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DERMA TODAY

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Dear Doctor,

Greetings from Micro Labs. We are happy to bring you "Derma Today" which contains latest and interesting news in the field of Dermatology.

This issue contains:

Should you require any article or, medical information, please feel free to contact us medicalservices@microlabs.in

Looking forward to your valuable feedback.

Best Regards,

Medical Team, Micro Labs Limited.

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A prospective multicentre, cross sectional study of Acne in pregnancy

Introduction

Acne vulgaris is a pilosebaceous unit chronic inflammatory disorder most often seen in teens but it may impact any age group including pregnant women. Pathogenesis plays a crucial role in interactions between genetic, hormonal and environmental factors. The relationship of acne and androgens is well established, although the functions of estrogens, progesterone, glucocorticoids, leptin, and the growth factor-1 related to leptin are little understood. There are several teenage and adult acne trials, with only little evidence on acne during pregnancy despite significant shifts in various hormone forms. In this study, the authors aimed to investigate the manifestations of acne in different stages of pregnancy in order to better understand the hormonal effects of acne in women.

Methods

Pregnant women aged 18 years and older with acne at any stage of pregnancy were consecutively interviewed at the participating centers during the study period from 2016 to 2019. Acne severity was evaluated using the Comprehensive Acne Severity Scale.

Results

A total of 295 pregnant women with acne were included, with 167 (56.6%) patients showing mild, 87 (29.5%) moderate, six (12.2%) severe, and five (1.7%) very severe acne. Truncal acne was significantly higher in the third trimester than in the other stages ($P < 0.001$). Onset of acne before pregnancy, prepubertal, pubertal or adult onset, or acne history in previous pregnancies did not influence acne severity in pregnancy. Women with irregular menstruation before pregnancy, polycystic ovary syndrome, hirsutism, and higher body weight index tended to show severe acne in pregnancy.

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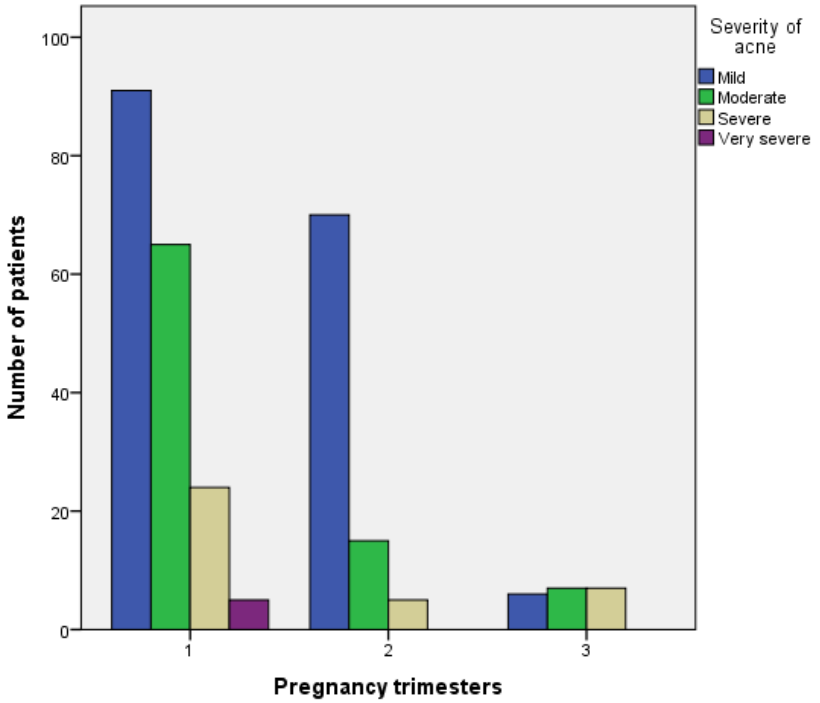
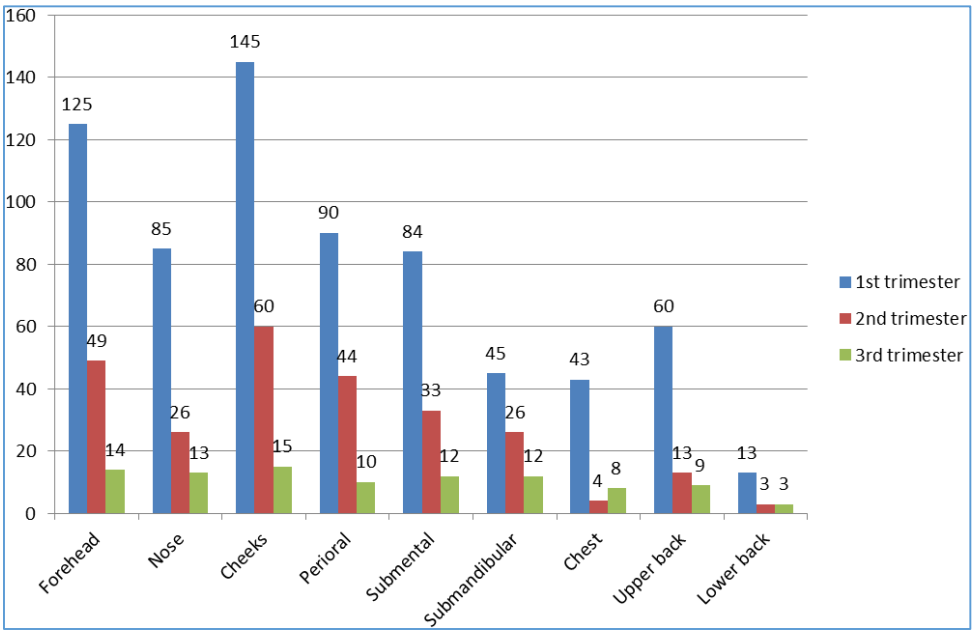


