IADVL

IADVL SIG DERMOSCOPY NEWSLETTER

Dermoscopy of Cutaneous Vascular Lesions

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WELCOME NOTE

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Dear IADVLites,

Wishing you all a happy and healthy new year 2022 !

This newsletter reviews current knowledge of dermoscopic features of the most frequent cutaneous vascular lesions (Vls). Cutaneous VLs comprise of skin conditions that originate from or affect blood or lymphatic vessels; including malignant or benign tumors, malformations and inflammatory diseases. Cutaneous VLs are very common and their correct and prompt recognition is of paramount importance for daily dermatology practice.

The analysis and interpretation of the shapes and distribution of vascular structures through dermoscope is definitely an important step in diagnostic pathway. The imaging of deeper blood vessels and deeply pigmented lesions can be enhanced by orange light (581-600nm).

Common VLs include pyogenic granuloma, cherry angioma, infantile hemangioma, verrucous hemangioma, and vascular malformations such as capillary (port-wine stain, angiokeratoma, and telangiectasia), venous and lymphatic malformations.

As dermoscopy provides a horizontal view of the lesion, it allows the identification of a wide variety of vascular structures, including morphological and architectural features whereas, it is difficult to fully appreciate the morphologic features of vessels in histology which shows a vertical view of sections of lesions. Thus, dermoscopy may provide additional information of diagnostic value.

Though cutaneous VLs can be diagnosed clinically, sometimes they may mimic many aggressive malignant tumors such as malignant melanoma, amelanotic melanoma, poorly differentiated SCC, Merkel cell carcinoma, dermatofibrosarcoma protuberans, etc. In such conditions, dermoscopy plays a prime role in diagnosis and helps to avoid unnecessary excision.

We hope you will enjoy learning about colorful vascular lesions through the eye of dermoscope.

Regards

Dr. Hita Mehta

AN APPROACH TO DERMOSCOPY OF VASCULAR LESIONS

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Dermoscopic features of vascular lesions are divided mainly into two

1)Key features

Lacunae
- o Color of lacunae
- o Structure of lacunae
- o Size of lacunae

Other Vascular structures and their types and patterns
- Vessel morphology
- Architectural arrangement
- Other criteria

2) Other nonspecific features

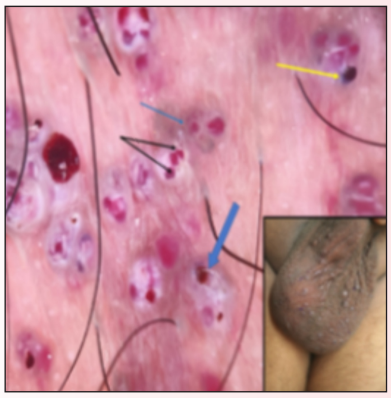
- Homogenous area
- Background color
- White rail lines
- White collarette
- Pigment network
- Hyperkeratosis
- Veil like appearance
- Peripheral erythema
- Fissure and ridges
- Ulceration

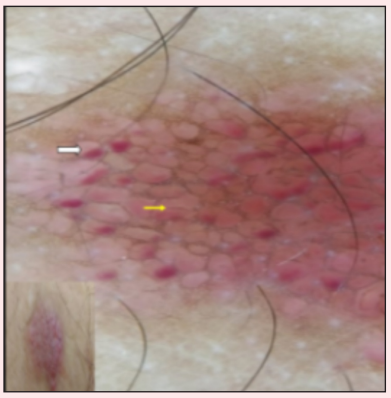
LACUNAE

Color of Lacunae:

- It may vary in different vascular lesions or in the same lesion such as various shades of red, reddish brown, dark brown and purple color. E.g Lacunae are dark red in angiokeratoma.
- Lacunae are mainly seen in cherry angioma, angiokeratoma, infantile hemangioma, verrucous hemangioma, angioma serpiginosum .
- **Half & half lacuna**- Lacunae with two different colors are seen in lymphangioma circumscriptum, angiokeratoma

Angiokeratoma
Well defined ovoid to round red lacuna (Black arrow), dark blue lacuna(Yellow arrow), Greyish white veil (Blue thin arrow), scales (Blue thick arrow)

