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News

# Chronicles of A.I. Pospelov Moscow Society of Dermatovenerologists and Cosmetologists (MSDC was founded on October 4, 1891)

Bulletin of the MSDC № 1157

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## ABSTRACT

On April 16<sup>th</sup> we held our last meeting of A.I. Pospelov Moscow Society of Dermatologists and Cosmetologists in person. There were 102 participants and 5 applicants.

Our agenda included two clinical cases: the first one was a clinical case of fulminant acne (Miderm Clinic); the second one was about gangrenous pyoderma as a possible marker or paraneoplasia in intestinal oncological diseases (Sechenov University). We present clinical cases of patients with fulminant acne and periorbital oedema in the first report, and ascending colon tumour and T3N0M0 rectal cancer in the second report.

Three reports were presented in the scientific part of the meeting: the effectiveness of therapy for severe psoriasis (Sechenov University), the effectiveness of Janus kinase inhibitors in atopic dermatitis (Sechenov University), the molecular genetic aspects of the fungal mycosis pathogenesis (State Scientific Center of Dermatovenerology and Cosmetology). The authors presented the results of their own clinical studies of the effectiveness of therapy of diseases, including in the report on molecular-genetic aspects of the pathogenesis of mycosis fungoides the author assessed the changes in the expression levels of genes of the JAK-STAT signalling pathway and transcription factors both in visually unaffected skin and in the focus of clinically detectable lesions.

**Keywords:** MSDC; chronicle; history.

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Новости

## Хроника Московского общества дерматовенерологов и косметологов имени А.И. Пospelова (МОДВ основано 4 октября 1891 г.)

Бюллетень заседания МОДВ № 1157

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### АННОТАЦИЯ

16 апреля 2024 года состоялось 1157-е заседание Московского общества дерматовенерологов и косметологов имени А.И. Пospelова.

Заседание прошло в очном формате. Всего присутствовало 102 участника. На вступление в члены МОДВ было подано 5 заявок: все кандидаты приняты единогласно открытым голосованием.

В клинической части заседания представлены два доклада: описание клинического случая фульминантных акне (клиника «МиДерм») и сообщение о гангренозной пиодермии как возможном маркере паранеоплазии при онкологических заболеваниях кишечника (Первый МГМУ им. И.М. Сеченова). Представлены клинические случаи пациентов с фульминантным акне и периорбитальным отёком в первом докладе, а также опухолью восходящего отдела ободочной кишки и раком прямой кишки Т3N0M0 — во втором.

В научной части заседания заслушаны доклады об эффективности терапии тяжёлых форм псориаза (Первый МГМУ им. И.М. Сеченова), эффективности препаратов из группы ингибиторов янус-киназ при атопическом дерматите (Первый МГМУ им. И.М. Сеченова) и молекулярно-генетических аспектах патогенеза грибовидного микоза (Государственный научный центр дерматовенерологии и косметологии). Авторами представлены результаты собственных клинических исследований эффективности терапии заболеваний, в том числе в докладе о молекулярно-генетических аспектах патогенеза грибовидного микоза автором проведена оценка изменения уровней экспрессии генов сигнального пути JAK-STAT и транскрипционных факторов как в визуально непоражённой коже, так и в очаге клинически определяемого поражения.

**Ключевые слова:** МОДВ; хроника; история.

### Как цитировать:

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## EDITORIAL NOTE

On April 20, 2024, the 1157th Regular Meeting of the A.I. Pospelov Moscow Society of Dermatovenereologists and Cosmetologists (MSDC) was held.

It was attended by 102 participants. Five MSDC membership applications were submitted.

Presidium: O. Yu. Olisova, Corresponding Member, Russian Academy of Sciences, Professor; E. S. Snarskaya, Professor; and A. B. Yakovlev, Assistant Professor, Chair of Dermatovenereology and Cosmetology, Federal State Budgetary Institution of Further Professional Education of Central State Medical Academy of the Administrative Department of the President of the Russian Federation, Ph.D. (Medicine).

In the clinical section, two reports were presented: Clinical Case Report of Acne Fulminans (MiDerm Clinic); and On Pyoderma Gangrenosum as Possible Marker of Paraneoplasia in Intestinal Cancer (I.M. Sechenov First Moscow State Medical University, Sechenov University).

In the scientific section, three reports were presented: On Efficacy of Therapy of Severe Forms of Psoriasis (Sechenov University); On Efficacy of Janus Kinase Inhibitors in Atopic Dermatitis (Sechenov University); and On Molecular Genetic Aspects of Mycosis Fungoides Pathogenesis (State Scientific Center of Dermatovenereology and Cosmetology, SSCDC).

