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Dear Doctor,

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

This issue contains:

1. Evaluation of melasma's impact on visual attention, perceived attractiveness, and social evaluations considering distinct anatomical areas
2. Determination of foot deformities in ingrown nail development with objective radiological parameters
3. A study on assessing the elevated Neutrophil–Lymphocyte and Platelet–Lymphocyte Ratios in Severe and Chronic Urticaria
4. Case report of an epidermal cyst colliding with a giant pretibial cellular fibrous histiocytoma

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Looking forward to your valuable feedback.

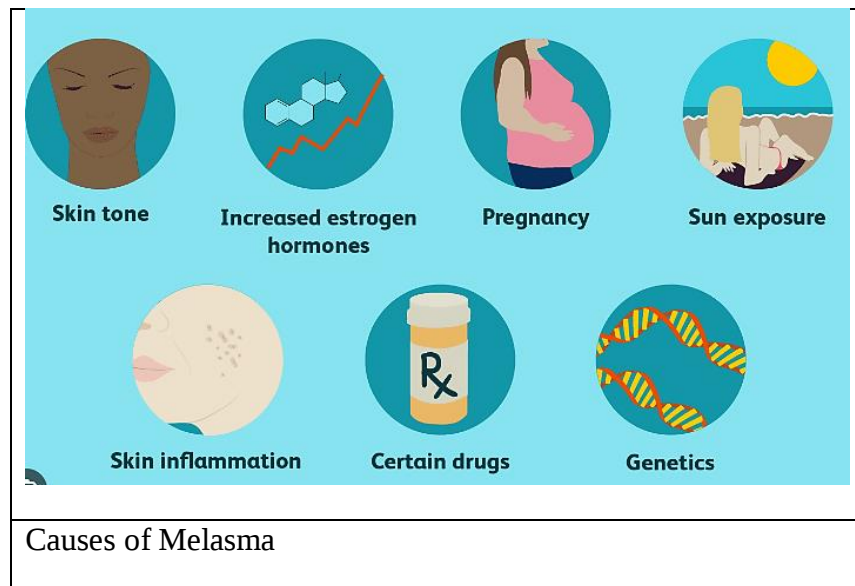
Best Regards,

Medical Team, Micro Labs Limited.

1. Evaluation of melasma's impact on visual attention, perceived attractiveness, and social evaluations considering distinct anatomical areas

Introduction:

Melasma is a prevalent chronic pigmentation condition that affects people with dark skin. Overall prevalence varies from 8.8% to 40%, depending on the region and population's ethnicity. Clinically, it presents as symmetric reticulated hypermelanosis, which primarily affects the mandibular, centrofacial, and malar facial patterns.¹ Melasma patients have a lower quality of life due to its major impact on face appearance and emotional suffering, including feelings of embarrassment, bothersomeness, and unattractiveness. The human face plays a significant role in creating initial impressions, assessing attractiveness, and determining characteristics of a person.² This study examined how melasma affects visual attention, perceived attractiveness, and social evaluations across different anatomical locations. Furthermore, it aimed to compare opinions of conventional face tattoos because of their strategic placement.



Methods:

This eye-tracking study involved 49 persons (18 males) aged 18-46 years. An additional 260 participants completed image-based personality questionnaires. Using eye tracking, gaze fixation patterns were investigated, and psychological traits were assessed through the completion of image-based personality questionnaires. Visual stimuli included anatomic

melasma variants and tattoo patterns. The Gazepoint GP3-HD eye-tracker was used to record eye movements. The study included a screen-based questionnaire. Respondents were asked to score how much they thought the personality attributes of the people in the pictures represented them in order to compare views toward photographs of clinical forms of melasma and facial tattoos.

Results:

There were 121 distinct traditional facial tattoo designs found. The most typical anatomical sites for tattoos on the faces of indigenous women are the chin and glabella, according to iconographic study. Traditional tattoos frequently follow midline patterns, avoiding the upper lip. Tattoos and melasma had a significant impact on visual attention ($p < 0.001$), with melasma on the chin and upper lip drawing more attention. Gaze to the ocular region was reduced by upper lip melasma ($p < 0.002$). While perioral fixations increased ($p < 0.001$) in comparison to faces in good condition. Increased perceived aggressiveness was indicated by upper lip tattoos ($p = 0.004$). There was a tendency that chin tattoos (mean=2.964) were more attractive than glabella and upper lip (mean=2.577; $p=0.189$) tattoos. Centrofacial lesions received considerably lower evaluations for attractiveness compared to malar, chin, and glabellar melasma ($p < 0.001$). However, there was no significant difference between centrofacial and isolated upper lip melasma ($p=0.178$) (Figure 1).

