OBSERVATIONS ABOUT EPIDEMIOLOGY, CLINICAL-DERMOSCOPIC CORRELATIONS AND SOME COMORBIDITIES RELATED TO A GROUP OF ROMANIAN ROSACEA PATIENTS

OBSERVAȚII DESPRE EPIDEMIOLOGIE, CORELAȚII CLINICO-DERMATOSCOPICE ȘI COMORBIDITĂȚI ÎNTR-UN GRUP DE PACIENȚI CU ROZACEE

Alin Laurențiu Tatu (1,2), Ana Maria Veronica Draganită (3), Victor Gabriel Clatici (4)

(1) University Dunarea de Jos, Faculty of Medicine and Pharmacy, Galați, Romania;
(2) CMI Dr. Alin Laurențiu Tatu, Galați, Romania
(3) Medical Practice Zimnicea, Romania
(4) Dermatology Department, ELIAS Universitary Emergency Hospital, Bucharest, Romania

Corresponding author:
Alin Laurențiu Tatu, 39 Al. I.Cuza street, 800101, Galați, Romania,
Telephone: 0040728267435, Fax number: 0040236415705,
Email: dralin_tatu@yahoo.com

Aknowledgements:
This paper is supported by the Sectoral Operational Programme Human Resources Development (SOP HRD), financed from the European Social Fund and by the Romanian Government under the contract POSDRU/159/1.5/S/137390/.

Abstract

Introduction: The aim of the study was to establish epidemiologic data regarding rosacea, to evaluate the dermoscopic features, clinical-dermoscopic correlations and comorbidities related to a group of rosacea patients.

Methods: 115 patients with rosacea after anamnesis were examined clinically and dermoscopically, and by scraping.

Results: The subtypes of Rosacea were: erithemato-telangiectatic 41,73%, papulopustular 51,30%, phymatous 9,56%, ocular rosacea as ocular signs:blepharitis and conjunctivitis at 10,43% and as ocular symptoms: sensitivity to light, foreign body sensation or itching at 36,52%. All of the patients showed telangiectasias, 70,43% showed red diffuse areas and 59,13% showed Demodex dermoscopic features.

Discussion: Dermoscopy improved the detection of Demodex Folliculorum features from 51,3% (with clinical spinulosis) to 59,13% of patients, and of pustules from 51,3% to 62,6%. All patients with spinulosis showed Demodex features at dermoscopy of the area and were confirmed by scraping. The most important comorbidities of rosacea patients were: airborne allergy-54,78%, gastrointestinal disturbances-51,3% and metabolic diseases-46,8%.
Rezumat

Scopul studiului a fost de a stabili datele epidemiologice referitoare la rozacee, evaluarea caracteristicilor dermatoscopice și a corelațiilor clinico - dermatoscopice precum și a comorbidităților la un lot de pacienți cu rozacee.

Metodă: 115 pacienți cu rozacee stabilită pe baza datelor anamnestice au fost examinați clinic și dermatoscopic, precum și prin examen parazitologic.

Rezultate: Subtipurile de rozacee au fost eritemato-telenagiectoză 41,73 %, papulo-pustuloasă 51,30 %, forma de tip fima 9,56%, rozacee oculară sub formă de semne oculare (blefarită și conjunctivită) 10,43% și sub formă de simptome (sensibilitate la lumină, senzație de corp străin, prurit) 36,52%. Toți pacienții au prezentat teleangiectazii, 70,43% au prezentat zone de eritem difuz iar la 59,13% s-au evidențiat caracteristici dermatoscopice ale infecției cu Demodex Folliculorum.

Discuții: Dermatoscopia îmbunătățește depistarea infecției cu Demodex Folliculorum de la 51,3% (cu forme clinice de spinuloză) la 59,13% dintre pacienți, și a pustulelor de la 51,3% la 62,6%. Toți pacienții cu spinuloză au prezentat elemente caracteristice ale infecției cu Demodex la examenul dermatoscopic și au fost confirmați prin examen parazitologic. Cele mai importante comorbidități la pacienții cu rozacee au fost alergii respiratorii – 54,78%, afecțiuni gastrointestinale 51,3% și boli metabolice - 46,8%.