## ACNE FULMINANS

The first report in the clinical section dealt with the issues of the acne fulminans. It was presented by I. Yu. Zhuravleva, Physician, MiDerm Clinic. Acne fulminans is a rare severe form of inflammatory acne. Its clinical manifestation involves sudden onsets of purulent nodules, ulcerations, and

hemorrhagic crusts on the skin. Cutaneous manifestations may either be accompanied with systemic symptoms or not. Seemingly, the pathogenesis of acne fulminans involves a number of components, such as genetic predisposition, uncontrolled use of corticosteroids, androgens, anabolics, certain antibiotics, and even isotretinoin; the viral and autoimmune theories, including the psycho-emotional stress theory (!), are also under consideration.

An indisputable fact is that acne fulminans can develop within the period of 5 days to 4–8 weeks following isotretinoin treatment, and within 3 to 18 months following androgens or anabolics administration.

Clinical manifestations of acne fulminans are large, painful, purulent nodules followed by the formation of painful ulcers covered with hemorrhagic crusts. Serious systemic events — fever, polyarthritis, myalgia, asthenia, hepatosplenomegaly, ulcerative colitis, and osteomyelitis — accompany the process.

Differential diagnosis is performed to distinguish from fulminant rosacea and/or acne conglobata.

The therapeutic method of choice is systemic glucocorticoids, as a rule, co-administered with antibiotics (prednisolone: 0.5–1 mg/kg/day in adults, and 0.25–0.9 mg/kg/day in children). Following 4 weeks of such therapy, systemic isotretinoin may be added at 0.1 mg/kg/day.

Alternative methods are sulfones, immunosuppressants (methotrexate, ciclosporin, azathioprine), tumor necrosis factor  $\alpha$  (TNF- $\alpha$ ) inhibitors, and interleukin 1 $\alpha$  (IL-1 $\alpha$ ) receptor antagonist anakinra.

A 16-year-old patient with acne fulminans and periorbital edema was presented. Weakness and asthenia developed concomitantly with the cutaneous process. The patient takes chronic anticonvulsants (concomitant disease: childhood absence epilepsy). The cutaneous process could be arrested



The I.Yu. Zhuravleva report discussion, dermatovenereologist of Miderm Clinic.



by 25 mg/day prednisolone in combination with antibiotics (ceftriaxone, clarithromycin).

## PYODERMA GANGRENOSUM

The second report was also focused on the analysis of the clinical pattern of a purulonecrotic process, pyoderma gangrenosum, which often develops in the setting of gastrointestinal malignancies (co-speakers: O. V. Grabovskaya, Assistant Professor, and A. E. Bobkova, Post-Graduate Student).

Pyoderma gangrenosum is an autoinflammatory neutrophilic dermatosis with a characteristic range of clinical presentations, persistent course, and overexpression of cytokines and chemokines in the affected skin. The intensive incidence rate of pyoderma gangrenosum is 3 to 10 per 1,000,000 a year. This disease often associates with rheumatic (lupus erythematosus, sarcoidosis, granulomatosis) and hematological (leukoses, polycythemia) conditions, chronic active hepatitis, Crohn's disease, and diabetes mellitus.

The following clinical forms of pyoderma gangrenosum have been described: ulcerative, pustulous, vegetative, peristomal, extracutaneous (with involvement of the lungs, central nervous system, etc.). Pyoderma gangrenosum must always be suspected when a patient has a painful ulcer without obvious causes for its onset, or associated diseases. As a rule, the process rapidly and positively responds to systemic glucocorticoids.

Pyoderma gangrenosum pathogenesis involves components of innate immunity. The neutrophilic-lymphocytic vasculitis events are secondary.

Two patients, aged 59 and 82 years, are presented. In the first case, painful ulcers on the lower abdomen skin were reported. The underlying disease was ascending colon tumor (resected). Despite the tumor resection, the cutaneous ulcerative process had a "wave-like" course. The patient was prescribed prednisolone at an initial dose of 30 mg/day in combination with metronidazole (antimicrobial) and cefotaxime (antibiotic), with a positive effect. The second case report was a T3N0M0 rectal cancer in an 82-year-old female patient. Pyoderma gangrenosum developed on the facial and thoracic skin on the right, with a steadily progressive course. The patient was prescribed prednisolone as monotherapy (in contrast to the case above) at a starting dose of 40 mg/day. Positive effect in form of ulcer scarring was achieved.

