

XII

23rd - 24th November 2018

Palazzo Mezzanotte

Piazza degli Affari

Milano

ACNE AND ROSACEA DAYS

An International Meeting



Presidente

Emilio Berti

Segreteria Scientifica

Stefano Veraldi

Mauro Barbareschi

Vincenzo Bettoli

Abstracts book

ISBN 978-88-98334-20-9

Every effort has been made to faithfully reproduce the abstracts as submitted.

However, no responsibility is assumed by the Organizers for any injury and/or damage to persons or property as a matter of product liability, negligence or otherwise, or from any use or operation of any methods, products, instructions or ideas contained in the material herein. Because of rapid advances in the medical sciences, we recommend that independent verification of diagnoses and drug doses should be made.

Rights reserved

No part of this publication may be reproduced, translated, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission of Italian Acne Board.

Oxys™ Publishing
Copyright © 2018
Rights reserved
Printed in Italy
ISBN: 978-88-98334-20-9

Presidente**Emilio BERTI****Segreteria Scientifica****Stefano VERALDI****Mauro BARBARESCHI***Dipartimento di Fisiopatologia
Medico-Chirurgica e dei Trapianti,
Università degli Studi di Milano***Vincenzo BETTOLI***Sezione di Dermatologia, Dipartimento
di Medicina Clinica e Specialistica,
Azienda Ospedaliera Universitaria
Arcispedale S. Anna, Ferrara***Comitato Scientifico
e Italian Acne Board****Mauro BARBARESCHI****Vincenzo BETTOLI****Gabriella FABBROCINI****Giuseppe MICALI****Giuseppe MONFRECOLA****Nevena SKROZA****Stefano VERALDI****International Faculty****Vito Abrusci***(Caracas, Venezuela/Milan, Italy)***Rohit Batra***(New Delhi, India)***Daniel Cataldo***(Paris, France/Milan, Italy)***Dae Hun Suh***(Seoul, South Korea)***Brigitte Dreno***(Nantes, France)***May El Samahy***(Cairo, Egypt)***Marius Anton Ionescu***(Paris, France)***Pedro Jaen***(Madrid, Spain)***Andreas Katsambas***(Athens, Greece)***Shirin Keyhanian***(Hamburg, Germany)***V. V. Pai***(Mumbai, India)***Marko Potočnik***(Ljubljana, Slovenia)***Christine Roques***(Toulouse, France)***Jacek Szepietowski***(Breslau, Poland)***Nikolaj Tsankov***(Sofia, Bulgaria)***Shyam Verma***(Vadodara, India)***Maria Vitale***(Madrid, Spain)***Pierre Wolkenstein***(Paris, France)***Christos Zouboulis***(Berlin, Germany)***Italian Faculty****Paolo Amerio***(Chieti, Italy)***Fabio Ayala***(Naples, Italy)***Mauro Barbareschi***(Milan, Italy)***Enzo Berardesca***(Rome, Italy)***Emilio Berti***(Milan, Italy)***Vincenzo Bettoli***(Ferrara, Italy)***Luca Bianchi***(Rome, Italy)***Bruno Capitanio***(Rome, Italy)***Carla Cardinali***(Prato, Italy)***Gabriella Fabbrocini***(Naples, Italy)***Andrea Giuseppe Faraci***(Milan, Italy)***Giovanni Genovese***(Milan, Italy)***Angelo Valerio Marzano***(Milan, Italy)***Giuseppe Micali***(Catania, Italy)***Chiara Moltrasio***(Milan, Italy)***Giuseppe Monfrecola***(Naples, Italy)***Maria Rita Nasca***(Catania, Italy)***Gianluca Nazzaro***(Milan, Italy)***Massimo Papi***(Rome, Italy)***Manuela Papini***(Terni, Italy)***Carlo Pelfini***(Pavia, Italy)***Bianca Maria Piraccini***(Bologna, Italy)***Marco Romanelli***(Pisa, Italy)***Franco Rongioletti***(Cagliari, Italy)***Nevena Skroza***(Rome, Italy)***Giuseppe Soda***(Rome, Italy)***Luca Vaianti***(Milan, Italy)***Stefano Veraldi***(Milan, Italy)*

PROGRAMMA SCIENTIFICO

ACNE AND ROSACEA DAYS AN INTERNATIONAL MEETING

Milan, 23rd - 24th November 2018NOVEMBER 23rd, 2018

Presentation and introduction

*E. Berti, S. Veraldi (Milan, Italy)*HIDRADENITIS SUPPURATIVA/ACNE
INVERSA

Towards a genomic classification?

C. Moltrasio (Milan, Italy)

Etiopathogenesis

A.V. Marzano (Milan, Italy)

Bacteriology

J. Szepietowski (Breslau, Poland)

Clinical manifestations and classification

G. Micali, M.R. Nasca (Catania, Italy)

Comorbidities

*F. Ayala (Naples, Italy)*How histopathology clarifies clinical features and
pathogenesis*F. Rongioletti (Cagliari, Italy)*

Ultrasonography

G. Nazzaro (Milan, Italy)

Therapy with biologicals

L. Bianchi (Rome, Italy)

Wound care

M. Romanelli (Pisa, Italy)

Surgical therapy

L. Vaienti (Milan, Italy)

FOLLICULITIS

HIV/AIDS folliculitis

M. Potočnik (Ljubljana, Slovenia)

Fungal folliculitis

M. Papini (Terni, Italy)

Bacterial folliculitis

N. Tsankov (Sofia, Bulgaria)

Eosinophilic folliculitis

G. Soda (Rome, Italy)

Folliculitis decalvans

B.M. Piraccini (Bologna, Italy)

Cutaneous side effects caused by anti-EGFR drugs

P. Amerio (Chieti, Italy)

ROSACEA

Rosacea Unit in Madrid: a global diagnostic and
therapeutical approach*P. Jaen (Madrid, Spain)*

UV and rosacea

*E. Berardesca (Rome, Italy)*Treatment of symptoms of erythematotelangiectatic rosacea with topical azelogyline
and hydroxypropyl chitosan*G. Genovese (Milan, Italy)*Topical and oral treatment of rosacea, a
combination to reach total clearness*V. Bettoli (Ferrara, Italy)*

Acne in Chinese people living in Italy

C. Cardinali (Florence, Italy)

THE OTHER SIDE OF THE WORLD

Leprosy

V.V. Pai (Mumbai, India)

NOVEMBER 24th, 2018

ACNE I

Art in the history of dermatology

M. Papi (Rome, Italy)

NON-CME LECTURE (LETTURA NON ECM)

Microbioma, innate immunity and inflammation: are *Propionibacterium acnes* all the same?

M.A. Ionescu (Paris, France)

***Cutibacterium acnes*: a brief look at the latest updates**

C. Roques (Toulouse, France)

Pathophysiology of acne: what's new

B. Dreno (Nantes, France)

NON-CME LECTURE (LETTURA NON ECM)

Targeting *P. acnes* associated biofilm

S. Keyhanian (Hamburg, Germany)

Discussion

ACNE II

Scientific connection between acne and diet

Dae Hun Suh (Seoul, South Korea)

Lessons from all surveys performed by the European Severe Acne Board

R. Wolkenstein (Paris, France)

Teen Act: results of an Italian survey

N. Skroza (Rome, Italy)

NON-CME LECTURE (LETTURA NON ECM)

Acne treatment in pigmented skin and different ethnicities

M. Vitale (Madrid, Spain)

Managing acne in pregnancy and breast feeding

R. Batra (New Delhi, India)

Discussion

ACNE III

Corticosteroids in acne: no, yes, why, when, how

A. Faraci (Milan, Italy)

Acne in the "topical steroid damaged face" - an underrecognized global menace

S. Verma (Vadodara, India)

Topical silver: Antimicrobial effect without resistance

M. Barbareschi (Milan, Italy)

Nano retinol for the treatment of mild to moderate acne

M. El Samahy (Cairo, Egypt)

NON-CME LECTURE (LETTURA NON ECM)

Acne in adult women: disputes and news

B. Capitanio (Rome, Italy)

Turn back in acne

M. Barbareschi (Milan, Italy)

Chemoesfoliation and antiinflammatory activity: a new tool

G. Fabbrocini (Naples, Italy)

Bacterial resistance to antibiotics

C. Zouboulis (Berlin, Germany)

Discussion

ACNE IV

The role of oral zinc

M. Barbareschi (Milan, Italy)

Oral isotretinoin in 2018: an updated way to communicate with the patients

V. Bettoli (Ferrara, Italy)

Sexual abnormalities following oral isotretinoin

C. Pelfini (Pavia, Italy)

Acne and photodynamic therapy: my personal experience

G. Monfrecola (Naples, Italy)

Combination treatments in acne scars

A. Katsambas (Athens, Greece)

Acne scars surgical treatment: from minimally invasive to maximally ablative

V. Abrusci (Caracas, Venezuela/Milan, Italy)

THE OTHER SIDE OF THE WORLD

Noma

D. Cataldo (Paris, France/Milan, Italy)

Discussion and Conclusion

E. Berti (Milan, Italy)

Towards a genomic classification?

