포함한 다른 약으로 유도된 관해의 유지에 사용될 수 있다. 이 때 코르티코스테로이드는 중단할 수 있다. –류마티스관절염 : 표준치료요법으로 효과가 없거나 적절하지 않은 중증의 류마티스 관절염 –재생불량성 빈혈 : 중증 또는 중등증의 경우 **[용법 · 용량]** 효능 · 효과 및 및 투여방법에 따라 다르므로 상세제품정보를 참조한다. 기존 사이클로스포린 경구제에서 다른 사이클로스포린 경구제로 교체 시에는 의사의 감독 하에서 진행되어야 하며 주의가 필요하다. 새로운 제제로 교체시 이전 수준의 사이클로스포린 혈중 농도가 얻어질 수 있도록 모니터링되어야 한다. **[금기]** 이 약 및 이 약의 다른 성분에 과민증 및 그 병력이 있는 환자/다음 환자 중 각 항의 질환을 가진 환자 ① 신장질환 환자 :비조절성 감염증, 악성종양 ② 건선 환자 :신부전, 비조절성 고혈압, 비조절성 감염증, 악성종양 ③ 아토피성 피부염, 다발성 류마티스관절염 환자 :신부전, 비조절성 고혈압 ,비조절성 감염증, 악성종양 ④ 포도막염, 형성부전 골수 환자 : 신부전, 비조절성 고혈압 ⑤ 기타: 포도막염 환자 중 악성종양이 있는 환자 /50% 이상의 신장애가 있는 신증 환자/ 중증의 간질환, 요산 증가 또는 고칼륨혈증 환자/18세 미만의 류마티스 관절염 환자 /임부 및 임신하고 있을 가능성이 있는 부인, 수유부, 알리스키렌, 보센탄 또는 다비가트란을 투여받고 있는 환자 **[신중투여]** 고령자, 영아

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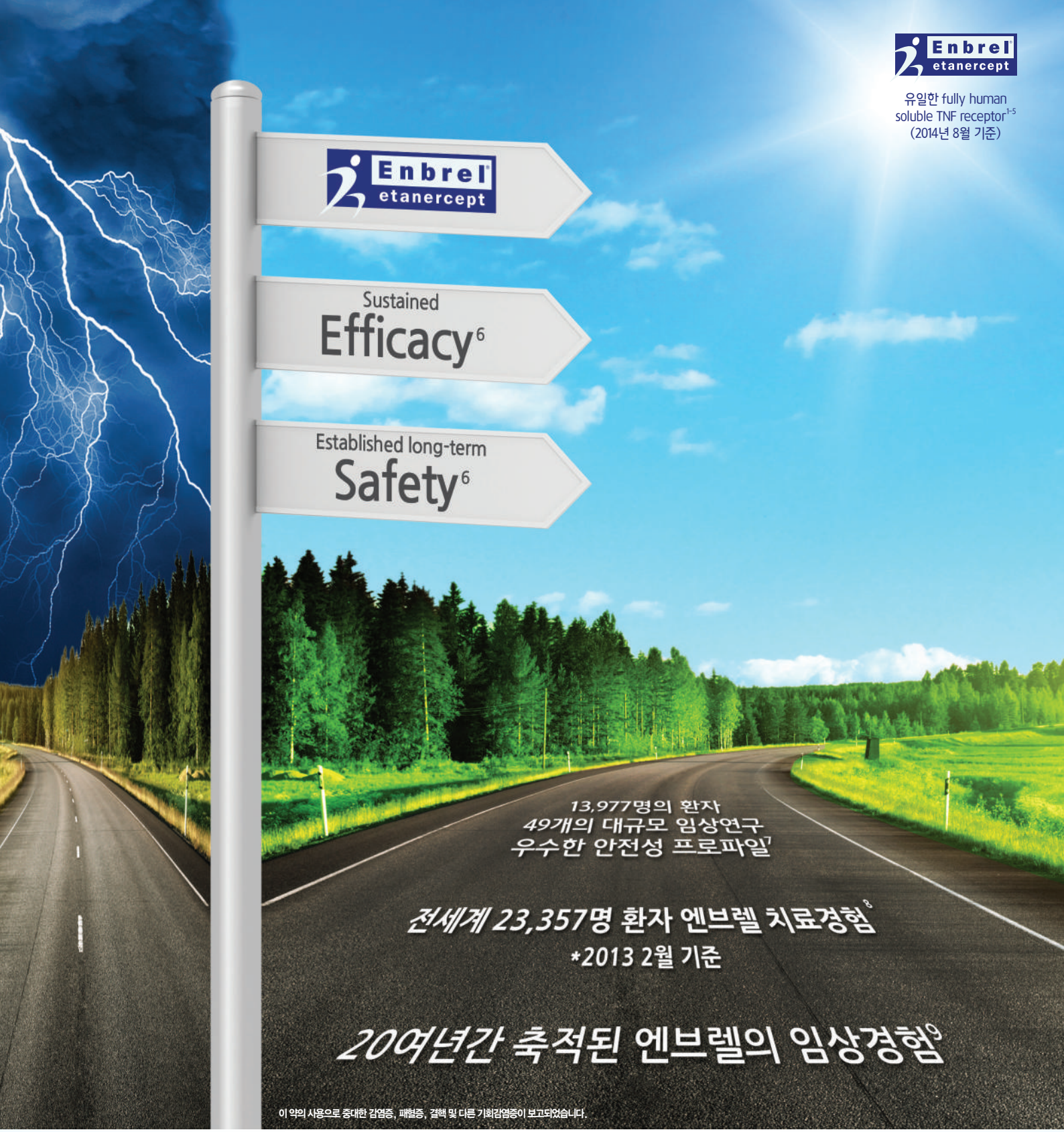