## BIOLOGICAL THERAPY OF SEVERE FORMS OF PSORIASIS

The first report in the scientific section dealt with the issues of the biological therapy of severe forms of psoriasis (speaker: O. Yu. Olisova, Corresponding Member, Russian Academy of Sciences, Professor). As of today, biological drug netakimab, an interleukin 17 (IL-17) inhibitor, shows unconditional benefits: according to the findings of the Planeta clinical study,



Report by O.Yu. Olisova, Dr. Sci. (Med.), Professor, Corresponding Member of the Russian Academy of Sciences, Head of the Department of Skin and Venereal Diseases named after V.A. Rakhmanov (Sechenov University).

it exhibits the best efficacy and safety profile and rapidly induces a pronounced skin clearance in psoriatic patients to PASI 75/90/100. Furthermore, netakimab is characteristic with low immunogenicity: no antibodies to this molecule were found throughout the study. The most common complication of the netakimab treatment, neutropenia, occurred in 9.9% of cases. Other adverse events were reported in 56% of cases; however, as a rule, they resolved spontaneously and did not require drug discontinuation.

The therapy “survival” is 77% after the first year; at the third year, it decreases to 53%. Planeta — a pivotal study of netakimab in patients with moderate-to-severe plaque psoriasis — has shown high efficacy and safety of netakimab with 3-year long-term use.

## THERAPY FOR SEVERE ATOPIC DERMATITIS

The second report in the scientific section dwelled on the problems of treatment of the severe atopic dermatitis with abrocitinib (speakers: N. G. Kochergin, Professor, Abdulridha Ali Hussein, Post-Graduate Student). The drug refers to small molecules, Janus kinase inhibitors. When Janus kinases are inhibited, it prevents the inflammatory cascade involving hyperpermeability of the epidermal barrier, Th2-immune response, hypersecretion of pruritogens, i. e., histamine, thymic stromal lymphopoietin, (TSLP), IL-31, IL-4, IL-13; epidermal hyperinnervation, neurotrophic factors

(NGF), and artemin from developing in atopic dermatitis. A characteristic phenomenon for the inflammatory cascade in atopic dermatitis is the vicious circle when all the above mechanisms further intensify at scratching.

The high-reliability therapeutic methods for the atopic dermatitis are the biologic therapies and small molecules, Janus kinase inhibitors (baricitinib, upadacitinib, and abrocitinib).

The authors presented the findings of their own clinical trials of the abrocitinib efficacy in atopic dermatitis. Abrocitinib was administered at the 200 mg/day QD initial dose within 2–3 weeks with subsequent titration to 100 mg/day QD within 4 more weeks. The trials found a more rapid and stable regression of the atopic dermatitis symptoms and a more significant Quality of Life Index growth in the abrocitinib group vs the control group. Both groups showed good and very good tolerance to the drug. This research will be continued.

## MOLECULAR GENETIC ASPECTS OF MYCOSIS FUNGOIDES PATHOGENESIS

The third report in the scientific section of the 1157<sup>th</sup> Regular Meeting dealt with the molecular genetic aspects of the mycosis fungoides, or cutaneous T-cell lymphoma, pathogenesis (speaker: I. V. Kozlova, Junior Research Fellow, State Scientific Center of Dermatovenereology and Cosmetology (SSCDC) — Central Scientific Research



Commentary by A.B. Yakovlev, PhD, Associate Professor of the Dermatovenereology and Cosmetology Department of the FSBE Institution for CSMA Postgraduate Education.





Report by N.G. Kochergin, Professor at the V.A. Rakhmanov Department of Skin and Venereal Diseases (Sechenov University).

Institute of Dermatovenereology (CSRID). The study enrolled patients with the classic form of mycosis fungoides (Alibert-Bazin syndrome) with three-stage progressive course. The most common presentations of this disease form are the folliculotropic pagetoid clinical variants and granulomatous slack skin syndrome.

The core of the uncontrolled proliferation of the T-lymphocyte pathological clone are mutations: more than 100 rearranged genes encode the proteins, which, in their turn, play a major role in the signaling (e. g., ligands, receptors, enzyme modulators) and regulation of transcription (e. g., transcription factors, chromatin regulators) and JAK/STAT-signaling pathway's activity.

The author evaluated the changes in the JAK/STAT-signaling pathway genes expression levels and transcription factors in patients with mycosis fungoides, both in the visually intact skin, and in the clinically detectable lesion, using the real-time reverse transcription polymerase chain reaction. The *R* programming language and Shapiro–Wilk test were used for the statistical analysis.

The main conclusion of the study is the direct correlation of the clinical severity and lesion depth with the *JAK3*, *STAT1*, and *IRF4* genes expression levels in the lesion in patients with mycosis fungoides. The clinically intact skin showed no statistically significant alterations of the gene expression levels.