Frequency of acne severity in different pregnancy Trimesters



Distribution of acne in different pregnancy trimesters

Conclusion

Acne is so far little studied during pregnancy, mainly because of its complexity caused by simultaneous changes in multiple hormones and the intricate fetal-maternal interaction. Severe acne during pregnancy is generally uncommon, according to this study, while facial acne, truncal acne, and hirsutism are higher in the third trimester than in other trimesters.

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Pregnant acne shares many characteristics with adult female acne. During breastfeeding, major shifts in different forms of hormones play a more complicated function in acne, however the pathogenesis continues to be established. This study has shed light on more triggering and acne-related risk factors during pregnancy, which can pave the way for a better understanding of the hormone influence on acne and help to better manage acne in this particular stage of life.

Source: Kutlu O, et al. Acne in pregnancy: A prospective multicenter, crosssectional study of 295 patients in Turkey. International Journal of Dermatology [published online June 2020] 2020; https://doi.org/10.1111/ijd.14999

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Nail dermoscopy (onychoscopy) findings in the diagnosis of primary onychomycosis: A cross- sectional study

Introduction

Onychomycosis caused by dermatophyte, non-dermatophyticum, or yeasts, is 5 percent prevalent worldwide and 0.5–5 percent prevalent in India. Although its diagnosis is predominantly clinical, confirmation from the laboratory is essential, since the majority need prolonged systemic treatment. Furthermore, in the absence of laboratory confirmation, when there is a lack of therapeutic response, it is difficult to rule out treatment failure. The onychomycosis diagnostic modalities include direct microscopic examination with immune-fluorescent potassium hydroxide microscopy with white calcofluoride, fungal culture, periodic acid – ship staining histology, and polymerase chain reaction.

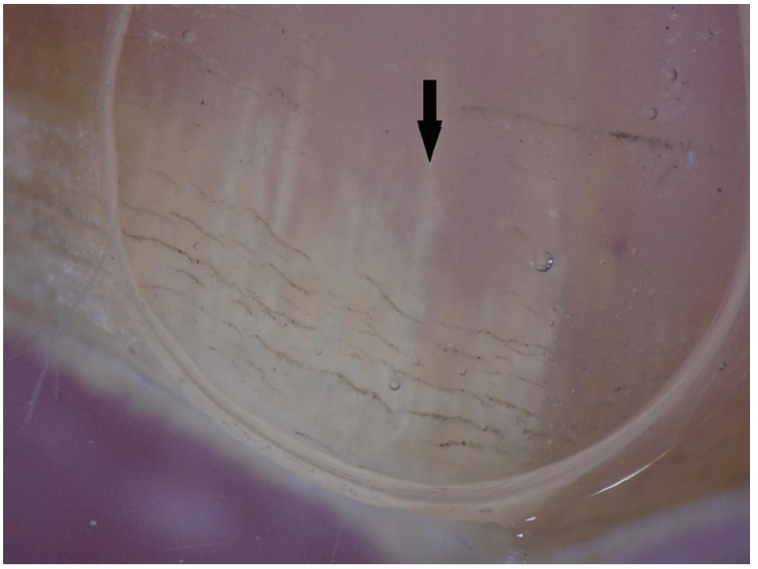
Nail or onychoscopy dermoscopy is an upcoming diagnostic tool with ever-expanding signs beyond pigmented nail disorders. It is a procedure that is non-invasive, fast, reproducible and office-based. There is limited literature relating to onycoscopic onychomycosis features. Piraccini et al. described distinctive dermatoscopic characteristics exclusive to distal subungual onychomycosis on the lateral. Jesus-Silva et al. described the presence in onychomycosis of spiked pattern, longitudinal striae pattern, linear edge pattern and distal irregular termination pattern. In this study, the authors identified onychoscopic features in different clinical types of onychomycosis and compared its diagnostic utility with that of direct microscopic examination with potassium hydroxide, mycological culture and periodic acid– Schiff stained nail clippings.