C. Moltrasio

U.O.C Dermatologia, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milano

Hidradenitis suppurativa (HS), also known as acne inversa is a chronic relapsing inflammatory disease affecting hair follicles located in apocrine gland-bearing body areas. The pathogenesis of HS is multifactorial and still unclear. Genetic factors together with environmental ones can contribute as triggering factors. Case series evidence suggests that just more than one-third of patients with HS have a family history of this disease with an autosomal dominant inheritance pattern. Heterozygous mutations in the γ -secretase genes NCSTN, PSENEN and PSEN1/2 have been reported in familial HS and loss of function of these proteins produces epidermal and follicular abnormalities which may compromise canonical Notch signalling. A recent systematic review identifies 41 distinct sequence variants in HS. 23 variants are considered pathogenetic and 17 likely pathogenetic. Some of these variants seem to have no impact on Notch signalling suggesting the possibility of a Notch-independent pathway in some cases of HS, but further studies are required. Canoui-Poitrine and colleagues identify three subcategories of HS using latent class analysis (LC1, LC2, LC3) based on affected skin sites, lesion types, family history and associations with acne conglobata. This is an important step in determining potential genotype-phenotype correlations within the HS spectrum disease. A large genetic study observes two common haplotypes (h1 and h2) of the gene IL-12R β 1 coding for the IL12-R β 1 receptor subunit revealing that this finding could interfere significantly with the phenotype of HS. Also copy number variation of β -Defensin Cluster interferes directly with the HS phenotype. This genomic event confers also genetic susceptibility. Hidradenitis suppurativa is a heterogeneous condition; not only one form but several clinically and genetically different forms ranging from a monogenic to a multifactorial disease. Advances in the understanding of molecular mechanisms of this skin disorder will help to clarify its pathogenesis and develop novel therapeutic modalities.

Etiopathogenesis

A.V. Marzano

Dermatology Unit, Department of Pathophysiology and Transplantation, Università degli Studi di Milano, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy

Hidradenitis suppurativa (HS) is a chronic-relapsing, debilitating inflammatory disease primarily affecting the pilosebaceous unit. The pathophysiology of HS is the result of a complex interplay between genetic and environmental factors cross-talking with both innate and adaptive immunity dysfunction. Heterozygous mutations in the gamma-secretase genes – presenilin enhancer 2 (PSENEN), presenilin (PSEN1) and nicastrin - were the first reported genetic changes in HS. The above mutations cause inactivation of Notch signaling which is responsible for an altered homeostasis of hair follicle and apocrine gland leading to the production of the so-called damage-associated molecular pattern (DAMP) molecules. These molecules induce an abnormal activation of the inflammasome, a molecular platform triggering the inflammatory process in HS as in the classic monogenic autoinflammatory diseases like familial Mediterranean fever. The important autoinflammatory component in the pathogenesis of the disease is supported also by the upregulation of interleukin(IL)-1 β , which is a pivotal cytokine in autoinflammation. On the other hand, some studies found γ -secretase mutations only in a minority of HS cases, suggesting gamma-secretase mutation alone is not sufficient to produce the HS phenotype. Interestingly, our group reported mutations involving a number of autoinflammatory genes in the recently described syndromic variant of HS known as PASH (pyoderma gangrenosum, acne, suppurative hidradenitis), giving rise to considering HS a polygenic autoinflammatory condition in which innate immunity dysfunction plays a key role. From an immunological point of view, IL-17, cytokine merging innate and adaptive immunity, has also been reported overexpressed in the lesional skin of HS. Of note, with respect to IL-1 β and IL-17 expression, HS resembles PASH as well as two prototypic neutrophilic dermatoses, pyoderma gangrenosum and Sweet's syndrome, making justified, to include HS in the spectrum of neutrophilic dermatoses, based also on the high number of skin infiltrating neutrophils especially in later stages of the disease. Reports of elevated circulating levels of tumour necrosis factor (TNF)- α in HS are in line with systemic inflammatory activation.

Bacteriology

J. C. Szepietowski

Department of Dermatology, Venereology and Allergology, Wrocław Medical University, Wrocław, Poland

Hidradenitis suppurativa (HS) is defined as a recurrent, debilitating suppurative skin disease manifested by abscesses, fistulas and scarring with involvement of intertriginous regions. The etiopathogenetical hypothesis has been changed during the last decades. Nowadays the previous infectious model was changed to environmental one. The role of bacterial infection in the pathogenesis of HS is not completely clear. It is unclear whether bacterial colonization is a primary or secondary event in the evolution of HS lesions. It has been speculated that bacterial invasion leads to series of pathogen-associated molecular pathways, which may trigger the initiation of inflammasomes. The inflammasomes are responsible for activation of inflammatory processes, and has been shown to induce cell pyroptosis, a highly inflammatory form of cell death, which can lead to excessive pus and scarring in HS. Moreover, in HS lesions antibacterial peptides are downregulated compared to psoriasis or atopic dermatitis and this could spread bacterial infection. This also illustrates that there is a weak antibacterial defence in HS subjects. Alternatively, the deposition of keratin fragments into the dermis in a genetically susceptible individual may be the trigger, and finally, it is speculated that the deposited keratin fragments may be colonized with bacteria. Systematic review of bacteriology in HS demonstrated no consistency in regard to the occurrence of any specific type of bacteria. All available studies showed predominantly positive culturing samples from HS lesions. The dominating occurrence of coagulase-negative staphylococci with high prevalence of *Staphylococcus aureus* in HS lesions was demonstrated. It can also be mentioned that biofilm formation has been described in HS (*S. epidermidis*). Biofilm-like structures were primarily situated in hair follicles and sinus tracts. In conclusions, definitely there is a role of bacteria in HS pathogenesis, however the exact mechanism of their involvement could only be hypothesised and needs further investigations.

Clinical manifestations and classification

G. Micali, M. R. Nasca

Dermatology Clinic, University of Catania, Italy

Hidradenitis Suppurativa (HS) is a chronic, debilitating, inflammatory disease of the pilosebaceous unit and its surrounding tissue affecting skin areas rich in apocrine glands. It most commonly occurs in II-III decades of life and it is more common in women (F:M=3:1), although males tend to have more severe manifestations. An early diagnosis is crucial for a correct management and to improve both physical and psychological impairments. The diagnosis of HS is mostly clinical and based on personal history and physical findings. Cutaneous lesions are classified as primary (deep-seated painful nodules, abscesses), secondary (sinus tract, draining sinuses) and tertiary (scars, keloids, pseudocomedones). Clinical severity may be assessed using different scores such as Hurley staging system, Sartorius score and Physician Global Assessment (PGA). Moreover, some possible subtypes of HS have been suggested (regular type, fractional foruncle type, scarring folliculitis type, conglobata type, syndromic type, ectopic type). Differential diagnosis of HS mainly includes common abscesses, furunculosis, nodular acne, inflamed epidermal cysts, lymphogranuloma venereum, infected Bartholin's gland and Crohn's disease.

Comorbidities

F. Ayala

Dept of Clinical Medicine and Surgery, University of Naples Federico II, Naples, Italy

Comorbidities F. Ayala Department of Clinical Medicine and Surgery, University of Naples Federico II, Naples, Italy Observed comorbidities of Hidradenitis suppurativa (HS), a progressive inflammatory condition, fall into several categories: arthropaties, hormone related disorders (such as polycystic ovarian syndrome - PCOS), severe acne, inflammatory bowel disease (IBD), obesity and the metabolic syndrome, autoimmune disease (e.g. thyroiditis), alcohol dependance, depression and/or anxiety, sequelae of nonhealing wounds, in addition to acute and chronic pain, disability, and psychological distress, many of them contributing to social isolation and poor quality of life. Other relationships exist, including rare genetic keratin disorders and lymphoma. Nevertheless, some of the above listed comorbidities have not been fully valitated. Moreover, some autoinflammatory rare but potentially debilitating syndromes such as: i) pyoderma gangrenosum (PG), acne, and HS (PAPA); ii) PG, acne, pyogenic arthritis, and HS (PAPASH); iii) psoriatic arthritis, PG, acne, and HS (PsAPASH) are at present recognized as separate entities and the awareness about these syndromes ought to be increased among physicians. Some reported complications due to HS, such as fistulae of the rectum and lower anogenital tract, genital lymphedema, anemia, amyloidosis and squamous cell carcinoma, can't be properly considered as comorbidities. The aim of the dermatologist nowadays is to help the patients minimizing the effects of associated comorbidities, in addition to the current treatment of HS. Collaboration of patients is mandatory in the management of, if present, obesity, smoking, and alcohol dependance.