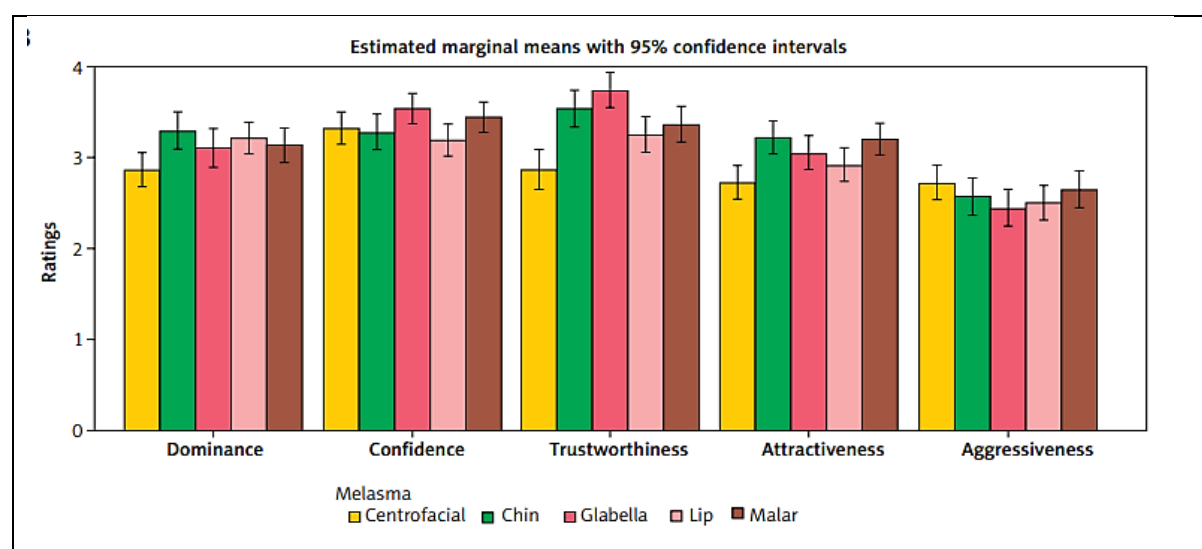


Figure 1: Mean rating scores and 95% confidence intervals for melasma indicate the relationship between personality factors and the anatomical location of pigmentary lesions (AOI).

Discussion:

Melasma's facial pigmentary lesions can negatively affect quality of life. Pigmentation of the upper lip shifts gaze pattern to show anger and disdain, making the face appear more aggressive and less attractive.² Previous study has shown that facial skin lesions can cause a shift in gaze pattern geometry and interfere with perception of emotions.³

Conclusion:

Pigmentation on the upper lip focuses attention on areas that convey anger, which increases perceived aggressiveness and decreases attractiveness. Thus, when setting treatment objectives, it is important to consider the significant impact of upper lip melasma in order to improve social perception as opposed to merely reducing the lesion area.

Pigmentation on the upper lip directs gaze towards areas that convey anger, which increases perceived aggressiveness and decreases attractiveness. So, it is important to consider the significant impact of upper lip melasma in order to improve social perception as opposed to merely reducing the lesion area.

Reference:

1. Neagu N, Conforti C, Agozzino M, Marangi GF, Morariu SH, Pellacani G, Persichetti P, Piccolo D, Segreto F, Zalaudek I, Dianzani C. Melasma treatment: a systematic review. *Journal of Dermatological Treatment*. 2022 May 19;33(4):1816-37.
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2. Determination of foot deformities in ingrown nail development with objective radiological parameters

Introduction:

An ingrown toenail is a painful condition of the lateral nail fold that is characterized by inflammation, infection, and the granuloma formation. This results from the distal portion of the nail penetrating the gutter and being injured by pressure.¹ Ingrown nails are prevalent among teenagers and young adults, but men are more likely to experience them. Uneven nail growth, irregular nail shape, hypertrophy of the lateral nail folds, acquired or congenital nail disorders, nail infections, factors that increase external pressure (such as wearing tight shoes), genetic predisposition, obesity, trauma, subungual tumors, excessive perspiration, and medication are all potential causes of ingrown nails. The two most prevalent abnormalities are pes planus, which was characterized by the collapse of the medial longitudinal arch, and hallux valgus, which was described as the lateral deviation of the big toe. Only a few number of earlier studies, with varying degrees of success, have examined the connections between these abnormalities and ingrown nails.² So, this study was to evaluate whether foot abnormalities played a role in ingrown nail formation using objective radiographic measures.