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제품요약정보 엔브렐 전문의약품 [원료약물의 분량] 프리필드시린지 중 에타너셉트 25mg, 50mg [주성분] 에타너셉트(TNFR:Fc) [성상] 무색투명 또는 유백색-pH지 연한 황색의 액이 충진된 프리필드시린지 [효능 · 효과] • 성인 : 1. 류마티스관절염 – 메토트렉세이트를 포함한DMARDs(Disease–Modifying anti Rheumatic Drugs)에 반응이 적절하지 않은 중등도에서 중증의 성인 활동성 류마티스관절염에 메토트렉세이트와 병용투여. – 메토트렉세이트에 내약성이 없거나, 메토트렉세이트 치료를 지속하기 부적절한 경우 단독투여. – 이전에 메토트렉세이트로 치료받지 않은 중증의 활동성 및 진행성 류마티스관절염. – 류마티스관절염 환자에 단독 또는 메토트렉세이트와의 병용투여시, X선으로 측정했을 때 질환과 관련된 구조적 손상 진행의 지연. 2. 건선성 관절염 – 이전에 DMARDs(Disease–Modifying anti Rheumatic Drugs)에 대한 반응이적절하지 않은 활동성 및 진행성 건선성 관절염. 3. 강직성 척추염 – 기존 치료에 대한 반응이 적절하지 않은 중증의 강직성 척추염. 4. 건선 – 싸이클로스포린, 메토트렉세이트 또는 PUVA를 포함한 전신 치료요법에 대해 반응이 없거나 금기이거나 내약성이 없는 중등도 또는 중증의 건선. • 소아 : 1. 소아 특발성 관절염 – 메토트렉세이트에 대한 반응이 적절하지 않거나 또는 내약성이 없는 2세 이상의 소아 및 청소년의 다수 관절염 (류마티스 인자 양성 또는 음성) 및 확장성 소수 관절염(Extended Oligoarthritis) – 메토트렉세이트에 대한 반응이 적절하지 않거나 또는 내약성이 없는 12세 이상의 청소년의 건선성 관절염 – 기존 치료요법에 반응이 적절하지 않거나 내약성이 없는 12세 이상의 청소년의 골부착부위염 관련 관절염 [용법 · 용량] ○ 성인 (18세 이상) 1. 류마티스관절염, 건선성 관절염, 강직성 척추염 : 1회 25mg을 주 2회 피하주사 하거나 1회 50mg을 주 1회 피하 주사한다. 2. 건선 : 1회 25mg을 주 2회 피하주사 하거나 1회 50mg을 주 1회 피하주사한다. 또는, 1회 50mg을 주 2회 12주까지 피하주사하고, 필요한 경우 그 이후에 1회 25mg을 주 2회 피하주사하거나 1회 50mg을 주 1회 피하주사한다. 이 약의 투여는 건선이 없어질 때까지 (최대 24주까지) 계속되어야 한다. 일부 성인 환자에 있어, 24주 이상의 지속 치료가 적절할 수 있다. 12주 후에도 아무런 반응이 없는 환자의 경우에는 투약을 중단해야 한다. 이 약의 재투여가 필요한 경우, 투여기간에 대한 위의 지침을 따라야 하며, 1회 25mg을 주 2회 피하주사하거나 1회 50mg을 주 1회 피하주사한다. 환자는 의사의 판단과 개별 환자의 필요에 따라 연속적 또는 간헐적으로 치료받을 수 있다. 