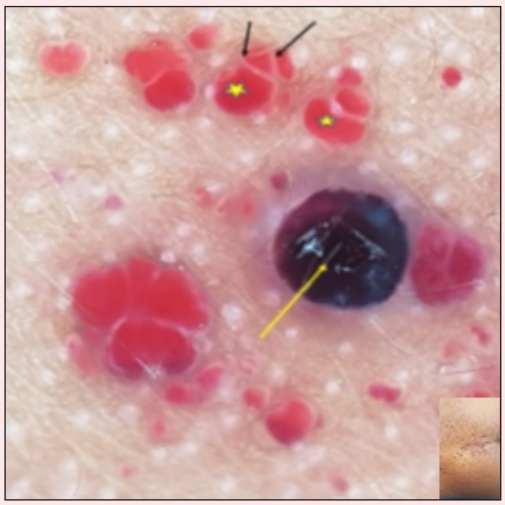




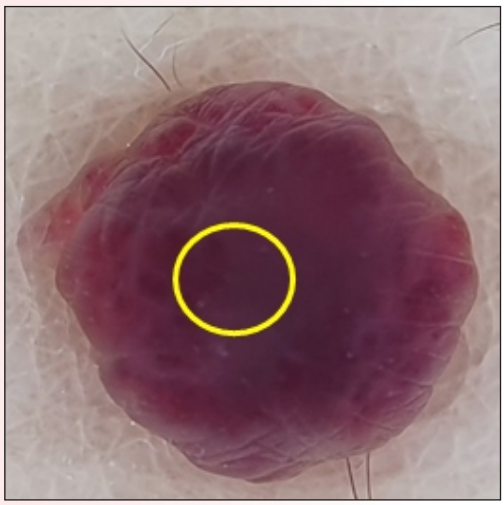
Lymphangioma circumscriptum showing half and half lacuna (pink in upper and red in lower part) and pink homogenous area (yellow arrow)

Structure of lacunae

- Most of the lacunae are well defined in cases of angiokeratoma, angioma serpiginosum, lymphangioma circumscriptum.
- Ill defined lacunae are seen relatively more in cherry angioma , infantile hemangioma



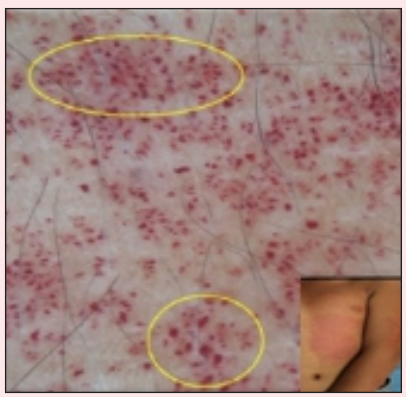
Angiokeratoma showing well defined ovoid to round Red lacuna (Yellow star), dark Blue lacuna (Yellow arrow), pale white collarette (Black arrow),



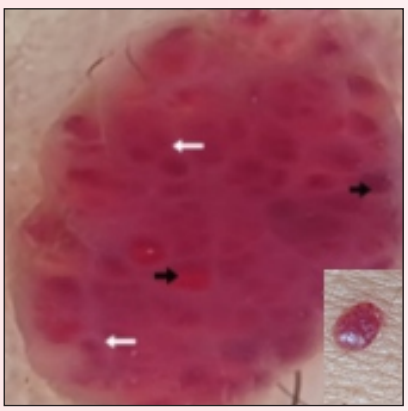
Cherry angioma showing ill defined lacunae (yellow circle)

Size of lacunae: :

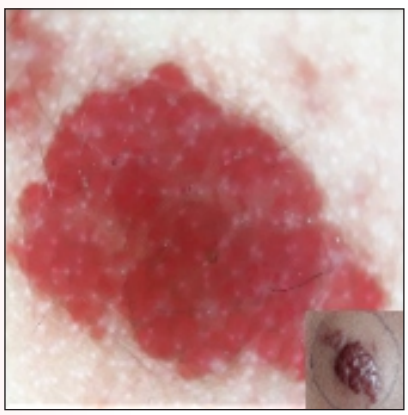
· Size may vary in different lesions. In Angioma serpiginosum most of the lacunae are small as compared to those seen in other lesions



Angioma serpiginosum showing relatively small lacunae (yellow circle)



