MICRO LABS LIMITED

DERMA TODAY

Volume 3 | Issue 30|2022

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:

1. A retrospective analysis of 32 newborns and a care plan for subcutaneous fat necrosis
2. Relationship between Rosacea Severity and Quality of Life or Psychological State

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.

A retrospective analysis of 32 newborns and a care plan for subcutaneous fat necrosis

A rare, self-resolving panniculitis (i.e., inflammation of the subcutaneous fat) that affects full-term and near-term newborns is known as subcutaneous fat necrosis (SCFN). Firm, uncomfortable red subcutaneous nodules and plaques, typically on the trunk, arms, and shoulders, less frequently on the legs or head, and frequently stiff overlying skin are its defining features.[1] Newborns who have previously experienced prenatal stress in the form of cord prolapse, hypothermia, hypoxia, meconium aspiration, and/or infection are more likely to acquire this illness. Prenatal history may indicate the existence of maternal diabetes, hypertension, preeclampsia, hypothyroidism, and/or placental abruption, making this specific demographic of mothers more vulnerable to the birth of infants with SCFN.[2] This study's objectives were to report the clinical and laboratory results of newborns with subcutaneous fat necrosis (SCFN) and to suggest a management strategy.[3]

The study's methods involved a retrospective analysis of newborns with SCFN diagnoses. Each patient's data was gathered, including their demographics, maternal health history, history of their pregnancy and birth, clinical traits from each dermatologist appointment, and all clinical and laboratory results pertaining to SCFN. Elevated total or ionised calcium was referred to as hypercalcemia.

The majority of the 32 infants who matched the criteria for inclusion were born full-term (84%), by caesarean section (58%), had normal weights for their gestational ages (69%), and had difficult deliveries (53%). Ninety one percent of the babies, or 29, who had calcium drawn all had hypercalcemia. Three newborns experienced clinical signs of hypercalcemia, two had to be admitted to the hospital, two had nephrocalcinosis, and one had an acute kidney injury. Ionized calcium peaked in the majority of infants (62%) between 1.5 and 1.6 mmol/L. No newborns with a peak ionised calcium level less than 1.5 mmol/L experienced hypercalcemia-related problems. The majority of patients (86%) had hypercalcemia, and 59% had peak ionised calcium levels within the first 28 days of life. No patients after the age of three months experienced hypercalcemia.