How histopathology clarifies the clinical features and pathogenesis

F. Rongioletti

Clinica Dermatologica, Università di Cagliari

The diagnosis of HS is usually made on clinical grounds, and histopathology is not routinely taken. However, although histopathology is not strictly specific, it is useful to throw some lights about the pathogenetic mechanisms of evolving lesions. HS appears to be predominantly a follicular disease and apocrine gland involvement is secondary to follicular events. Accordingly, the histological spectrum of HS is broad and related to the evolving nature of skin lesion. Early phase is characterized by follicular occlusion with peri and intrafolliculitis followed by proliferation and rupture of the follicular epithelium with spilling of keratin, sebum and bacteria into the surrounding dermis. Well-developed HS lesions show abscess formation, destruction of the pilosebaceous structures, and later also extension of inflammation to the apocrine glands, eccrine glands and subcutis. As the abscesses extend deeper into the subcutaneous tissue, draining sinus tracts lined by stratified squamous epithelium develop. In response to this destructive inflammation, granulation tissue containing foreign-body giant cells related to fragments of keratin arises associated to areas of healing extensive fibrosis that represents the late result in HS lesions.

Ultrasonography

G. Nazzaro, E. Passoni

Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico

Hidrosadenitis suppurativa (HS) is a chronic, recurrent, inflammatory skin disease characterized by painful nodules, abscesses and sinus tracts in the apocrine gland-bearing areas of the body. The diagnosis is based on the clinical presentation and, during the last years, many physician-rated scoring systems of HS have been proposed in order to assess the disease severity, address therapy and evaluate the clinical response. Ultrasonography (US) has been introduced in HS to better assess the disease severity, whose evaluation has been traditionally based on the clinical examination with its intrinsic limitations, as in the Hurley classification. In fact, the palpation has low sensitivity in particular for the diagnosis of deeper HS lesions like nodules, sinuses or fistulous tracts, which are critical in assessing the disease severity and choosing the appropriate therapeutic regimen. Sonographic criteria for diagnosing HS were proposed by Wortsman et al in 2013 and include: 1) widening of the hair follicles; 2) thickening or abnormal echogenicity of the dermis; 3) dermal pseudocystic nodules; 4) fluid collections; 5) fistulous tracts. A three-stages scoring system, named SONographic Score in Hidradenitis Suppurativa (SOS-HS), was also suggested by the same authors: stage I includes patients showing the previous reported dermal changes affecting a single body segment with single fluid collection and without fistulous tract; stage II includes patients with two to four fluid collections or a single fistulous tract; stage III includes patients with more than four fluid collections or two or more fistulous tracts or the involvement of at least three body segments. Here, we report the experience of the Dermatologic Unit of the University of Milan about US in HS.

Therapy with biologicals

L. Bianchi

Azienda Ospedaliera Univeristaria, Policlinico Tor Vergata, Roma

Hidradenitis suppurativa (HS) is a chronic, inflammatory, recurrent, debilitating follicular skin disease that usually occurs after puberty. It is associated with painful deep seated, inflamed lesions in apocrine gland-bearing areas, most commonly in the axillae, inguinal and anogenital region, and has a great impact on the patient's quality of life. Although the etiopathogenesis of the disease remains unclear, the dysregulation of pilosebaceous unit combined with an altered immune response have been recognized as crucial pathogenic factors for the onset of HS. Significantly higher levels of TNF α , interleukin (IL)-1 β , IL-12, IL-17 and IL-23 were found. The levels measured in HS patients were also dramatically higher than those seen in psoriatic lesions and correlated with disease severity. These findings have demonstrated the rationale behind using of monoclonal antibodies in HS treatment. Furthermore, biologics can be given for a prolonged period, making them a good and safety treatment option for patients with moderate-to-severe HS who fail other medical and surgical treatment. Currently adalimumab is the only biologic approved by the European Medicines Agency and the U.S. Food and Drug Administration for the treatment of HS.

Wound care

M. Romanelli, V. Dini, T. Oranges, A. Janowska

Clinica Dermatologica, Università di Pisa

Hidradenitis suppurativa (HS) also known as Acne Inversa (AI) is a disease that has a profound impact in the life of the patient and often presents highly disabling outcomes. It is a chronic inflammatory dermatosis, most commonly it involves axillary, inguinal and perineal regions but can occur on many other areas. Contrary to what was thought in the past we know that the centre of the disease is the hairfollicular unit and its occlusion may be due to defective follicular support. Scientists have found that the disease stemmed from plugged hair follicles causing rupture of bacterial contents into the surrounding tissues. The inflammation of apocrine and sebaceous glands is a secondary event. Typical early lesions are deep-seated inflammatory nodules, chronic painful abscesses, fistulas, draining sinus tracts; secondary lesions are represented by ropelike hypertrophic scars which restrict the range of movements and open “tombstone” comedones. The etiopathology is still unclear, we know some risk factors present in most patients. Smoking cigarettes and obesity are linked with the onset and the severity of the disease and is also known that nicotine promotes follicular plugging. Other dermatological diseases are related to HS such as severe acne, acne and pilonidal cysts, squamous-cell carcinoma, psoriasis and buccal cancer. Wound care in patients with HS is mandatory particularly after surgical treatment. There are several new therapeutic options available, such as new advanced dressings to control the exudates and the bacterial burden, or the use of topical negative pressure with ultraportable devices.

Surgical therapy

L. Vaienti, A. Marchesi

Department of Plastic and Reconstructive Surgery, I.R.C.C.S. Policlinico San Donato, Università degli Studi di Milano.

Background: hidradenitis suppurativa (HS) often requires wide excisions to obtain low recurrences'rate. Consequently, plastic surgeons have to cover large defects, mainly located in bodyfolds. Up to now, pedicled perforator flaps represent in most of cases a good reconstructive option for their several advantages. Our aim is to evaluate such surgical approach in terms of surgical outcome and patient's quality of life. Materials and methods: we retrospectively analysed 22 consecutive patients who underwent 30 surgical reconstructions with pedicled perforator flaps, who referred to our department from October 2015 and July 2018. Patient demographics, operative data and complications were recorded. Dermatology Quality of Life Impairment (DLQI) test. Results: 7 out of 30 flaps experienced surgical dehiscences, 2 cases of venous congestion and 1 total flap necrosis. No recurrences occurred. Despite the considerable complications' rate, patients showed a high degree of satisfaction after surgery as demonstrated by DLQI tests. Conclusion: pedicled perforator flaps seem to be a reliable and feasible surgical option for extensive cases of HS. Even though complications' rate is not negligible, the majority of the patients would recommend these operations to others affected by HS.

HIV/AIDS folliculitis

M. Potočnik

Department of Dermatovenereology, University Medica Centre Ljubljana, Ljubljana, Slovenia

HIV infection affects nearly every organ system in the body, including the skin. HIV infection can lead to a myriad of dermatoses with complicated clinical presentations. Infection with HIV leads to a decrease in cell-mediated immunity resulting in a variety of opportunistic infections of viral, bacterial and fungal etiology. Bacterial folliculitis is usually caused by *S. aureus*, or occasionally *Propionibacterium acnes*. The most typical sites are the back, thighs, and buttocks; irregularly distributed pustules with an erythematous periphery are seen. HIV patients can also have a noninfectious form of folliculitis known as EF (eosinophilic folliculitis). Three types of EF have been identified: classic, immunosuppressed-associated and infancy-associated. EF in HIV patients is characterized by severely pruritic, recurrent, discrete erythematous follicular papules sometimes accompanied by pustules or urticarial lesions. Often, the lesions are excoriated, which can make it difficult to find an intact lesion for biopsy. Lesions are predominantly found on the upper trunk but can also involve the head, neck and upper arms. Since it is difficult to distinguish EF from infectious types of folliculitis, cultures and biopsies should be performed to aid in the diagnosis. Various treatments have been employed in EF, including: isotretinoin, UVB phototherapy, itraconazole, and metronidazole, among others, with contrasting results. Oral steroids can also be used to reduce the eosinophilia, however, chronic use can lead to poor wound healing, osteoporosis, elevated blood pressure, adrenal suppression and increased weight. Antihistamines may be helpful in easing the associated pruritus. The treatment of EF with potent topical corticosteroids is reportedly effective, but is accompanied by skin atrophy and hypopigmentation. As dermatologists, it is important to be aware of the varied dermatoses associated with HIV, as well as their management. Knowledge of HIV-associated dermatologic manifestations may be useful in helping to make the diagnosis of HIV infection.