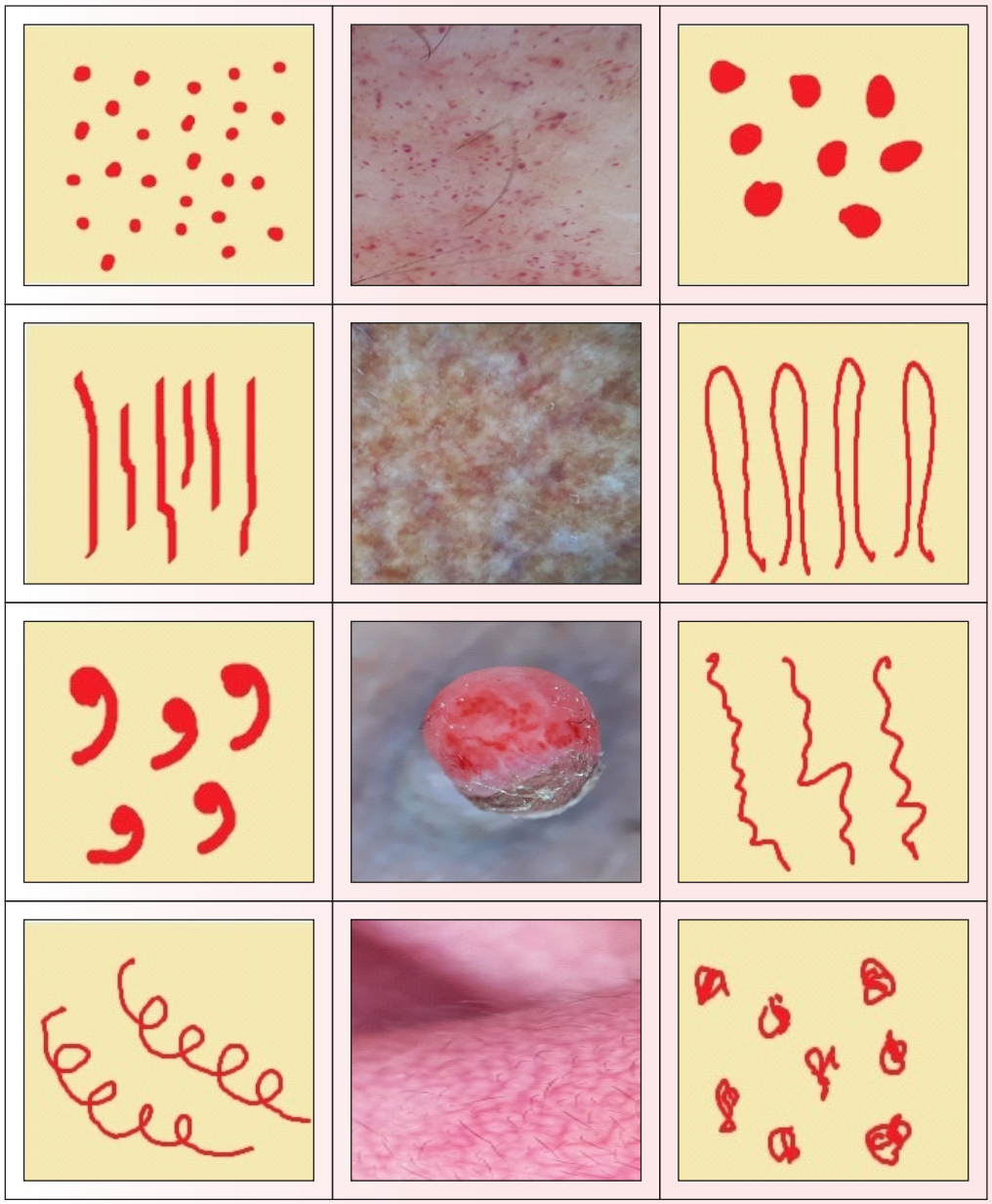
In cherry angioma size of lacunae is relatively small as compared to infantile hemangioma