간헐적 치료시, 최초주기 이후 치료 주기에는 1회 25mg을 주2회 피하주사 하거나 1회 50mg을 주1 회 피하주사한다. ○ 소아 소아 환자에서 이 약의 투여 용량은 체중을 기준으로 한다. 체중이 62.5 kg 미만인 환자는 엔브렐주사 25mg/mL 제제를 사용하여 정확하게 kg당 투여용량(mg)을 투여해야만 한다. 체중이 62.5 kg 이상의 환자는 정해진 용량의 프리필드시린지를 사용할 수 있다. 1. 소아 특발성 관절염 (2세–17세)1회 kg당 0.4mg (1회 최대 25mg 까지)을 주 2회 (3–4일 간격으로) 피하주사한다하거나 1회 kg당 0.8mg (1회 최대 50mg 까지)을 주 1회 피하주사한다. 4개월 후에도 아무런 반응이 없는 환자의 경우에는 투약을 중단해야 한다. [사용상의 주의사항] 1. 경고 1)감염 : 이 약 사용으로 중대한 감염증, 패혈증, 결핵 및 다른 기회감염증이 보고되었다. 박테리아, 마코박테리아, 진균, 바이러스 및 프로토조아를 포함한 기생충에 의한 것이다. 2) 결핵 : 이 약을 포함하여 TNF 길항제를 투여받는 환자에서 파종성 (속립) 결핵 및 폐외결핵 (폐막, 림프절 등)이 보고되었다. 3) 아나킨라(anakinra)와의 병용치료 : 이 약과 아나킨라(anakinra)을 병용투여한 24주간의 임상시험에서 두 약물을 병용투여한 환자의 7%에서 중증의 감염이 나타났으며 이 약 단독투여군에서는 나타나지 않았다. 4) 신경계 이상 : 이 약 및 다른 TNF 길항제 투여시 드물게 탈수초성 질환의 발생 및 악화가 나타날 수 있다. 5) 혈액학적 이상반응 : 이 약을 투여받은 환자에서 재생불량성 빈혈을 포함한 범혈구감소증이 드물게 보고되었다. 6) 악성 종양 및 림프구 증식질환 : 이 약의 임상시험에서 대조군에 비해 TNF 길항제 투여군에서 더 많은 림프종이 발생하였다. 시판 후 조사에서 여러 가지 악성종양 (유방암, 폐암 그리고 림프종을 포함)이 보고되었다. 7) B형간염(HBV) 감염 가능력이 있는 환자에서 이 약을 포함한 TNF길항제 병용투여시 B형간염 바이러스 재활성화가 보고되었고 일부는 치명적인 경우가 있었다. 8) 울혈성 심부전 : 이 약을 투여받은 환자에서 확인할 수 있는 발생요인과 관계없이 울혈성 심부전을 악화시킨다는 보고가 시판 후 조사에서 보고되었다. 9) 용제 주사기의 고무 마개는 라텍스(건조천연고무)를 함유하고 있으므로, 라텍스 과민성 또는 그 가능성이 있는 자가 다루거나 투여받을 경우에는 과민반응을 유발할 수 있다. 2. 금기 1) 과민증 환자 2) 패혈증 또는 패혈증의 위험이 있는 환자 3) 결핵을 포함 만성 또는 국소 감염을 포함한 활성 감염이 있는 환자 3. 신중한 투여 1) 탈수초성 질환 및 병력이 있는 환자 2) 울혈성 심부전환자 4. 이상반응 : (상기도 감염, 기관지염, 방광염, 피부감염을 포함한) 감염, (출혈, 타박상, 홍반, 소양증, 통증, 종창을 포함한 주사부위반응이 성인에 대한 임상시험 및 해외시판 후 조사에서 매우 자주 (10% 이상) 보고되었음. 설명서개정년월일 : 2013. 1 .12