Fungal folliculitis

M. Papini

Università di Perugia

Fungal folliculitis (FF) is an inflammatory skin disorder that typically manifests as pruritic, follicular papulo-pustular eruption, mainly distributed on the scalp, face and upper trunk of young and middle-aged adults. Yeasts, specifically *Malassezia* and *Candida* spp, are the pathogenic agents in superficial folliculitis, whereas dermatophytes cause generally deep follicular and perifollicular infections also known as kerion Celsi and *Tinea barbae*. Several risk factors are related to yeast folliculitis. Hot and humid environment, diabetes, drug addiction, immune impairment and previous long-term treatment with glucocorticoids and antibiotics, are the most common predisposing factors. The clinical picture is characterized by a follicular papulo-pustular eruption not specific and not diagnostic. A chronic course and lack of response to antibacterial treatment must arouse suspicion. Evidence of *Candida* or *Malassezia* from crusts and follicular smear may be diagnostic if at the same time bacteriological cultures give negative results. Topical antifungal treatment is usually effective, but in diffuse and/or relapsing eruptions, oral treatment with fluconazole or itraconazole may be useful. The discovery and treatment of predisposing factors is important.

Bacterial folliculitis

N. K. Tsankov

Aji-badem-Cityclinic-Tokida Hospital Sofia, Bulgaria

Bacterial Folliculitis (BF) is a worldwide infection affecting children and adults. BF presents a clinical picture of inflammation of the hair follicle due to infections, physical injuries or chemical irritation. BF is one of the most common forms of Folliculitis. Etiological factors are Staph. Aureus, coagulase-negative Staph. albus, Gram negative bacteria, anaerobes. BF may arise on scalp, face (beard area, front), axillae, extremities and buttocks. Systemic symptoms are uncommon. Many types of BF are described – gram-negative folliculitis, spa pool folliculitis (caused by Pseudomonas), Hot tube folliculitis, Furunculosis (Boils), Folliculitis keloidalis, Folliculitis decalvans, Pediatric acne. The diagnosis needs a microbiological identification (bacterial swabs sent for microscopy). Skin biopsy and histological study are rarely necessary. The treatment starts usually with cleansers (hydrogen peroxide, chlorhexidine, triclosan, hexamethylenetetramine) and topical antibiotics (fucidic acid, erythromycin, clindamycin, and mupirocin) usually no more than one week. For more extensive or severe infections, oral or intravenous use of antibiotics should be started as well as incision and drainage of abscesses. Repeated laser hair removal and photodynamic therapy also could be applied.

Eosinophilic folliculitis

G. Soda

Dipartimento di Medicina Molecolare "Sapienza" Università di Roma

Eosinophilic pustular folliculitis (EPF), also known as Ofuji's disease, is an inflammatory dermatosis that was first described in Japan in 1970. Over 300 cases have been reported so far, and more than 100 Japanese cases have been reported. Eosinophilic pustular folliculitis (EPF) is a noninfectious condition characterized by folliculocentric papules, pustules, and plaques on the head, trunk, and extremities. Three subtypes of EPF have been described: classic EPF (Ofuji's disease); immunosuppression-associated EPF (IS-EPF) which is often associated with HIV, and infancy-associated EPF (I-EPF). The rarity of EPF has hindered our understanding of this entity. Histopathology predominantly shows abundant eosinophils concentrated at the follicle. The treatment typically consists of topical corticosteroids or oral indomethacin. We present a small collection of ten cases occurring in the last five years at the Dermatopathology Department of the Northwestern University of Chicago and the Molecular Medicine Department of "Sapienza" University of Rome, to describe both the main histopathological aspects and the most important histopathological differential diagnoses.

Folliculitis decalvans

B. M. Piraccini

*Department of Experimental, Diagnostic and Specialty Medicine, Division of Dermatology,
University of Bologna, Bologna, Italy*

Folliculitis decalvans is a rare inflammatory scalp disorder that mostly affects young males. Folliculitis decalvans is classified as primary neutrophilic cicatricial alopecia and predominantly occurs in the vertex or posterior area of the scalp. Clinically, acute lesions present with erythema, follicular pustules, follicular tufting, and hemorrhagic crusts and erosions. Cicatricial alopecia develops more or less rapidly. Trichoscopy is diagnostic as it shows typical features. Histology shows a mainly neutrophilic inflammatory infiltrate in early lesions and additionally lymphocytes and plasma cells in advanced lesions. Treatment is focused on the eradication of *S. aureus* and anti-inflammatory agents.

Cutaneous side effects caused by anti-EGFR drugs

P. Amerio

Università "G. D'Annunzio"

Epidermal growth factor receptor (EGFR) is a transmembrane tyrosine kinase receptor found on cells of epithelial origin, which has an important role in cell differentiation, proliferation, migration, apoptosis, angiogenesis, and cytokine regulation and has been used as a target in oncological therapies. EGFR blockade induces a variety of cutaneous adverse events with a wide range of severity and presentation. These cutaneous toxicities have a significant impact on patient treatment continuation, quality of life and healthcare resource utilization. It is important to prevent and manage these events in order to optimize patient oncological treatment. Prior to management a good grading of the cutaneous presentation is needed. We present the actual knowledge on clinical presentation, grading tools and management of this particular kind of adverse events.

Rosacea Unit in Madrid: a global diagnostic and therapeutical approach

P. Jaén Olasolo

Hospital Ramón y Cajal, Madrid

Rosacea is a common chronic skin disorder that has an important impact on the quality of life and self-esteem of affected individuals. Nowadays it is understood as an inflammatory condition that occurs in the context of an altered innate immune response. Available systemic and topical therapies function as immunomodulators to restore cutaneous homeostasis. The goals of therapy include reduction of pustules, erythema, papules and physical discomfort. Standard topical treatments include ivermectin, brimonidine, metronidazole and azelaic acid. Oral therapy is an option when topical treatments are not able to improve patient's clinic. Subantimicrobial/antiinflammatory dose oral doxycycline was US FDA approved in 2006 for the management of rosacea. There is also a wide experience with oral low-dose isotretinoin for papulopustular rosacea. Furthermore, renewed research interest has led to the development of other emerging therapies such as intradermal botulinum toxin, vascular laser, intense pulsed light, photodynamic therapy and, recently, biophotonic therapy. We will discuss about our rosacea's unit at our clinic, and we will present our wide clinical experience with emerging therapies and new diagnosis tools, such as confocal microscopy.

UV and Rosacea

E. Berardesca

San Gallicano Dermatological Institute, Roma

The pathogenesis of rosacea is not fully understood, but genetics, immune factors, neurovascular dysregulation, microorganisms, and environmental factors are thought to play a role. UV radiation is a well-known rosacea trigger. Exposure to UV radiation may cause flushing and worsening of rosacea symptoms. UV-A promotes expression of MMP and causes collagen denaturation whereas UV-B increases production of fibroblast growth factor 2 and vascular endothelial growth factor 2. Overexpression of MMP-1 may be involved in the dermal collagen degeneration that is observed in rosacea-affected skin.

Treatment of symptoms of erythematotelangiectatic rosacea with topical azelogyline and hydroxypropyl chitosan

G. Genovese

Università degli Studi di Milano

Thirty-seven adult Caucasian patients (9 males and 28 females), with erythematotelangiectatic rosacea accompanied by stinging and burning sensation, were treated with a cream containing 5% potassium azeloyl diglycinate and 1% hydroxypropyl chitosan. All patients were previously treated at other centers with topical azelaic acid and/or metronidazole. The cream was applied twice daily for 12 weeks. The objective of the study was the evaluation of the soothing effect of the cream: stinging and burning sensation were measured by means of a 4-point scale (0 = absent, 1 = mild, 2 = moderate, and 3 = severe). All patients were clinically evaluated every 4 weeks. Of 37 patients (81.1%), 30 were considered evaluable. Before the beginning of the study, the total score of stinging and burning sensation was 66 (mean: 2.2 points/patient); at the end of the study, it was 37 points (-29) (mean: 1.2 points/patient), with a reduction of 56.1%. No side effects were reported or observed. This study shows that the fixed combination potassium azeloyl diglycinate - hydroxypropyl chitosan is effective in reducing stinging and burning sensation in patients with erythematotelangiectatic rosacea.