Introduction

Rosacea is an inflammatory facial condition with a prevalence between 0,5 to 10% and a female-male ratio of 3:1(1),(2),(3). From the clinical point of view, the diagnosis of Rosacea is based on papules, pustules, telangiectasias, flushing, blushing, phymas and ocular signs(4). We sometimes need better ways to observe this condition on the skin and to detect earlier some infra-clinical features. Dermoscopy is a very useful tool for a better view and recognition of the specific conditions, of the disease severity and also for the follow up of the treatment result (5). The aim of the study was to establish some epidemiologic data regarding rosacea, to find the dermoscopic features, some clinical-dermoscopic correlations and to find some comorbidities related to a group of Romanian rosacea patients.

Material and Methods

115 patients with variable rosacea clinical manifestations and subtypes were admitted in our outpatient clinic and in private practice and were examined clinically and dermoscopically. We have taken clinical pictures with a digital camera (Sony Cybershot DSC 450) and dermoscopic pictures were taken using DermLite (3Gen; LLC, Dana Point, CA, USA) at ×10 magnification and an attached Nikon Coolpix P5100 camera. The dermoscopic criteria was based from literature and also from the authors experience in dermoscopy. Clinically, patients presented some features such as telangiectasia, flush, erythema, papulo-pustules, spinulosis, phyma and scales. We observed on dermoscopy vessels (linear, tortuous, poligonal), follicular plugs, scales, red areas, Demodex Folliculorum tails and pustules. All patients stopped the previous treatments at the time of the taken pictures. During this time interval, they used just soft emollients or thermal water spray. Scales harvesting was done by scraping technique improved with scotch tape. Thus, for microscopic examination material was harvested from the affected area using a piece of 2 cm transparent scotch, it subsequently displayed on a microscope slide that has been sent to the laboratory labeled pouch. Scotch tape preparation was examined microscopically with objectives 10x, 20x and 40x, appreciating parasitic load.

The local ethics committee approved this study.

Results:

In this group of Rosacea patients, 79 (68,69%) were women and 36 (31,31)% men with a ratio of 2,19 for women to men and the mean age was 46,2 years. From a clinical point of view we observed...
these subtypes of Rosacea: Erythematotelangiectatic, Papulopustular, Phymatous and Ocular Rosacea. The erythematotelangiectatic clinical subtype (Fig.1) was characterized by flushing, burning or stinging associated with flushing, persistent erythema on central parts of the face, eritrosis, telangiectasias and it was found in 48 patients (41,73%) - 33 women and 15 men (2,2 to 1 ratio). The papulopustular clinical subtype (Figure.2) was characterized by tiny pustules, dome-shaped erythematous papules, erythema, edema and it was found in 59 patients (51,30%), 49 women and 10 men (4,9 to 1 ratio). The phymatous clinical subtype (Figure.3) showed the thickening of the skin with irregular surface contours, pustules, open pores, erythema which affects the nose, chin, forehead and it was found in 11 patients (9,56%), 2 women and 9 men (a 1 to 4,5 ratio). Ocular Rosacea was found as ocular signs - blepharitis and conjunctivitis in 12 patients (10,43%), 9 women an 3 men (a 3 to 1 ratio) and as ocular sensations like sensitivity to light, foreign body sensation, burning, stinging or itching of the eyes in 42 patients (36,52%), 31 women and 11 men (a 2,81 to 1 ratio). By dermoscopy, we found on the face of Rosacea group the following dermoscopic features: vessels, red areas, follicular plugs, Demodex tails, scales, pustules. All of the patients showed clinically telangiectasia, which is seen more clearly and specific with dermoscopy as red dilatated, reticular, linear, tortuous or polygonal vessels. This is the most important dermoscopic sign in Rosacea and it is considered specific.