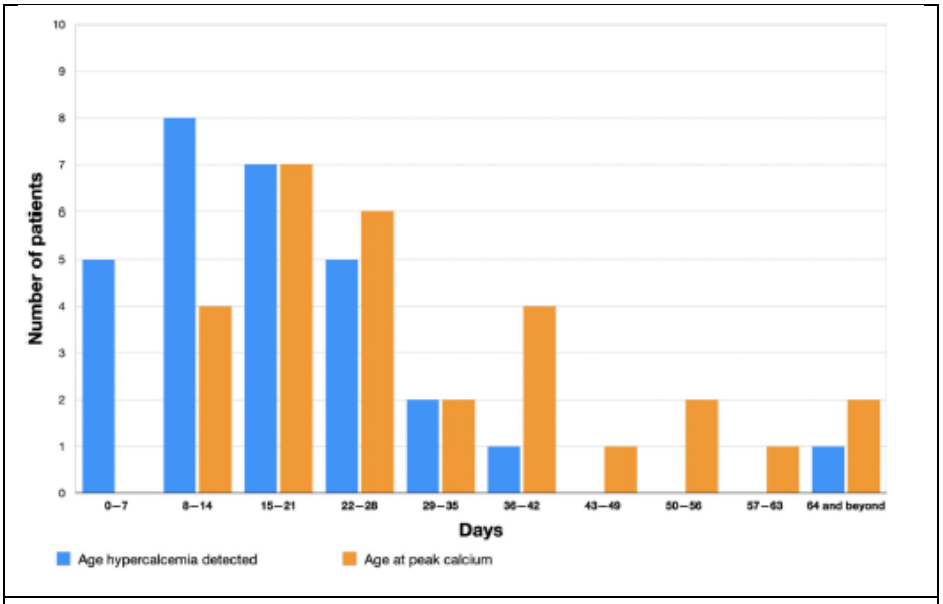


Fig. 1: Age at diagnosis of hypercalcemia and age at peak of ionized calcium

Low and high birthweight have been linked in the past to an increased risk of hypercalcemia in newborns with SCFN. In contrast, the weight for gestational age of 69% of the newborns in this sample who had hypercalcemia was appropriate. 3 Of the 29 individuals with hypercalcemia, complications from it happened in 20% (n = 6) of them. Clinical signs of hypercalcemia (such as fussiness, poor feeding, and irritability) (n = 3), the need for admission for hypercalcemia treatment (n = 5), nephrocalcinosis (n = 2), and acute kidney injury (n = 1) were all considered complications. Some patients had more than one of the aforementioned issues. The fact that three individuals who experienced problems from hypercalcemia did not exhibit any clinical signs is noteworthy and emphasises the value of ongoing calcium monitoring. It has been proposed that nephrocalcinosis and the severity of hypercalcemia are related.[4] Calcium did not return to normal in either of our patients with nephrocalcinosis until they were older than 2 years, indicating that persistent hypercalcemia may be a significant risk factor for this condition. The literature has documented long-term hypercalcemia as a side effect of SCFN.[3]

All infants with laboratory monitoring had hypercalcemia. When SCFN is suspected, this study advises getting an initial ionised calcium test and monitoring for the first three months of life if hypercalcemia has not been found. There seems to be a low

Reference:

1. Rodd C, Schwieger-Briel A, Hagmann C; Newborn Brain Society Guidelines and Publications Committee. Subcutaneous fat necrosis associated with hypercalcemia in neonates with neonatal encephalopathy treated with therapeutic hypothermia. Semin Fetal Neonatal Med. 2021 Aug;26(4):101269.
2. Al-Ghamdi WM, Milyani AA, Al-Agha AE. Extensive subcutaneous fat necrosis complicated by neonatal hypercalcaemia. Acta Biomed. 2021 Apr 30;92(S1):e2021081.
3. Siegel LH, Fraile Alonso C, Tuazon CFR, Mancini AJ, Kruse LL, Miller JL, Wagner AM, Yun D, Kenner-Bell BM, Paller AS, Chamlin SL. Subcutaneous fat necrosis of the newborn: A retrospective study of 32 infants and care algorithm. Pediatr Dermatol. 2022 Dec 21.
4. Chrysaidou K, Sargiotis G, Karava V, et al. Subcutaneous fat necrosis and hypercalcemia with nephrocalcinosis in infancy: case report and review of the literature. Children. 2021;8(5):374.

Relationship between Rosacea Severity and Quality of Life or Psychological State

There are four basic clinical subtypes of rosacea, including erythematotelangiectatic, papulopustular, rhinophymatous, and ocular. Despite the fact that a number of hereditary and environmental factors have been connected to rosacea triggers.[1] Clinically, it is distinguished by persistent central facial erythema and recurring chronic flushing episodes. Common cutaneous symptoms of rosacea include papulopustules, telangiectasia, phymatous alteration, and flushing. Each person exhibits different combinations and intensities of the clinical signs and symptoms of rosacea. There is a significant psychological strain placed on rosacea patients that should not be understated.[2] Dermatologists are now increasingly concerned about how rosacea affects quality of life and mental health. Numerous studies have revealed that rosacea patients have a higher risk of anxiety and depression as well as lower QOL. Therefore, the purpose of this study was to look into the psychological state and quality of life (QOL) of rosacea patients.[3]

In the study, rosacea phenotype-based clinical symptoms such as flushing, persistent erythema, papules and pustules, telangiectasia, phymatous alterations, edoema, dryness, burning, and stinging sensation were evaluated. Additionally, the study gathered data on the rosacea comorbidities and disease duration. The earliest and most popular dermatology-specific QOL was the Dermatology Life Quality Index (DLQI). Selection bias is less likely in this study because all rosacea patients had their diagnoses made by the same senior dermatologist in accordance with the diagnostic criteria. Specialized dermatologists awarded severity scores to the patients (Investigator's Global Assessment [IGA] and Clinician's Erythema Assessment [CEA]), and each score was completed by the same physician.