Topical and oral treatment of rosacea, a combination to reach total clearness

V. Bettoli

Department of Medical Sciences, O.U. of Dermatology, Azienda Ospedaliera University of Ferrara, Italy

Background: Recent data show that subjects achieving an endpoint of “clear” on IGA with no inflammatory papules and pustules and no erythema after treatment of rosacea, have improved quality of life and extended time to relapse compared to “almost” clear subjects. Neurovascular dysregulation as well as a complex interplay between innate and adaptive immunity are key mechanisms responsible for underlying pathophysiology of the disease. A combination of different drugs that optimally block the various inflammatory pathways may be required. Objective: To present the current scientific evidence for the optimization of rosacea therapy and to discuss the complementary mechanism of action of topical and systemic therapy in reaching complete clearness of the disease. Methods: In clinical practice it is often used a combination of topical and oral therapy, as an increased or additive benefit is expected with combination regimens. Topical ivermectin has been shown to be more effective than metronidazole 0.75%. Oral doxycycline 40 mg modified-release is the only approved oral treatment for rosacea. Moreover Ivermectin 1% cream and oral doxycycline 40 mg modified release have different targets in the inflammatory pathways of rosacea. The Author presents the clinical outcomes in a series of patients with severe inflammatory lesions (IGA 4), persistent erythema and subjective multiple symptoms (stinging, burning, flushing etc.) treated with the combined regimen for 3 months. Overall the clinical outcome shows significant efficacy benefits in terms reduction of inflammatory lesions and other subjective symptoms, with fast onset of action and total clearness achieved in a satisfactory number of cases. Conclusions: These data suggest that the combination therapy lead to optimized clinical outcomes in severe rosacea and may increase the percentage of patients reaching complete clearness, particularly relevant to patient quality of life and time to relapse.

Acne in Chinese people living in Italy

C. Cardinali, A. Gimma

SOS Dermatologia, USL TOSCANA CENTRO

We have conducted a study among Chinese patients with acne who presented to our Hospital in Prato, with a view to evidencing any clinical peculiarities of acne in those subjects who follow a Western lifestyle, as well as the degree of severity of the disorder in this ethnic group. We have controlled eating habits of our patients, smoking, recourse to Chinese traditional medicine, and response to topical and systemic therapies. Most of our Chinese people had papulopustulous inflammatory and nodulocystic acne, hyperchromic scarring was observed in most of our patients. Our experience with Chinese patients suggests that acne is a disease with a strong psychological impact rather than an aesthetic problem. The need for a targeted therapeutic education is even more important in people who have severe language barriers, especially when dermatologists prescribe systemic therapies.

Leprosy

V.V. Pai

Bombay Leprosy Project

Leprosy - Current Challenges and the unfinished agenda Leprosy is a chronic inflammatory mycobacterial disease primarily affecting skin and peripheral nerves. Although leprosy is distributed world wide, India contributes majorly to leprosy disease burden. Though leprosy was formally declared eliminated from India in 2005 with 0.88 lakh leprosy cases on record on 1st April 2015 with a PR of 0.69/10,000, sustaining gains made remains a big challenge. Every year more than 200,000 new cases being detected, leprosy continues to be a major challenge globally. It is estimated that more than three million people are living with disability due to leprosy in the world. Global Leprosy Strategy 2016-2020 guideline for Accelerating towards leprosy free World is developed with goal being to further reduce global and local leprosy burden thereby aiming for zero children with leprosy affected disabilities, reduction of new patients with deformities to less than 1 per million population and repeal all laws allowing discrimination of leprosy patients. Leprosy remains one of highly neglected diseases which causes severe deformity and physical and psychological consequences but at the same time it is treatable. Despite elimination, major key challenges are undetected new cases leading to continued transmission, disability among new cases, patients with clinical problems such as reactions chronic and recurrent ENL reactions, neuritis, those with impending nerve damage, patients with disabilities, management of reactions with steroids, clofazimine and Thalidomide, physiotherapy services, problems with leprosy integration, childhood leprosy obsolete discriminatory laws and paucity of education and training for livelihoods. Relapses are known in leprosy and hence the need for establishment of network for global surveillance of drug resistance in leprosy. As per WHO amongst 1862 (1086 relapse and 776 new) cases studied, 127 (6.8%) *M. leprae* strains were found with mutations conferring resistance to rifampicin, dapsone or ofloxacin. In 2016-17 India reported 1,35,485 new cases of which 5245 were grade 2 disabilities (G2D). Leprosy is the leading infectious disease cause of disabilities and India's contribution to global grade 2 disability increased from 29% in 2010 to 41% in 2016. In the year 2016, a total of 12,819 new cases with G2D were reported from 143 countries with India contributing 5098 (40%) of global G2D cases. Lack of awareness, myths, socio-cultural beliefs, and the stigma attached to leprosy are perhaps the most pressing problems before public health activist today. Hence there is no room for any complacency when such alarming trends are seen on disability which is preventable and therefore developing practical strategies for timely detection of leprosy cases would help in reaching the rate of G2D of less than 1 per million globally. To reduce burden is a challenge since it is important to develop a holistic and multi-prolonged approached with key policy changes, public education campaign and skill training workshops and involvement of multi-stake holders.

Art in the history of dermatology

M. Papi

INMP, Roma, Italy

The history of dermatology and fine arts follows a parallel route. The representation of the skin diseases illustrates the dramatic reality of the great infectious plagues (above all pest, leprosy and syphilis) and at the same time the cure of the skin ulcers. A great variety of other skin disorders identified along the centuries or that have played a role in dermatologic activity may be found in fine arts. We will examine various art works, including modern and contemporary ones, that express the tight relationships between art and history of dermatology.

Microbioma, innate immunity and inflammation: are *Propionibacterium acnes* all the same?

M. A. Ionescu

University Hospital Sain-Louis

Microbioma, innate immunity and inflammation: are *Propionibacterium acnes* all the same?" Marius-Anton (Toni) IONESCU, MD, PhD¹, Marc FEUILLOLEY, PhD², Luc LEFEUVRE, PharmD³ 1. Dermatology Polyclinic, University Hospital "Saint-Louis", Paris; 2. Microbiology Laboratory LMSM EA 4312 -University of Rouen; 3. R&D-Uriage Laboratories, Neuilly-sur-Seine, France Background *P. acnes* ribotypes RT4 and RT5 are more frequently associated with acne than ribotype RT6. Objectives The purpose of this study was to compare RT4-RT5 ribotypes to ribotype RT6 and assess the activity of a topical polysaccharide on these strains and on skin ex vivo in contact with *P. acnes*. Methods In 3 types of culture mediums (Brain Heart Infusion BHI - hydrophilic; Reinforced Clostridial Medium RCM - lipophilic; Sebum Like Medium SLM) were assessed: bacteria's growth, cytotoxicity (on keratinocytes HatCat), inflammatory potential (IL-1 / 8 on HaCaT) and biofilm expression (laser scan confocal microscopy). A vegetal polysaccharide rich in glucuronic acid was tested. In ex vivo human skin in contact with *P. acnes* RT4-RT5 was assessed the expression of antimicrobial peptide hBD2. Results: the growth of ribotypes RT4-RT5 was more important in SLM medium, RT6 grew more in RCM medium. All strains were more virulent in lipid mediums. RT4 was the most pro-inflammatory and had the most important biofilm. Polysaccharide at 0.1% to 1% applied on cultured strains induced RT4-RT5 biofilm's dose-dependent decrease, cytotoxicity was not influenced. Ex vivo skin in contact with RT4-RT5 strains and treated by vegetal extract at 1% showed an increased expression of hBD2. Conclusions in this study, *P. acnes* RT4-RT5 were more lipophilic and more pro-inflammatory than RT6. A polysaccharide: in vitro decreased dose-dependent the biofilm of *P. acnes* RT4 -RT5; ex vivo increased the expression of antimicrobial peptide hBD2 in human skin in contact with *P. acnes* RT4-RT5. Reference 1. Fitz-Gibbon S, et al. J Invest Dermatol, 2013;133:2152-2160.

Cutibacterium acnes: a brief look at the latest updates

C. Roques^{1,2*}, S. Pecastaings^{1,2}, V. Mengeaud³, S. Corvec⁴, S. Veraldi⁵, A. Khammari⁶, B. Dreno⁶

¹Laboratoire de Génie Chimique, UMR 5503, Faculty of Pharmacy, Université de Toulouse, Université Paul Sabatier, Toulouse Cedex 9, France

²CHU Toulouse, Hôpital Purpan, Service de Bactériologie-Hygiène, Toulouse, France

³Laboratoires Dermatologiques Ducray, Pierre Fabre Dermo-Cosmétique, Cauquillous, Lavaur, France

⁴Department of Bacteriology, CRCINA Inserm 1232, CHU Nantes, Nantes, France

⁵Department of Pathophysiology and Transplantation, Università degli Studi di Milano, I.R.C.C.S. Foundation, Cà Granda Ospedale Maggiore Policlinico, Milan, Italy

⁶Department of Dermatology, CIC 1413, CRCINA Inserm 1232, CHU Nantes, Nantes, France

While the commensal bacterium *Propionibacterium acnes* (*P. acnes*) is involved in the maintenance of a healthy skin, it can also act as an opportunistic pathogen in acne vulgaris. The latest findings on *P. acnes* shed light on the critical role of a tight equilibrium between members of its phylotypes and within the skin microbiota in the development of this skin disease. Indeed, contrary to what was previously thought, proliferation of *P. acnes* is not the trigger of acne as patients with acne do not harbor more *C. acnes* in follicles than normal individuals. Instead, the loss of the skin microbial diversity together with the activation of the innate immunity might lead to this chronic inflammatory condition. This review provides results of the most recent biochemical and genomic investigations that led to the new taxonomic classification of *P. acnes* renamed *Cutibacterium acnes* (*C. acnes*), and to the better characterization of its phylogenetic cluster groups. Moreover, the latest data on the role of *C. acnes* and its different phylotypes in acne are presented in regard to healthy skin. In the same way, the incidence of *C. acnes* strains with acquired resistance to antibiotics in healthy versus acneic subjects are discussed. These data providing an overview of the factors that could participate in the virulence and in the antimicrobial resistance of acne-associated strains. Overall, this emerging key information offers new perspectives in the treatment of acne, with future innovative strategies focusing on *C. acnes* biofilms and/or on its acne-associated phylotypes.