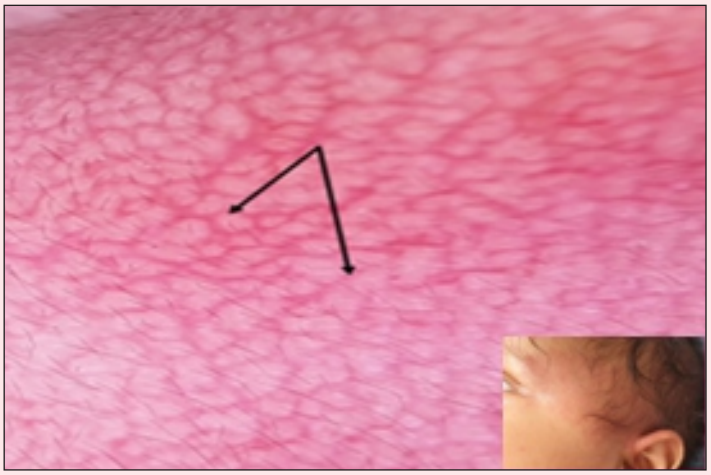
Infantile hemangioma showing larger lacunae

VASCULAR STRUCTURE

- Different vascular patterns and arrangements can be seen, out of which Irregular tortuous, dilated, linear and dotted vessels (light red, dark red or purple) are common. Because dermoscopy provides a horizontal view of the skin, vessels that run parallel to the skin surface are visualized as lines, while those that run perpendicularly are generally viewed as dots or even loops. (*)

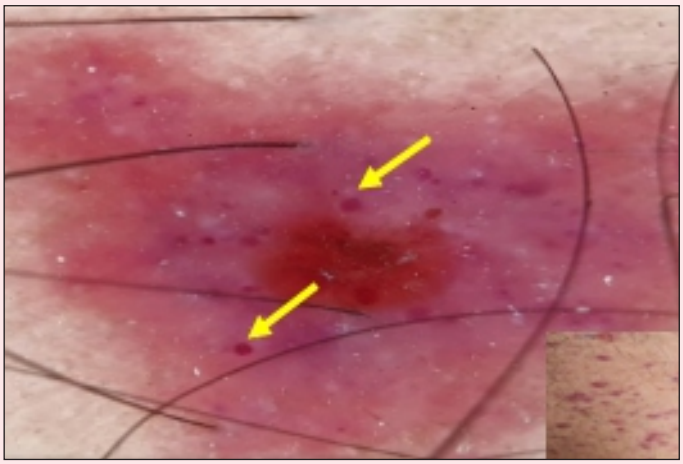


- Lesions predominantly showing vascular patterns includes - Port wine stain, urticarial vasculitis, pyogenic granuloma, infantile hemangioma, Cherry angioma etc.

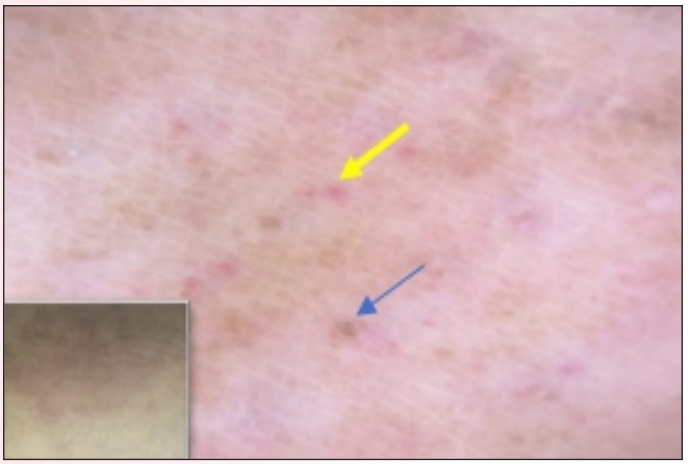


Port wine stain
Red linear vessels in irregular network like arrangement (type 1 vessels)(deep pattern) (black arrow)

Port wine stain
Mixed pattern with red dotted and globular vessels or type 2 vessels indicating superficial pattern(black arrow) and dilated and tortuous vessels or type 1 vessels(deep pattern)(yellow arrow)



Small vessel vasculitis showing blurred purpuric dots and globules (yellow arrow)



Urticarial vasculitis showing blurred red globules (blue arrow) and brown globules (yellow arrow)