Included were 469 rosacea patients. Dermatology Life Quality Index (DLQI) affected degree was moderately severe, with mean score of 12.6 ±7.7. Rosacea-specific Quality-of-Life Instrument (RosQol) total score was 2.34± 0.84; emotion, symptom, and function scores were 2.41 ±0.99, 2.37± 0.82, and 2.03± 0.89, respectively. 37.5% of patients had depression, while

44.8% of patients had anxiety. The incidence of anxiety ($p < 0.001$), the DLQL ($p = 0.02$), RosQol mood ($p = 0.04$), symptom ($p < 0.01$), and function ($p = 0.02$) scores at the various severity levels all showed statistically significant differences. Furthermore, there was a strong association between declining QOL and worsening illness severity (Spearman's rank correlation index (r) ranging from 0.171 to 0.266, $p<0.01$ for RosQol; $r = 0.104$, $p = 0.024$ for DLQI). Additionally, there was a strong association between anxiety and the various severity levels ($r = 0.155$; $p < 0.01$)

Table 1 : Correlation Between the Severity of Rosacea and Its QOL and Psychological Status (Anxiety and Depression)

	IGA		CEA	
	Correlation Index	P	Correlation Index	P
DLQI	0.104	0.024	0.052	0.257
Anxiety	0.155	<0.01	0.073	0.116
Depression	0.076	0.102	0.028	0.549
RosQol total	0.218	<0.01	0.111	0.016
RosQol emotion	0.171	<0.01	0.078	0.092
RosQol symptoms	0.266	<0.01	0.151	<0.01
RosQol function	0.175	<0.01	0.104	0.025

IGA: Global Assessment ; CEA: Clinician's Erythema Assessment

The findings of this study demonstrated that rosacea primarily had a moderate to severe influence on quality of life, with an average DLQI score of 12.6±7.7. Rosacea not only negatively impacts patients' QOL, but also their psychological well-being. Numerous comorbidities are linked to rosacea. Depression and rosacea have some of the most prevalent psychosocial comorbidities in common, and they are strongly correlated—the worse the rosacea, the worse the depression. Additionally, rosacea sufferers frequently experience an aggravation of their condition due to emotional stress.[3] The study by Chen M. et al. found a correlation between depression and younger age, more severe self-reported symptoms, more adaptive actions, and a higher disease burden.[4] According to a brief case study, cognitive-behavioral therapy administered by a skilled clinical psychologist may assist patients with severe rosacea who are blushing socially reduce their clinical symptoms. Recognizing the

emotional impact of rosacea allows physicians to treat patients more thoroughly and aim for better results.[3]

Rosacea may have a more profound effect on the QOL and mental health of patients. And when disease severity increases, the impact on QOL and mental health generally deteriorates noticeably. The connection shows that QOL assessment is crucial to clinical practise and needs to be researched further.

Reference:

1. Morss-Walton P, McGee JS. Rosacea, not just skin deep: Understanding thesystemic disease burden. Clin Dermatol. 2021 Jul-Aug;39(4):695-700.
2. Woo YR, Han YJ, Kim HS, Cho SH, Lee JD. Updates on the Risk of Neuropsychiatric and Gastrointestinal Comorbidities in Rosacea and Its Possible Relationship with the Gut-Brain-Skin Axis. Int J Mol Sci. 2020 Nov 10;21(22):8427.
3. Yang F, Zhang Q, Song D, Liu X, Wang L, Jiang X. A Cross-Sectional Study on the Relationship Between Rosacea Severity and Quality of Life or Psychological State. Clin Cosmet Investig Dermatol. 2022 Dec 20;15:2807-2816.
4. Chen M, Deng Z, Huang Y, Li J. Prevalence and Risk Factors of Anxiety and Depression in Rosacea Patients: A Cross-Sectional Study in China. Front Psychiatry. 2021 Jun 16;12:659171.