Pathophysiology of acne: what's new

B. Dreno

Nantes, France

Targeting *P. acnes* associated biofilm

M. Sulzberger, H. Fölster, M. Sattler, F. Rippke, S. Keyhanian

Beiersdorf AG, Hamburg, Germany

There is accumulating evidence that biofilms play an important role in the early pathogenesis of acne as the detection of large *C. acnes*-associated biofilms in follicles provide an alternative pathomechanism for comedo formation. Biofilms produced by *C. acnes* are more frequently detected in acne patients than in normal individuals and are associated with increased virulence as shown in prosthesis infection. Therefore, the bacterial biofilm is a preferred target for an effective treatment approach. The effect of the antimicrobial Decanediol on biofilm formation of *Cutibacterium acnes* in vitro was investigated. As compared to the solvent control all experiments with Decanediol treatment resulted in a significantly lower biofilm mass than with the solvent control. The numeric results were confirmed by electron microscopy images. Whereas biofilms produced by untreated *P. acnes* showed an extensive, three-dimensional network with numerous embedded aggregated bacteria, Decanediol treatment was associated with a flat, two-dimensional growth of bacteria together with a sparsely developed biofilm. The formation of *C. acnes*-associated biofilms in vitro can be markedly inhibited by low concentrations of Decanediol in a dose-dependent manner. Furthermore, although it is widely known that many types of antimicrobials were less potent to kill bacteria grown in biofilms, it could be shown that also established biofilms undergo degeneration when exposed to Decanediol. Decanediol in low concentrations is not only acting as an antimicrobial, but also has a significant potential for reduction of biofilms, whether being newly produced or already mature. Consequently, it can be regarded as an effective active ingredient in the dermocosmetic treatment of acne.

Scientific connection between acne and diet

D. H. Suh

Department of Dermatology, Seoul National University College of Medicine, Acne, Rosacea, Seborrheic Dermatitis, and Hidradenitis Suppurativa Research Laboratory, Seoul National University Hospital, Seoul, South Korea

In the past, there has been controversy about the relationship between acne and foods. Some reports have shown no relationship between food and acne. But, recently many researchers have contended that there is a positive relationship between acne and foods in their analytic studies. Hypothetical mechanism was also suggested. The diet may be an important source of the substrate needed for the synthesis of sebaceous lipids and it may influence androgen-mediated increases in sebum production. In addition, diet-induced hyperinsulinemia elevates the insulin-like growth factor-1 (IGF-1), while reducing insulin-like growth factor binding protein-3 (IGFBP-3). These alterations may stimulate follicular epithelial growth and keratinization. Therefore, hyperinsulinemia has been implicated in acne pathophysiology through mediation of increased androgen bioavailability and free concentrations of IGF-1, which aggravate acne by stimulating androgen synthesis, androgen receptor signal transduction, and sebocyte lipogenesis. Current research interests have focused on the concept of glycemic load. Traditional Korean foods consist of a low glycemic load and low fat content. However, adoption of Western dietary habits over the past few decades has been associated with an increase in acne. Previous studies on diet and acne have been mostly Western based research. The dietary patterns and food of Korea are different from those of Western countries. Therefore, we investigated the effect of dietary patterns on acne vulgaris. It was found that a high glycemic load diet, processed cheese, a high fat diet, iodine and irregular dietary habits play a role in the exacerbation of acne in Koreans. It was clinically intriguing as to whether the low glycemic load diet (LGLD) might have a beneficial effect on acne. In our study to clarify the effect of LGLD, subjects with LGLD demonstrated significant clinical improvement in the number of both non-inflammatory and inflammatory acne lesions. Histopathological examination of skin samples revealed several characteristics, including reduced size of sebaceous glands, decreased inflammation, and reduced expression of sterol regulatory element-binding protein-1, and interleukin-8 in LGLD group.

Lessons from all surveys performed by the Severe Acne Board

P. Wolkenstein

Department of Dermatology, Henri-Mondor Hospital, APHP, UPEC, Créteil, France

The French Severe Acne Board (J.M. Amici, R. Maghia, L. Misery, P. Wolkenstein) and then the European Acné Board (R. Delucas (Spain) A. Machovcova (Czech Republic) D. Tennstedt (Belgium), J. Szepietowski (Poland) S. Veraldi (Italy) P. Wolkenstein (France)) conducted two surveys with the support of Laboratoires Pierre Fabre Dermatologie in order to evaluate dietary and smoking habits associated with acne. Risk factors for acne are a main issue for dermatology. Surveys are an easy way to collect rapidly epidemiological data through declarative online questionnaires. Case-control studies allow to investigate different variables through univariate then multivariate analyses. Our first survey took place in France in 2012 (*Dermatology*. 2015;230(1):34-9). 10,084 subjects answered the survey. Among them, 2266 were between 15 and 24 years old. 1375 (Case group) declared to have acne at the present time, 891 (Control group) declared not to have acne at the present time. The daily consumption of chocolate and sweets was independently and highly associated with acne, with an odds ratio of 2.38 (95% CI: 1.31-4.31). Smoking more than 10 cigarettes a day was highly associated with no acne, with an odds ratio of 0.44 (95% CI: 0.30-0.66). The regular use of cannabis was associated with acne, with an odds ratio of 2.88 (95% CI: 1.55-5.37). Second survey took place in France, Spain, Italy, Poland, Belgium, and Czech Republic/Slovakia (*J Eur Acad Dermatol Venereol*. 2018 Feb; 32(2):298-306). 10,521 questionnaires were completed by people between 15 and 24 years old, 6063 declared to have acne. In the analyses we separated females and males. The main risk factor was heredity with an OR=10.78 for females if both parents were affected and 8.49 for males. For males tobacco was protective (OR = 0.67 (95%CI: 0.56-0.82) as well as for females. Chocolate consumption was significantly associated with acne in females (OR = 1.4). The main limit of our studies is the declarative characteristic of data. On the other hand, their statistical power allows us to confirm heredity, and chocolate consumption as risk factors for acne and tobacco consumption as protective.

Teen Act: results of an Italian survey

N. Skroza, E. Tolino

Sapienza Università di Roma Polo Pontino

Il progetto "Teen act" sull'acne adolescenziale, viene realizzato con lo scopo di rilevare alcuni dati provenienti dalla pratica clinica italiana in tema di acne grave, nonché di raccogliere informazioni in merito a diagnosi, approccio terapeutico, igiene, stili di vita e aspetti psicologici relativi a questa condizione. Il progetto si articola in diverse fasi, una prima nella quale sono stati discussi e approvati gli strumenti che serviranno a portare a termine la raccolta dei dati, ovvero il Questionario destinato ai Dermatologi e quello che sarà somministrato dagli specialisti ai pazienti. Il secondo passaggio dell'iniziativa, è focalizzato sui Dermatologi, invitati a partecipare e a confrontarsi sui punti chiave dell'acne grave, in termini di definizione, diagnosi e trattamento in pazienti adolescenziali e oltre. Alla base del progetto, la volontà di andare a valutare il problema dell'acne grave soprattutto nella fascia di età che va dall'adolescenza in avanti, individuando un identikit del paziente con acne grave e cercando di capire anche in che modo il Dermatologo italiano approccia il paziente e prescrive il trattamento con isotretinoina, molecola che risulta molto poco utilizzata nel nostro Paese.