Methods:

This prospective and controlled study involved patients with ingrown nails and controls without any ingrown nail history. The hallux valgus angle (HVA), interphalangeal angle (IPA), and intermetatarsal angle (IMA) associated with hallux valgus, as well as the calcaneal pitch angle (CPA), talohorizontal angle (THA), and talometatarsal angle (TMA) associated with pes planus, were assessed on the bilateral foot radiographs of the patients with ingrown nails in both groups.

Results:

Overall, a total of 180 feet were assessed, which included 76 feet from 64 patients with ingrown nails who were symptomatic, and 104 feet from 71 people in the control group who had a foot radiograph. There was no significant difference in radiological measurements of hallux valgus (HVA, IPA, and IMA) or pes planus (CPA and TMA) compared to controls. In the control

group, THA was statistically significantly higher ($P=0.025$). While there were no significant connections between ingrown nail stage and other angles, there was a moderate strength positive association between ingrown nail stage and assessed TMA for pes planus diagnosis ($\rho=0.326$; $P=0.04$) (Table 1).

	Pes Planus			Hallux Valgus		
	CPA	THA	TMA	HVA	IMA	IPA
Ingrown nail staging	-0.019	0.179	0.326**	-0.089	0.069	-0.086

CPA = Calcaneal pitch angle; HVA. Hallux valgus angle; IMA = Intermetatarsal angle; IPA = Interphalangeal angle; THA = Talohorizontal angle; TMA = Talometatarsal angle.
 ** $P < 0.01$

Table 1: Spearman correlation analysis (N = 76) comparing the evaluation angles of pes planus and hallux valgus to the stage of ingrown nail.

Discussion:

The most common location for ingrown nails to occur is the big toe's lateral nail fold. This research showed that 73.7% of individuals experienced lateral stinging.² This was due to compression of the lateral nail fold between the two toes leads to inflammation, infection, and granulation tissue in the ingrown nails.³ Men and women both saw higher rates of ingrown nails on the lateral margin, with women experiencing statistically significant higher rates of ingrown nails (90.6 versus 61.4%).² The incidence and prevalence of ingrown nails were greater in female patients than in male individuals.³

Conclusion:

This study does not propose correcting foot anatomy to prevent or treat ingrown nails unless there was an underlying foot deformity. However, pes planus, a foot deformity, can occur in patients with severe ingrown nails.

Unless there is a concomitant foot deformity, correcting foot anatomy is not advised for the prevention or treatment of ingrown nails.

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3. A study on assessing the elevated Neutrophil–Lymphocyte and Platelet–Lymphocyte Ratios in Severe and Chronic Urticaria**Introduction:**

Urticaria is a prevalent inflammatory skin condition with a lifetime frequency of up to 20% globally. It was classified as acute (AU) for less than 6 weeks and chronic (CU) for more than 6 weeks. CU is associated with high healthcare expenses, psychiatric comorbidities, and a significant negative impact on patient quality of life.¹ Certain inflammatory markers, such the platelet-to-lymphocyte ratio (PLR) and the neutrophil-to-lymphocyte ratio (NLR), have been used to predict the occurrence and severity of cancer, cardiovascular disorders, and inflammatory diseases. Furthermore, NLR has been linked to a number of inflammatory dermatological conditions, including vitiligo, rosacea, erythema nodosum, urticaria, atopic dermatitis, psoriasis vulgaris, lupus erythematosus, and dermatomyositis. This study hypothesized that NLR and PLR will be raised in urticaria patients and may be utilized as a

predictor for illness severity due to the existence and pathophysiology of inflammatory cells in urticaria.² This study aimed to assess the NLR and PLR values in urticaria patients.