Seasonal Trends in Ambulatory Visit Burden in Patients with Hidradenitis Suppurativa

Introduction:

Hidradenitis suppurativa (HS) is a chronic, debilitating inflammatory skin illness characterised by painful nodules, abscesses, and tunnels, which are frequently found in intertriginous regions. Heat, friction, and perspiration have been found to exacerbate HS symptoms in patients with HS, particularly in warmer locations. Despite this, seasonal patterns in the ambulatory visit burden owing to HS are poorly understood. The study looked at the seasonal burden of ambulatory visits owing to HS in the US. [1]

Methods:

The National Ambulatory Medical Care Survey, a nationally representative database of ambulatory visits in the United States, was utilised in the study to analyse seasonal changes in ambulatory visits for patients with HS. SAS Studio 9.04.01 (SAS Institute, Cary, N.C., USA) was used for data analysis, and variation in the complicated survey design was accounted for by applying survey weights to provide national estimates and confidence intervals.

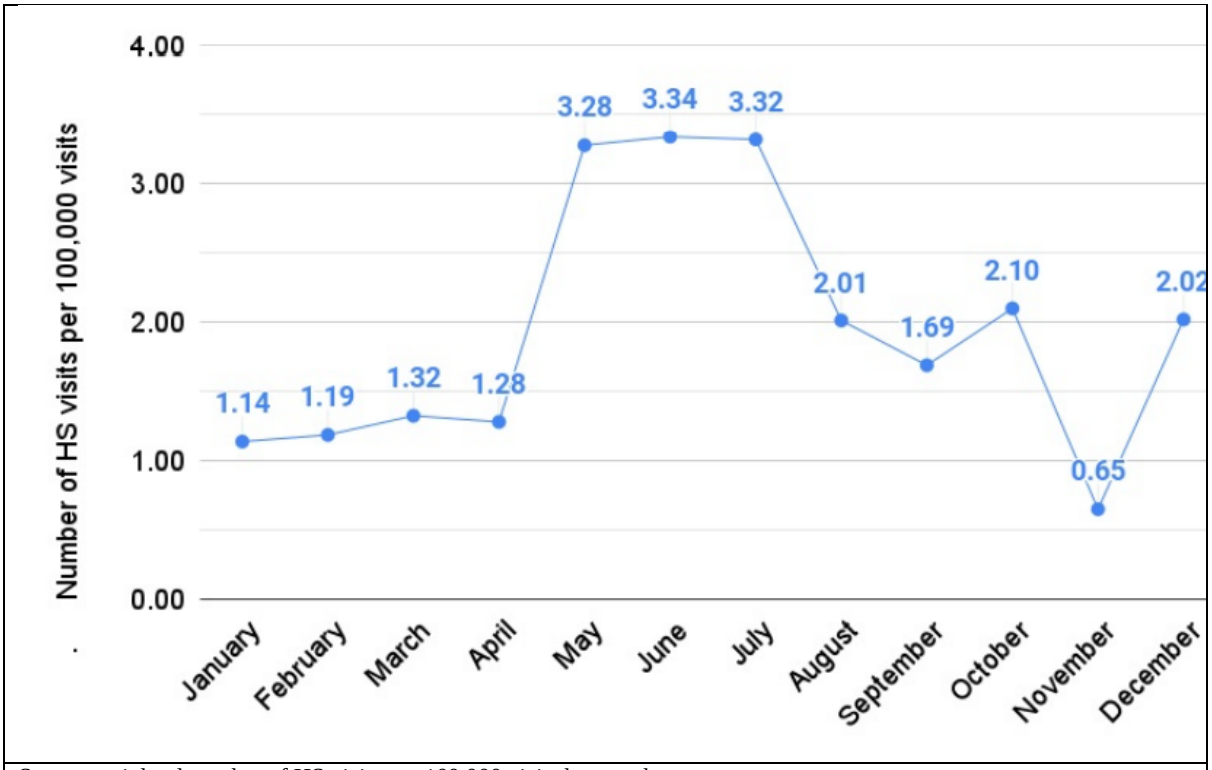
Results:

Between 2008 and 2018, the analysis identified about 2.33 million outpatient visits (95% confidence interval 1.95 million-2.71 million) with a diagnosis of HS. Approximately 21% of visits occurred from January to April, 51% from late spring to summer (May to August), and

28% from autumn (September to December). There was a significant difference in the number of visits between these three time periods (X2=13.1, p=0.0014).