68 patients (59,13%) showed Demodex dermoscopic features and the Demodex features were follicular plugs and Demodex tails. The follicular plugs were found in 59 patients (51,3%) as semi round oval or triangular brown, white or grey structures corresponding to Demodex. They should be distinguished from open comedones - they are brown homogenous circles sometime also seen with the naked eye. The follicular plugs were intricate with Demodex tails. We observed the Demodex tails in 51 patients (44,34%) as creamy gelatious threads protruding out of follicular openings representing the presence of the mite itself (under ×10 magnification): three or more tails on a dermoscopic area were considered specific for Demodex (Figure.5). The Demodex tails should be distinguished from normally white hairs on the face. Those are smaller in diameter and size, regular, are present in almost all the follicles of a dermoscopic area and they don't have semi round oval or triangular brown, white or grey structures at the proximity of the skin corresponding to Demodex body. All the 59 patients with areas of spinulosis (Figure.6) showed Demodex features at dermoscopy of the area confirmed by scraping. (Figure.7)

59 from 115 patients (51,3%) showed pustules clinically and 72 patients by dermoscopy (62,6%). Dermoscopy revealed tiny pustules not yet clinically apparent as central white circular areas sometimes surrounded by an erythematous halo - if we pushed too hard on the dermoscope the halo might not be visible or can be incomplete. Scales were present clinically in 42 patients (36,52%) but dermoscopic in 49 patients (42,6%) because tiny scales are not seen every time with the naked eye but they are seen by dermoscopy as white polygonal or irregular border areas or lines. The scales are whiter than follicular plugs and there are no tails as a marker for Demodex and they should also be distinguished from white hairs.

Comorbidities

In this group of Rosacea patients, the anamnestic and clinical data obtained showed that the most important comorbidities were: metabolic disease (including diabetes, hypertension, hyperlipidemia, and obesity defined by a body mass index >30 kg/m2) in 53 patients (46.8%), gastrointestinal disturbances (including gastroesophageal reflux disease, gastritis, ulcer, irritable bowel syndrome) in 59 patients (51,3%) and airborne allergy (including as IGE levels to allergens > 0.35 KUA/l) in 63 patients (54,78%) especially with high IGE levels to dust mites-Dermatophagoides pteronissius and Dermatophagoides Farinae - 29 patients.
Figure 4. Telangiectasias. Dermoscopy (25.21%)[14].

Discussion

In this group of Rosacea patients, 68.69% were women and 31.31% men with a ratio of 2.19 for women to men and the mean age was 46.2 years. The Rosacea clinical subtype and ratio between women to men were:
- Papulopustular 51.30%, 9 to 1 ratio.
- Erythematotelangiectatic 41.73%, 2.2 to 1 ratio.
- Phymatous 9.56%, 1 to 4.5 ratio.
- Symptomatic Ocular Rosacea 35.52%, 2.81 to 1 ratio.

Dermoscopy revealed the following features: vessels (100%), red areas 70.43%, follicular plugs and Demodex tails 59.13%, pustules (62.6%), scales (42.60%). Dermoscopy improved the detection of Demodex Folliculorum features from 51.3% (with clinical spinulosis) to 59.13% of patients, of pustules from 51.3% to 62.6% and of scales from 36.52% to 39.13%. All the patients with areas of spinulosis showed Demodex features at dermoscopy of the area and were confirmed by scraping. Dermoscopy is a tool for early detection of the infra-clinical signs of rosacea, to document the flares and as perspective for the follow up process of repairing of the skin after the treatment. The most important comorbidities on Rosacea patients were: airborne allergy-54.78%, gastrointestinal disturbances-51.3% and metabolic diseases-46.8%, but obviously more studies should be done in this field.

Conclusion

Rosacea patients must be evaluated from a comorbidities point of view and dermoscopy is a valuable tool for diagnosis of Demodex infection.

Bibliography