Acne treatment in pigmented skin and different ethnicities

M. Vitale Villarejo

SOCS

Acne is a very common chronic disease affecting approximately 85% of teenagers around the world. Acne vulgaris pathogenesis is caused not only by *Cutibacterium acnes* proliferation, but also by inflammatory mechanisms due to factors such as genetic predisposition, diet, sebaceous gland activity and others. All of these factors could be affected in different ways in the different skin types, however, there are few studies comparing acne between racial and ethnic groups. The topical treatment of acne is widely recognized and retinoids are the core of this therapy for their comedolytic property, their ability to resolve the microcomedones, induce normalization of keratinocyte proliferation and anti-inflammatory effect. Topical retinoids are indicated in most cases of acne as first line treatment, alone or in combination with other drugs depending on the severity of the condition. Their use, however, may be limited by side effects including dryness, peeling, erythema, and photosensitization. This lack of tolerance to retinoids may lead to poor adherence and may be an important factor in acne treatment failure, furthermore, could lead to the development of post-inflammatory hyperpigmentation. There is a perception that Asian and, even, people with dark skin, has a greater tendency to the development of sensitivity to the retinoids compared with Caucasian skin. Previous studies performed with a topical retinoid combination (the association of retinol encapsulated in glycospheres and hydroxipinacolone retinoate) have demonstrated to be safe and effective treatment for mild and moderate acne in Caucasian patients. We will discuss the results of a study performed in African and Asian skin (patients from Angola and Philippines, respectively) to evaluate the acne clinical improvement and the tolerance to the retinoid combination.

Managing acne in pregnancy and breast feeding

R. Batra

Sir Ganga Ram Hospital

Acne is a common skin condition which can occur at any age. Acne pathogenesis is multifactorial. Factors that play a pivotal role in the formation of acne lesions: excess sebum production, abnormal keratinization, inflammation, and bacterial colonization of *Propionibacterium acnes* in the pilosebaceous unit. Various hormonal changes occurring in a female body over the entire life does cause flare ups. PCOS is the commonest hormonal imbalance which is associated with acne flares. The hormonal component becomes all the more important in the subset of patients who are wishing to be pregnant, are pregnant or are breast feeding. Acne flare ups are seen in as many as 50% of pregnant females at some period during the pregnancy. Its not only the female who is suffering from the skin condition but also it adds to the already stressful life event. Inability to take various oral as well as most topical gels during this period makes things even worse not only for the pregnant female but also for the treating dermatologist whose resources are restricted and patient expectations are hard to meet. Oral retinoids are contraindicated during pregnancy. Although studies show that the amount of these medications absorbed through the skin is low, there is a concern that they could pose an increased risk of birth defects and only topical benzyl peroxide, azelaic acid and topical clindamycin are used during pregnancy and breast feeding. Oral tetracyclines too are contraindicated owing to their potential to cause bone and teeth abnormalities. Salicylic acid peels have become a very common treatment option for acne but should better be avoided during pregnancy. Blue-violet or red light phototherapy may be used as monotherapy or in addition to topical and/or oral therapies. A short course of oral prednisolone may be useful for treating fulminant nodular cystic acne after the first trimester if topicals fail to deliver. The risk-to-benefit ratio, efficacy, acceptability, and costs are considerations when choosing a treatment.

Corticosteroids in acne: “No, yes, why, when, how?”

A. G. Faraci, S. Veraldi

*Clinica Dermatologica - Dipartimento di Medicina Interna, Fondazione IRCCS Ca' Granda
Ospedale Maggiore Policlinico di Milano - Università degli Studi di Milano*

Corticosteroids are considered acnegenic-comedogenic drugs and are historically contraindicated in acne-prone patients. In the last years anyhow, many authors have broken this caveat. In acne fulminans they are recommended at the onset to quickly control inflammation, initiating oral prednisone 0.5-1 mg/kg/day as monotherapy for at least 4 weeks with systemic symptoms and 2 weeks without systemic symptoms. Corticosteroids should be continued until crusted lesions have healed, then low-dose isotretinoin can be added. Subsequently, steroid therapy should continue and overlap with isotretinoin for at least 4 weeks. Isotretinoin can then be gradually increased, with a concomitant slow reduction of glucocorticoids in 4-8 weeks. Thus, patients are commonly on systemic steroids for 3-4 months. If acne flaring occurs, more prolonged prednisone or temporary retinoid discontinuation may be required. A flare of acne in a course of isotretinoin is a problem in 6-20% of cases and it can be significant sometimes. If severe, oral prednisone 0.5-1.0 mg/kg/day should be given in 1-3 weeks and slowly decreased over 6 weeks. The isotretinoin should either be stopped or reduced to 0.25 mg/kg/day. If stopped, the drug can be slowly reintroduced and then increased or decreased as response dictates. To prevent acne fulminans and isotretinoin-flare in severe inflammatory acne (nodular or conglobata), overlapping prednisone 0.5-1 mg/kg/day 2-4 weeks with low-dose isotretinoin should be considered. Isotretinoin should then be increased as tolerated. Some authors institute prednisone as monotherapy for 2 weeks before isotretinoin in high-risk patients. Finally, according to some authors, all patients who necessitate systemic antimicrobials or retinoids should receive concomitant prednisone 20-40 mg/day for 2-4 weeks. This protocol, besides giving immediate improvement, prevents isotretinoin-related exacerbation. In summary, the use of oral corticosteroids is well established in acne fulminans, in isotretinoin-flare and in the prevention of both. It can be a matter of debate if extending the use to less severe forms of acne is beneficial or detrimental to patients.

Acne in the “topical steroid damaged face”- an underrecognized global menace

S.Verma
Vadodara, India

Topical silver: Antimicrobial effect without resistance

M. Barbareschi

Università di Milano Fondazione Cà Granda Ospedale Maggiore

Treatments of acne vulgaris commonly use antibiotics, anti-microbials and comedolytic agents. Considering bacterial resistance to topical antibiotics alternative treatments such as silver manufactured into nanoparticle receives an attention. Silver nanoparticles has an anti-bacterial effect against *Propionibacterium acnes* and anti-inflammatory properties. Even if the usage of silver in dermatology and in particular in ulcers treatment is very common, clinical studies about silver nanoparticle formulations for acne are limited.

Nano retinol for the treatment of mild to moderate acne

M. H. I. El Samahy

Ain Shams University, Cairo, Egypt

Acne vulgaris is a common skin condition with substantial cutaneous and psychologic disease burden. Topical retinoids are versatile agents in the treatment of acne, however they are often associated with local adverse events. Nanoscience is the study of particles on an atomic or molecular scale whose size is measured in nanometers. In the present study, 30 female patients with mild and moderate acne were treated with nanoretinol aided by iontophoresis device on the right side of the face compared to conventional retinoids on the left side. The nanoformulation was significantly better in reducing the total lesions count with no adverse effects.

Acne of the adult woman: controversies and news

B. Capitano

IRCCS San Gallicano, Roma

Postadolescent acne is usually described as an inflammatory, mild-to-moderate dermatosis, frequently involving the lower third of the face, the jawline, and the neck. However, we have also frequently observed a clinical form predominantly characterized by retention lesions (microcomedones and macrocomedones), with few or absent inflammatory lesions. The authors, after a quick review of the literature and a description of the different clinical aspects, affirm the existence of two forms of acne: 1) prevalent in young age (25-30 years), with an inflammatory character with aspects similar to adolescence; 2) prevalent after 30 years, with completely unique clinical, microbiological and biochemical aspects. A new classification is proposed together with some therapeutic aspects.

Turn back in acne

M. Barbareschi

Università di Milano Fondazione Cà Granda Ospedale Maggiore

Acne vulgaris is the most common cutaneous disorder seen in dermatological practice. However, the vast majority of data on the epidemiology and the treatment of acne are based on studies evaluating facial lesions. On the contrary data on truncal acne (chest and back) are limited. The literature about truncal acne reported a prevalence of 50-60% in patients affected by facial acne. Many cases of truncal acne can be mild to moderate in severity and could potentially respond to a topical regimen as initial treatment or as maintenance therapy after discontinuation of oral therapies for acne.

Chemoesfoliation and antiinflammatory activity: a new tool

G. Fabbrocini, M. D'Andrea, M. Donnarumma

Section of Dermatology, Department of Clinical Medicine and Surgery, University of Naples Federico II, Naples, Italy

Acne vulgaris has a substantial impact on a patient's quality of life, affecting both self-esteem and psychosocial development. Patients and physicians are faced with many over-the-counter and prescription of acne treatments and choosing the most effective therapy can be confusing. Acne is an inflammatory disorder of pilosebaceous units and is prevalent in adolescence. The pathogenesis of acne is multifactorial and includes abnormal follicular keratinization, increased production of sebum secondary to hyperandrogenism, proliferation of *Propionibacterium acnes* and inflammation. Conventional therapy often results in side effects and poor adherence, and the treatment does not consider the psychological effect of acne on patients, which is comparable with that of disabling diseases. Chemoesfoliation and antiinflammatory activity are an important tool in managing acne. This therapy is effective, well-tolerated and improve patient quality of life.