Discussion:

This nationally representative cohort demonstrates the increasing ambulatory load of HS patients from May to August. This corresponds to a larger burden of national emergency room visits throughout the summer owing to HS. [2] The temporal trends might be related to increased hyperhidrosis and friction in warmer regions, both of which patients have highlighted as aggravating aspects of HS that degrade quality of life. Sweating, heat, and activity are frequently reported as exacerbating HS variables by patients. Other skin disorders, such as acne, have also been linked to seasonal exacerbation. [3] Anticipation of seasonal illness load and adjustments in therapy, such as commencing or changing anti-hyperhidrosis drug dosing, may aid in disease control. [4] Botulinum toxin was found to ameliorate illness in certain HS patients with or without concurrent hyperhidrosis in a comprehensive assessment of anti-hyperhidrosis therapy in HS. Clinicians may also advise patients on how to stay cool and avoid friction. It is particularly critical to continue monitoring patients' mental and emotional well-being throughout the warmer months, when flares may be more common.



Survey-weighted number of HS visits per 100.000 visits by month

Conclusion:

The findings of the study should assist dermatologists anticipate a higher burden of HS treatment throughout the late spring and summer months, ensuring continuing access to care and addressing potential season-related HS triggers like as hyperhidrosis early.

Awareness of the increased prevalence of HS during the summer months may aid in management, such as anticipatory counselling on strategic lifestyle changes and the commencement of anti-hyperhidrosis medicines.

Reference:

1. Shih T, De D, Rick J, Shi V, Hsiao JL. Seasonal Trends of Ambulatory Visit Burden in Hidradenitis Suppurativa Patients. SKIN The Journal of Cutaneous Medicine. 2022 Sep 12;6(5):387-91.
2. Tripathi R, Korman NJ, Ezaldein HH. Seasonal burden of National Emergency Department visits due to hidradenitis suppurativa. Journal of the American Academy of Dermatology. 2022 Jun 1;86(6):1362-5.
3. Narang I, Sardana K, Bajpai R, Garg VK. Seasonal aggravation of acne in summers and the effect of temperature and humidity in a study in a tropical setting. Journal of cosmetic dermatology. 2019 Aug;18(4):1098-104.
4. Del Boz J, Millán-Cayetano JF, García-Montero P, García-Harana C, Rivas-Ruiz F, de Troya-Martín M. Adjusting oral oxybutynin medication for hyperhidrosis to reflect seasonal temperature variations. Dermatologic Therapy. 2018 Jul;31(4):e12615.

The Butterfly Sign in Scabies: An Evolutionary Process?

Introduction:

Human scabies is a global skin infection caused by the mite Sarcoptes scabiei hominis that is still a major public health problem. The discovery of the mite is critical for diagnosis, and entodermoscopy enhances diagnostic reliability significantly. Because of its refractile region placed between the buccal apparatus and the second set of legs, the mite is visible on dermoscopy near the burrow's head. This sign is also known as a "triangle" sign, a "delta glider" sign, or a "hang glider" sign. [1] On wet dermoscopy, the "triangle" indication is commonly accompanied by reflecting bubbles down the tunnel known as the "jet trail" sign. Other less often observed dermoscopic indications have been recorded, including the "gray-edge line" sign, which is caused by the presence of mite faeces containing melanin. [2] This study describes a novel dermoscopic sign discovered in two patients during the age of Sarcoptes scabiei hominis' growing resistance to traditional therapies.