Methods

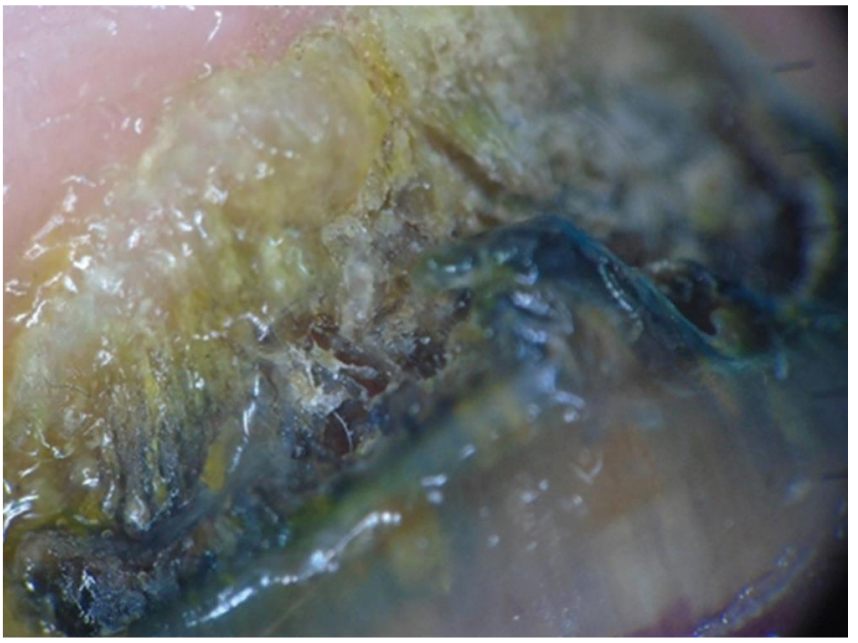
A detailed history, physical examination including that of nails and clinical photography was followed by onychoscopy with DermLite DL3. The nail clippings were sent for direct microscopic examination with potassium hydroxide, mycological culture and histopathology with periodic acid–Schiff stain. The patient was said to have onychomycosis if at least one of the three tests was positive.

Results

Onychomycosis was confirmed by potassium hydroxide and/or culture and/or histopathology in 88 patients. Onychoscopic features were identified and their association with different clinical variants of onychomycosis was attempted. Percentage positivity for diagnosing onychomycosis in decreasing order was: direct microscopic examination with potassium hydroxide followed by spiked pattern, subungual hyperkeratosis, distal irregular termination on onychoscopy, histopathology, mycological culture and ruins aspect again observed on onychoscopy.



Dermatoscopic image of spiked pattern (arrow): polarizing mode with the interface



Dermatoscopic image of chromonychia: polarizing mode with the Interface

Feature	Sensitivity (%)	Specificity (%)	PPV (%)	NPV (%)
Nail plate				
Onycholysis	96.6	0	0	87.6
Spiked pattern	86.4	58.3	93.8	36.8
Chromonychia	85.2	25	89.3	18.8
Fluffy shadow	63.6	58.3	91.8	17.9
Lamellar micro-splitting	51.1	50	88.2	12.2
Homogenous opacity	34.1	83.3	93.8	14.7
Longitudinal striae pattern	25	83.3	91.7	13.2
Distal free edge				
SUH	85.2	41.7	91.5	27.8
Distal irregular termination	81.8	50	92.3	27.3
Chromonychia	68.2	41.7	89.6	15.2
Ruins aspect	59.1	91.7	98.1	23.4
Distal regular termination	18.2	50	72.7	7.7
Adjacent skin				
Dryness and Scaling	83	25	89	16.7
Microscopic examination with KOH	88.6	NA	NA	54.5
Culture	53.4	NA	NA	22.6
Histopathology with PAS	77.3	NA	NA	37.5

Sensitivity, specificity, positive predictive value and negative predictive value of each onychoscopic feature

Conclusion

Onychoscopic features such as spiked pattern, distal irregular ending and presence of ruins have a strong correlation with onychomycosis and its variants. In the diagnosed cases of onychomycosis, the authors identified few new features, such as white fluffy shadows, transverse striate pattern, homogeneous opacity and lamellar micro-splitting. Further studies of a greater sample size should be carried out to create certain correlations of confidence.