Bacterial resistance to antibiotics

C. C. Zouboulis

Departments of Dermatology, Venereology, Allergology and Immunology, Dessau Medical Center, Brandenburg Medical School Theodor Fontane, Dessau, Germany

Propionibacterium acnes (*P. acnes*) and Staphylococcus species are Gram-positive bacteria that belong to the normal skin microflora. These bacteria have been accused to play an important role in the pathogenesis of acne vulgaris. Short-term topical (clindamycin, erythromycin) and systemic (tetracyclines) antibiotics are included in the guidelines for acne treatment not exclusively because of their antibiotic effectiveness but also due to their anti-inflammatory potential. However, long courses of antibiotics are commonly administered with the consequence of the development of antibiotic-resistant bacteria. Currently, more than 50% of antibiotic-treated acne patients are colonized by erythromycin- and clindamycin-resistant *P. acnes* phylotypes and Staphylococcus strains and more than 20% are colonized by tetracycline-resistant *P. acnes* strains. A correlation between the presence of antibiotic-resistant bacteria and clinical response with antibiotic treatment has been both confirmed and refused, especially when administered in subantimicrobial doses, in different studies. The resistance seems now to move from acne patients to the community. *P. acnes*-resistant strains have not only been found in acne patients but also in their close contacts as well as in the caring physicians. Despite the general perception of *P. acnes* being a microorganism with low virulence, severe organ infections caused by *P. acnes* has been identified in the last years. Antimicrobial resistance has emerged among *P. acnes* isolates from such infections. Therefore, antibiotic treatment should only be used when necessary and not be administered as monotherapy. Topical antibiotics should be applied in combination with topical retinoid +/- topical benzoyl peroxide. It should be administered for a maximum of 3-4 continuous months and be discontinued when there is no further improvement. In case of relapse, the same antibiotic should be re-used.

The role of oral zinc

M. Barbareschi

Università di Milano Fondazione Cà Granda Ospedale Maggiore

Acne treatments target one or more of the pathophysiological mechanisms believed to be responsible for causing the disease. Antibiotics, anti-bacterials and anti-inflammatory are considered in all the guidelines for the treatment of the pathology. Zinc is a trace element that is necessary for many physiologic processes including gene transcription, phagocytic activity of macrophages and stabilization of biological membranes. Other beneficial effects such as anti-oxidant and anti-inflammatory properties have been attributed to zinc including acne. The literature on the usage of oral zinc in acne treatment demonstrate its efficacy. In acne treatment zinc has been linked with decreasing sebum production, decreasing anti-inflammatory mediators and with anti-bacterial effect on *P. Acnes*.

Oral isotretinoin in 2018: an updated way to communicate with the patients

V. Bettoli

Department of Medical Sciences, O.U. of Dermatology, Azienda Ospedaliera University of Ferrara, Italy

Oral Isotretinoin (O.I.), after three decades, remains the most effective treatment for acne. However, information about this drug, in particular with regard to side effects, needs an update. Some points in the official information sheets and in the information / advertising material, addressed to the patients by the companies marketing this retinoid, would benefit from a review to make them in line with the increased knowledge coming from trials and clinical practice. Some aspects, like teratogenicity, need an update of the information about the still occurring unwanted pregnancies while on treatment. Other side effects are overestimated, both in terms of incidence and severity. Patients and parents, who are asked to sign an informed consent, not rarely deny the treatment after reading the side effects section of the information sheet. European Medicine Agency (EMA) recently finalized a review on topical and systemic retinoids. Interestingly, just to mention one of the main points, some psychiatric side effects, which have been strongly influencing the approach of the patients to the drug, have been eliminated by the list. The appropriateness of the information sheets is of paramount importance for the correct use of drugs in order to offer to the patients a balanced view between clinical effects and possible adverse events.

Sexual abnormalities following oral isotretinoin

C. Pelfini

Since some years, cases of sexual dysfunction are reported in acneic patients who take or who have taken isotretinoin. The first report is from 1994 (Coleman "The Lancet") another 6-7 cases result in the two subsequent works of Tirado (Actas Urol Esp 2005) and Hogan (Int J of Risk & Safety in Medicine 2014), and in the recent publication (2017) of Healy with AA of the same departments and in the same journal (the cases reported are now 54). These are data of a certain consistency and the problem is worthy of attention. Thus, the Netherlands Pharmacovigilance Monitoring Center -Lareb (having received the report of 7 cases in 2000-2014) decided to analyze them with particular reference to erectile dysfunction, the most frequent symptom of sexual dysfunction. Similar cases of erectile dysfunction are reported (2015) in the WHO (132) and EMA (61) databases. Clinical symptomatology is largely overlapping with what is notoriously verifiable in relation to the use of many psychotropic drugs and of finasteride. The side effects of these two results in the Summary of Product Characteristics (SmpC) of German and Usa, not so in that of isotretinoin. Even with due caution and with the need for further verification, the problem arises of the insertion of this side effect in the Isotretinoin SmpC.

Acne and photodynamic therapy: my personal experience

G. Monfrecola

Dermatologia Università Federico II Napoli

Light therapies utilize light with different properties (wavelength, intensity, coherent or incoherent light) with the aim of achieving a beneficial result. The exact mechanisms of action are still not fully understood, but three components are considered crucial: light, photosensitizers (i.e. molecules that absorb and are then activated by light) and oxidative stress resulting from their activation. Photosensitizers can be produced endogenously or applied exogenously. *Propionibacterium acnes* produces endogenous porphyrins, which absorb light to form a highly reactive singlet oxygen. Photodynamic therapy (PDT) uses exogenous light activating topical products, consisting of various porphyrin precursors, most commonly 5-aminolaevulinic acid (ALA) and its methyl ester methyl-aminolaevulinate (MAL), which are absorbed into the skin. Probable biological consequences of oxidative stress include damaging bacteria and sebaceous glands, together with reduction of follicular obstruction and hyperkeratosis due to apoptotic mechanisms. Possible interference with the immunological response, not necessarily mediated by photosensitizers, are also believed to be important.

Combination treatments in acne scars

A. Katsambas

University of Athens

The treatment of post acne scars is still a therapeutic challenge, as often a single method is not enough. Most of the time a combination of more than one technique is required. The treatment depends on the type of acne scars (macular, atrophic or hypertrophic) of which the atrophic ones can further appear as ice pick, 'rolling' or boxcar scars. In the management of acne scarring, prevention is of paramount importance as the initiation of the proper treatment may minimize the risk of scars. The methods of scarring therapy include various types of ablative and non-ablative lasers, chemical peeling with emphasis in the 'Cross' method, skin needling, punch techniques and subcision and for the hypertrophic scars intralesional corticosteroids and probably fluorouracil.

Acne scars surgical treatment: from minimally invasive to maximally ablative

V. Abrusci

Abrusci Studio

This main photographic lecture will show the author's 30 years experience in acne scar surgery: scar focal 90% TCA application cross therapy, subcision, excision and closure, chemodermabrasion, chemodermabrasion followed by ablative laser resurfacing, highly ablative laser resurfacing, fractional CO₂, and multiple combinations of all them in order to try to achieve the best possible result with one surgical procedure.

Noma

D. Cataldo

Madonnina Clinic - Milan - University of Paris

Noma is an opportunistic disease associated with malnutrition, poverty and lack of hygiene. In most cases the causal pathogens are *Fusobacterium necrophorum* and *Prevotella intermedia*. The disease mostly affects children under the age of six. Malnutrition is often associated with malaria, measles, chicken pox, rubeola, scarlet fever, herpes, typhoid and tuberculosis further increase the risk of cancrum oris. Acute necrotizing gingivitis is one of the most significant manifestations, it begins with edema and sudden necrosis, with decapitation of the interdental papillae, rapidly followed by bleeding and pain. The research to study the evolution of the disease was carried out using radiology, scanners, a reproduction of the three years old skull and Power point. The infection starts on the mucosa, spreading into the bone and following a relatively precise path which could be in one or more of the following directions - ascendant, forwards or posteriorly. Deeper understanding of the disease has made the treatment standardized. Damage of the nose is the result of the infection started from two or more incisors and one or both canines. When the infection starts at a canine the lateral wall of the nose suffers lesions, while the inferior and medium turbinates are associated with molar and can damage seriously the cheek. It is necessary to reconstruct the inner lining first, then the nasal floor and the mucosa with excess tissue at the side of the wall. When possible, we perform a pre-surgery toilette in order to accelerate healing and eliminate bacteria. In half of the patients a healing tissue with great retraction is present, causing trismus. We don't use hinge flap. The elasticity of the skin is greater in African patients. It is mandatory to operate in patient's home country, this must always be the priority, a treatment which considers the effects on body and mind together.

OXYS
PUBLISHING