Case Report:

The researchers looked at two cases of young patients (a 10-year-old male and a 5-year-old male) who were admitted to the dermatologic unit for scabies that had been present for several months and were treated with repeated cycles of permethrin 5% cream. Physical examination revealed persistent multiple mite burrows with classic dermoscopic image of "delta glider" sign (Figure 2, A-C, asterisk), corresponding to the anterior part of the mite (Figure 2, B-D, asterisk), associated with a new dermoscopic sign, which we called the "butterfly" sign, characterised by a butterfly-shaped reddish area just below the "delta glider" sign (Figure 2, B-D, asterisk) (Figure 2, A-C, arrow).

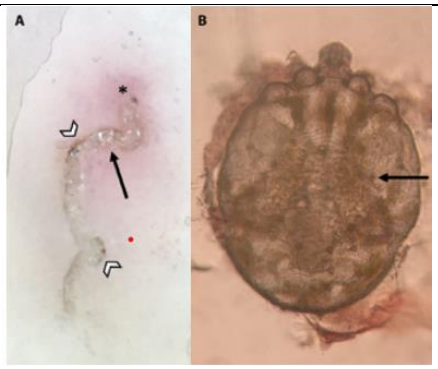


Figure 1. (A) Dermoscopy of a scabies burrow showing the “delta glider” sign (asterisk), reflective bubbles within the burrow referred to as “jet trail” sign (arrow) and blackish-gray lines at some points of the burrow walls consistent to the “gray-edge line” sign (arrowhead). (B) Microscopic examination of a Sarcoptes scabiei hominis with classical features: the gut area appears poorly demarcated and of the same color of the adjacent structures (arrow).

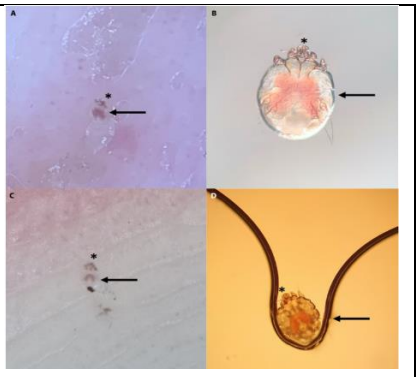


Figure 2. Dermoscopic evaluation of a scabies burrow of the 5-years old patient (A) and of the 10-years old patient (C) with the corresponding microscopic appearance of the scraped mites (B and D). (A-C) Both dermoscopic images show the “delta glider” sign (asterisks) and the presence, just below, of a reddish structure corresponding to the “butterfly” sign (arrows). (B-D) Microscopic features of the anterior part of the mite body (asterisks) and of the underlying gut area which appear well demarcated and reddish in color (arrows)

The microscopic inspection of the scraped skin in the vicinity of the burrow revealed the existence of the mite with a well-defined butterfly-shaped stomach region and a crimson colouring resembling blood in both individuals (Figure 2, B-D, arrow). It should be noted that the stomach region of the Sarcoptes scabiei hominis mite is not always readily visible under the microscope (Figure 1B, arrow).

Discussion:

Several writers have recently documented the rising issue of mite resistance to traditional trea tments, particularly permethrin, as in these examples [3].

Conclusion:

This study offers a new dermoscopic sign as a potential marker of Sarcoptes scabiei hominis progression based on these unique findings.

Given these novel findings, this study proposes a new dermoscopic sign as a prospective marker of Sarcoptes scabiei hominis progression.

Reference:

1. Oranges T, Pedaci FA, Filippeschi C. Butterfly sign in scabies: towards an evolutionary process?. Dermatology Practical & Conceptual. 2022 Jul 28:e2022098-.
2. Ueda T, Katsura Y, Sasaki A, Minagawa D, Amoh Y, Shirai K. Gray-edged line sign of scabies burrow. The Journal of Dermatology. 2021 Feb;48(2):190-8.
3. Mazzatenta C, Piccolo V, Argenziano G, Bassi A. Is Scabies becoming less sensitive to permethrin therapy?. Journal of the European Academy of Dermatology and Venereology: JEADV. 2021 May 11.