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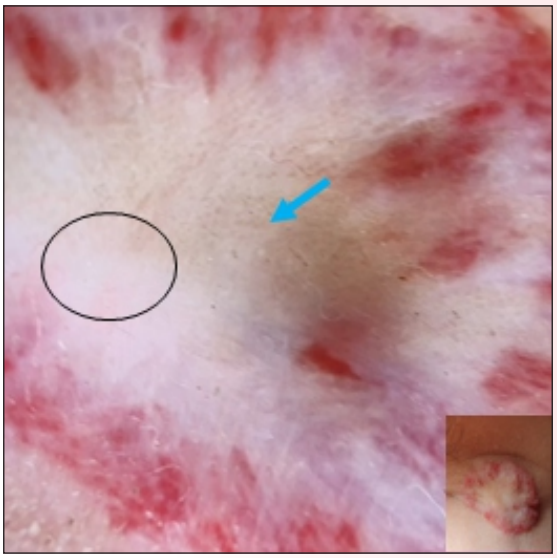
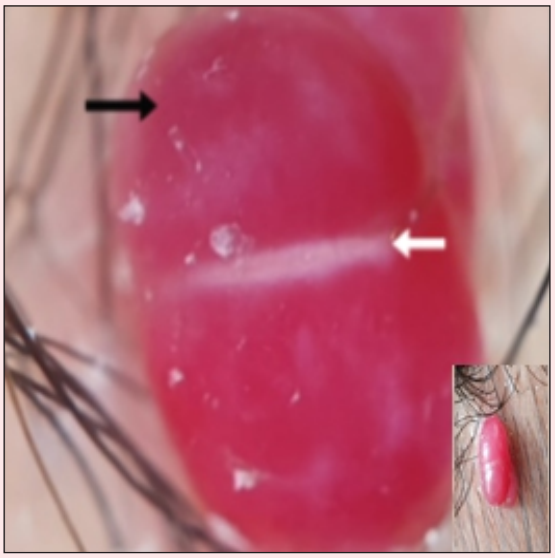
NONSPECIFIC FEATURES

Homogenous area:

- This looks like structureless zone which can show various colors.
- Pyogenic granuloma shows red or pink colored homogenous area.
- Resolving phase of infantile hemangioma shows white and brown structureless areas



Infantile hemangioma in resolving stage showing white structureless area (black circle) and brown area (blue arrow)



Pyogenic granuloma show red homogenous area(black arrow) and white rail lines (white arrow)

Background color :

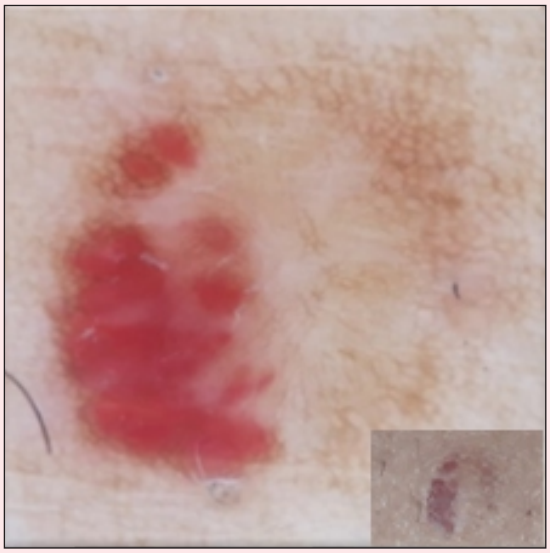
- Shows many different colors in different lesions such as orange/ yellow/ brown colors are seen in - PPD
- Shades of Purple color seen in - Senile purpura, small vessel vasculitis

PPD showing orange and brownish background

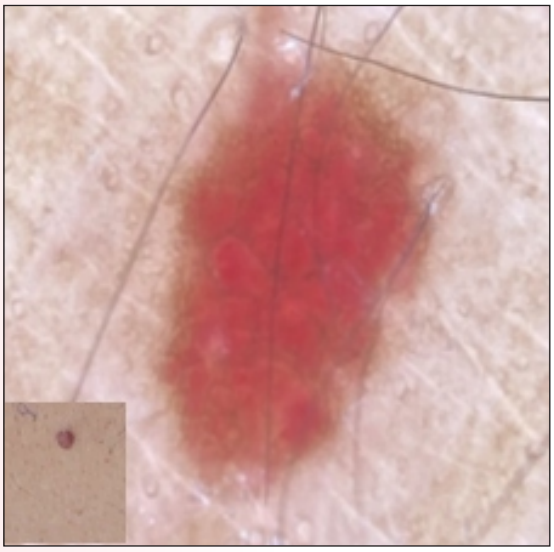
Senile purpura showing purplish background