Methods:

This retrospective cohort study included patients of all ages with urticaria and blood counts within 30 days after diagnosis. Acute spontaneous urticaria (ASU) or chronic spontaneous urticaria (CSU) were the two categories assigned to the patients. If a patient had more than two separate recorded diagnoses of urticaria in a 6-week period, they were considered as CSU. In patients with ASU vs. CSU and mild-to-moderate CSU vs. severe CSU (defined by the use of systemic drugs or hospitalizations), neutrophil-to-lymphocyte and platelet-to-lymphocyte ratios were assessed.

Results:

This study comprised 13,541 participants with urticaria. In comparison to ASU patients (n=8,520), CSU patients (n=5,021) had higher serum IgE levels, neutrophil-to-lymphocyte and platelet-to-lymphocyte ratios. Compared to children, adults showed greater platelet-to-lymphocyte and neutrophil-to-lymphocyte ratios. The neutrophil-to-lymphocyte and platelet-to-lymphocyte ratios were higher in severely affected patients (n = 53) than in mild-to-moderately affected patients (n = 4,968). Patients who possessed NLR and PLR values in the upper quartile (NLR exceeding 2.89 and PLR exceeding 151)

Characteristic	OR	95% CI	p-value
NLR			
Q1			
Q2	1.09	0.98, 1.21	0.10
Q3	1.20	1.08, 1.33	<0.001
Q4	1.73	1.56, 1.92	<0.001
PLR			
Q1			
Q2	0.97	0.87, 1.07	0.5
Q3	1.01	0.92, 1.12	0.8
Q4	1.24	1.12, 1.37	<0.001

OR: odds ratio; CI: confidence interval.

Table 1: Chronic urticaria regression

were more likely to experience severe urticaria than mild urticaria (OR 2.98, OR 1.54, $p < 0.001$, $p = 0.003$). Patients with NLR and PLR in the highest quartile (NLR > 2.89 and PLR > 151) were more likely to have CSU compared to ASU (OR 1.73, OR 1.24, $p < 0.001$) (Table 1).

Discussion:

This study assessed the total serum IgE, PLR, and NLR values in patients with ASU and CSU. This study showed substantial differences in blood count parameters between patients with ASU and CSU, children and adults with CSU, and mild-to-moderate and severe CSU patients. Baseline characteristics showed that females made up the majority of patients with both ASU and CSU.² This was in line with previous study that points to an average female-to-male ratio of two to four females for every one man.³ Compared to patients with ASU, individuals with CSU showed greater IgE, PLR, and NLR levels. These were indicators that could be used to identify inflammation.² Similar result was reported in a previous study including 52 patients, suggesting a positive correlation between NLR and the duration of chronic spontaneous urticaria illness.⁴

Conclusion:

Neutrophil-to-lymphocyte and platelet-to-lymphocyte indicators can accurately predict and characterize severe and chronic urticaria.

Neutrophil-to-lymphocyte and platelet-to-lymphocyte indicators are useful for predicting and evaluating severe and chronic urticaria.

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4. Case report on epidermal cyst colliding with a giant pretibial cellular fibrous histiocytoma

Introduction:

Fibrous histiocytomas (FHs), also known as dermatofibromas, are common soft tissue lesions made up of fibroblastic and histiocytic cells. Although they can be deeply embedded, FHs are often localized in the dermis and extend into the subcutaneous adipose tissue. FHs are uncommon in the first two years of life and are typically observed in adults in the 2nd to 4th decade of life, with a female predominance. FHs usually appear as reddish-brown, single, sensitive lesions that are dome-shaped and measure less than 2 cm on the lower extremities, or less frequently on the upper extremities, trunk, or head and neck area.¹ The etiology of these proliferations was unclear, but they might occur after slight trauma (e.g., bug bites) or as clonal proliferations. Many histological variations exist, such as plexiform, angiomatous, cellular, epithelioid, common fibrous, and atypical. Most histiocytomas don't cause any symptoms.² In the present case, a long-standing histiocytoma developed more quickly, resulting in a sizable pretibial tumorous lesion.

Case Presentation:



A 43-year-old man had a long-standing pretibial tumor on his left leg that had grown unexplainably in the last three months. Despite having thrombophilia, which was managed with phenprocoumon 3 mg/day to prevent embolism, his medical history was unremarkable. He did recall a small injury to the tumor site that caused a purulent discharge to appear for a few days. The lesion was mostly asymptomatic, with the exception of some tension in recent months. Upon closer inspection, it was found that a hard lesion measuring 7 x 6 cm on an erythematous plaque, with a central nodule [Figure 1]. Skin biopsy, which revealed abnormal proliferations of spindle cells. As a result, it was decided to fully remove the lesion while leaving a 2-cm safety margin [Figure 2].