Source: Kayarkatte MN, Singal A, Pandhi D, et al. Nail dermoscopy (onychoscopy) findings in the diagnosis of primary onychomycosis: A cross-sectional study. Indian J Dermatol Venereol Leprol 2020; 86:341-9.

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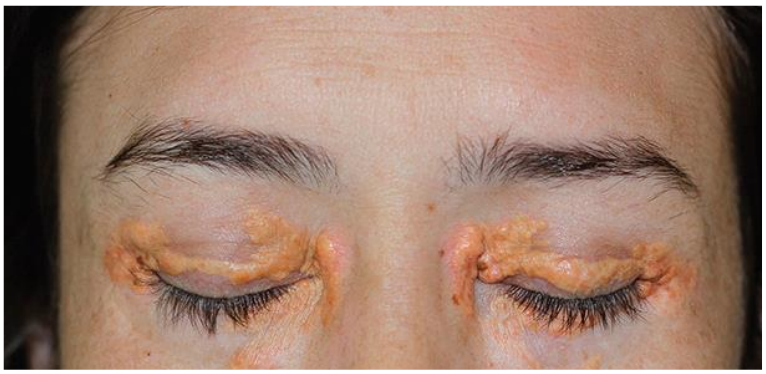
CASE STUDY

Necrobiotic Xanthogranuloma

During her 40's, a woman came to the hospital to examine asymptomatic yellow plaques on her eyelids (Figure), which had been active for 8years. She also formed identical plaques on her spine and limbs over the previous five years of accelerated growth of scale and eventual ulceration. The patient also developed dysphagia, dysphonia, diffuse lymphadenopathy and splenomegaly during this time period.



AWoman in Her 40s with Asymptomatic Yellow Plaques on Her Eyelids

Magnetic resonance imaging and computed tomographic tests showed new longitudinal hilar lymphadenopathy, as well as extreme neck and abdominal infiltration. Laboratory testing revealed microcyticanemia, a high rate of sedimentation with erythrocytes, and immunoglobulin gammopathy with monoclonal immune fixation. The proportion of clonal plasma cells included in subsequent screening of the bone marrow did not follow multiplemyeloma requirements. Biopsy findings from a skin lesion revealed substantial regions of necrobiosis and granulomatous invasion of massive foreign body cells, massive Touton cells and foam cells. These findings support the clinical diagnosis of xanthogranuloma necrobiotic (NXG), associated with clinically significant monoclonal gammopathy. Following a thalidomide and corticosteroid relapse of care, the woman endured 9 months of intravenous immunoglobulin therapy. Stabilization before development and existing intravenous cyclophosphamide therapy was just temporary.

The Histiocyte Society1 has recently classified NXG as a chronic and progressive non-Langerhans cell histiocytosis within the group of cutaneous and mucocutaneous histiocytosis. The disease has a predilection for periorbital skin which affects the dermisandsubcutis. There can be extracutaneous involvement, and ophthalmological complications are common. In approximately 80 per cent of patients, monoclonal gammopathy is identified as either plasma cell dyscrasia or lympho proliferative disorder. Recently, the novel concept of clinical significance of monoclonal gammopathy was proposed to identify cases of toxic effects from monoclonal gammopathy, which may result in severe organ damage. The clinical treatment involves xanthelasma (in the early phases

of eyelid disease), lipoidic necrobiosis, granuloma annulare, granuloma of the foreign body, rheumatoid nodules, amyloidosis and other histiocytosis with non-Langerhans. While no histological trend is unique for NXG, atypical giant cells, Touton giant cells, and cholesterol clefts are commonly seen and in the proper clinical environment confirm this diagnosis. It is the combination of typical clinical and pathological findings, however, that will allow the definitive diagnosis. In selected cases, immunohistochemical findings may lead to the diagnosis, showing positivity of CD68 and MAC387 with negative S100 and CD1a. Although alkylating agents (e.g., chlorambucil, cyclophosphamide, melphalan) are often considered in the NXG treatment, evidence of their use is largely anecdotal due to a lack of clinical trials. Many therapeutic choices include anesthesia, photochemotherapy, extracorporeal photophoresis, plasmapheresis, radiotherapy, laser therapy, intravenous immunoglobulin, immunosuppressive medications, and high-dose corticosteroids, many of which have complex and impredictable reactions.

Source: Dellatorre G, Miqueloto JK. Necrobiotic Xanthogranuloma [published online ahead of print, 2020]. JAMA Dermatol. 2020;10.1001/jamadermatol.2020.0897.