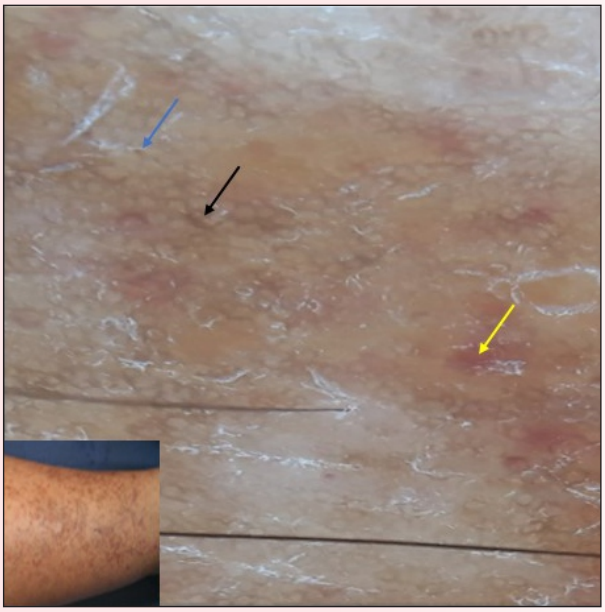
Pigmentation :

- Can be seen in the form of broken Pigment network in- cherry angioma
- As interconnecting brown/ grey lines and red dots / globules / patches are seen along with subtle grey/brown dots – in Pigmented purpuric dermatosis
- Peripheral pigmentation is also seen in lymphangioma circumscriptum and small vessel vasculitis



Cherry angioma showing peripheral pigment network

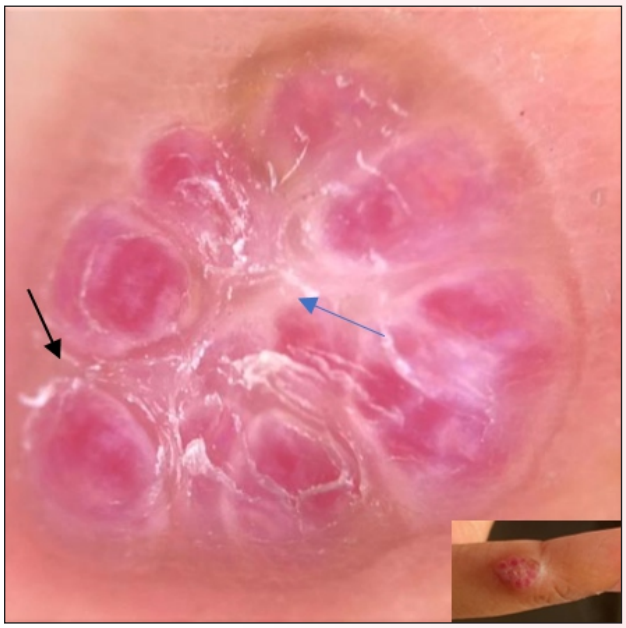




PPD showing brown interconnecting lines (black arrow) red globules(yellow arrow) and brown globule(blue arrow)

White Collarette and White rail lines :

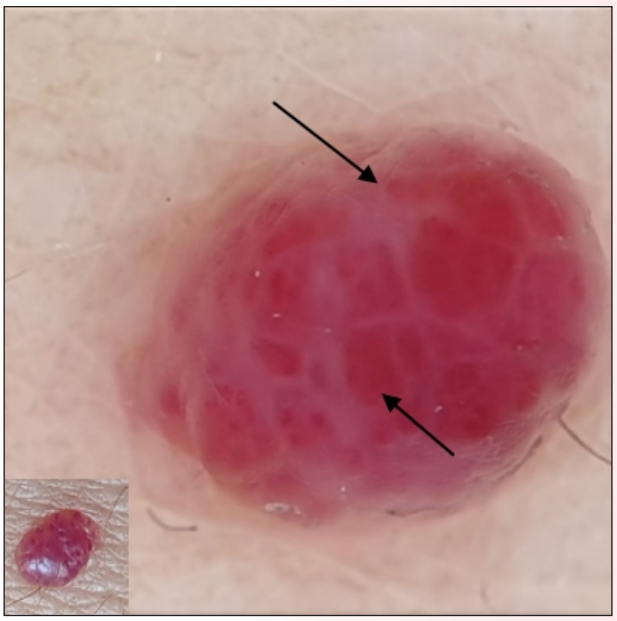
- White collarette surrounding the lesion is characteristic feature of Pyogenic granuloma though it can be seen in Angiokeratoma also.
- White rail lines are lines that intersect the lesions.