제품에 대한 자세한 정보는 최신의 제품설명서를 참고하시기 바라며, 홈페이지 www.pfizer.co.kr를 통해 확인하실 수 있습니다.

KENB–1407–12

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자가면역질환 치료에는 사이폴엔

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- 치료용량을 서서히 Tapering함으로써 재발과 악화를 예방할 수 있습니다.

사이폴엔 상병코드	L63.0	전두부 탈모증	L40	건선	L501	특발성 두드러기	L10	천포창
	L63.1	범발성 탈모증	L20	아토피성 피부염	L12	수포성 유천포창	L88	괴저성 농피증

CIPOL·N
Cyclosporine Microemulsion

■ 조성 · 성상 : 1. 원료약품의 분량 : 매 캅셀당 사이클로스포린 (U.S.P) 25, 100mg 2. 성상 : 미황색의 점조한 액이 충전된 회색의 연질 캅셀입니다. ■ 보험인정범위 : • 건선 – 기존치료에 부작용이 있거나 효과가 없는 중증건선에 2차적으로 투여시 • 아토피성피부염 : 기존치료에 불응성인 중증의 아토피성피부염에 2차적으로 투여시 • 전두부탈모증, 범발성탈모증 : steroid 장기치료로 부작용이 발현되거나 다른약제치료에 불응인 경우 • 만성특발성두드러기 : 기존치료제에 불응인 만성특발성두드러기 환자 중 자가면역항체 양성인 경우 • 천포창, 수포성유천포창 : 면역억제제(Azaathioprine등)와 부신피질호르몬과의 병합요법에 반응하지 않는 경우 • 괴저성농피증 • 베체트질환 : 안증상 및 피부점막의 궤양 등 전신적으로 심한 증상을 보이는 경우 ■ 용법 · 용량 : 초기 용량 체중kg당 2.5mg을 1일 2회 분할 투여하며 4주후에도 개선이 없는 경우 매달 체중 kg당 0.5-1mg씩 증량하여, 1일 체중 kg당 5mg까지 증량가능. 증상의 신속한 개선이 요구되는 환자의 초기량은 1일 체중 kg당 5mg, 유지용량은 1일 체중 kg당 5mg을 초과하지 않는 범위에서 최소유효량으로서 개인에 따라 조절. ■ 투약시 주의 : 이약의 1일 총 투여량은 항상 2회 분할로 투여합니다. 브리스터 포장 개봉시의 독특한 향기는 정상적인 것이며, 어떤 문제가 있어서 그런 것은 아닙니다. 캡슐은 통째로 삼켜야 합니다. ■ 부작용 : 부작용들은 보통 용량의존성으로 감량에 의해 소강됩니다. ■저장방법 : 기밀용기에 넣어 실온에 보관하십시오.