Laboratory studies: Microbiology from a lesion swab revealed *Enterococcus faecalis* and unidentified anaerobic bacteria. Both of them responded well to ampicillin/sulbactam, which was initially administered intravenously and then orally. Under treatment, the thrombocyte count was 223 Gpt/L (normal range: 120–340). Also, there was 5.9 mmol/L of increased cholesterol found (normal range <5.2). Triglycerides, creatinine, salt, potassium, thyroid stimulating

hormone, and differential blood count were all within normal ranges. For 10 days, the defect was mostly closed with vacuum assistance before a meshed skin graft transplant was carried out [Figure 3]. Healing was unremarkable. Hematoxylin-eosin-stained slices were used to conduct a thorough histological evaluation of the tumor nodule and plaque. In addition, smooth-muscle actin, desmin, pan-cytokeratin, epidermal membrane antigen (EMA), S-100, Ki-67, CD 31, CD 34, CD 68, and CD 99

Figure 1. Clinical manifestation of cellular histiocytoma with epidermal cysts.

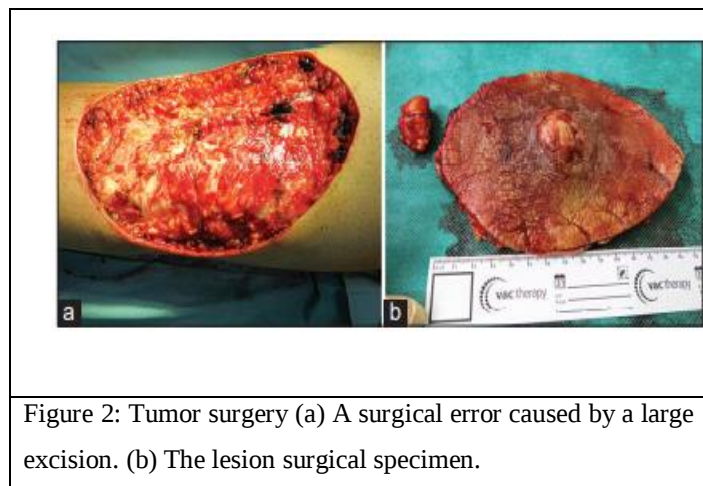


Figure 2: Tumor surgery (a) A surgical error caused by a large excision. (b) The lesion surgical specimen.

immunoperoxidase staining were carried out. The spindle-type cells that made up the nodule lacked both mitotic activity and atypia. There appeared to be vestiges of an epidermal cyst due to a central necrosis of epithelioid cells. The tumor cells mixed with circulatory spaces and were organized in a storiform pattern. Hemostasis depots, persistent inflammation, and a large number of capillary blood vessels were seen in the area. The tumor cells tested negative for EMA, smooth-muscle actin, keratin, desmin, and CD 34, but positive for CD 68 and CD 99. The S-100 and CD 68 were co-expressed by some histiocytic cells. The endothelial cells showed CD 34 and 31 expressions. While angiomatoid or aneurysmatic histiocytomas as well as malignant fibrous tumors could be ruled out of the investigation, the diagnosis of a cellular benign histiocytoma collision with an epidermal cyst was confirmed.



Figure 3: (a) Vacuum-assisted closure stimulating granulation of the wound ground. (b) On the sixth day following surgery, a stable mesh split skin transplant.

Discussion:

This case described a patient who had a pretibial tumorous mass for a long time that had rapidly enlarged. Based on histological investigation, a cellular fibrous dermatofibroma (CFD) was identified. In certain instances, CD43-positive cells may even be seen in CFD.² In a previous study, it was shown that, twenty-eight of the 29 lesions that were screened for CD34 found negative, and one had an uncommon label. Also, 32 lesions were examined for S-100, and only one lesion tested positive.³

Conclusion:

A histological examination was necessary for proliferation skin cancers in order to rule out malignant change. Rarely, tumor growth may be caused by a second tumor that was unrelated to the primary one.

A histological investigation was required for proliferating skin malignancies to rule out malignant changes.

Reference:

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