Pyogenic granuloma showing white collarette (black arrow) and white rail lines (blue arrow)

Septa :

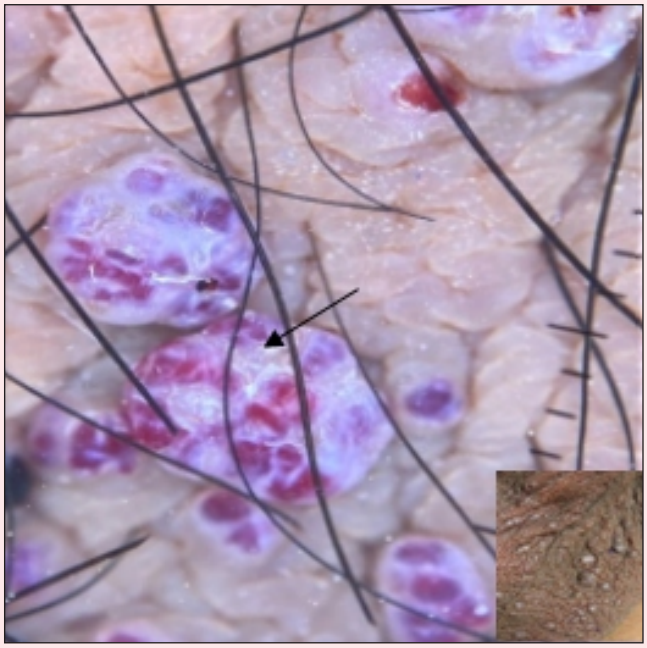
- Whitish septa are found in few lesion of Cherry angioma, Infantile hemangioma, Pyogenic granuloma, Angiokeratoma and LC



Cherry angioma showing white septa (black arrows)

Prominent hyperkeratosis :

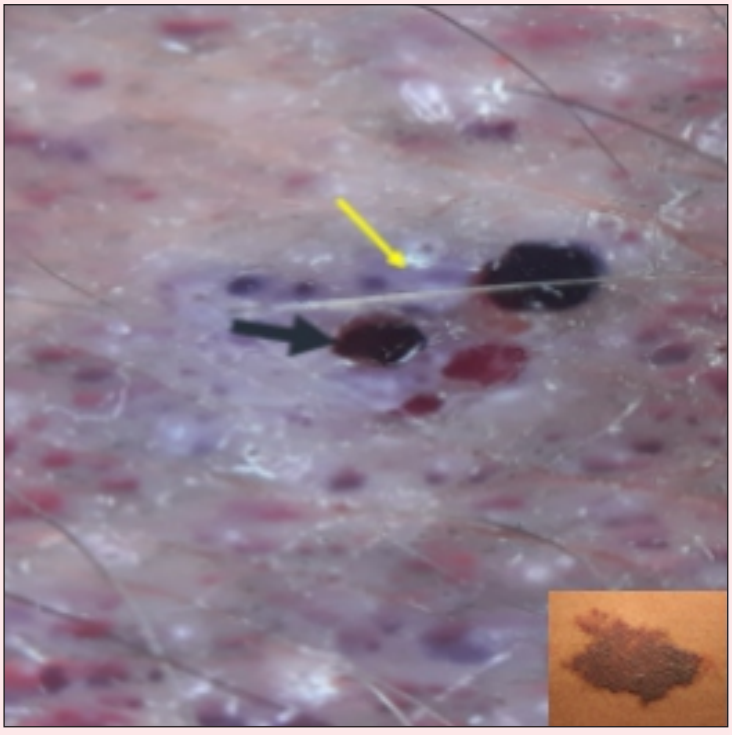
- Verrucous hemangioma , angiokeratoma shows hyperkerastosis (especially in scrotal lesions)



Angiokeratoma over scrotum showing hyperkeratosis (black arrow)

Veil like appearance:

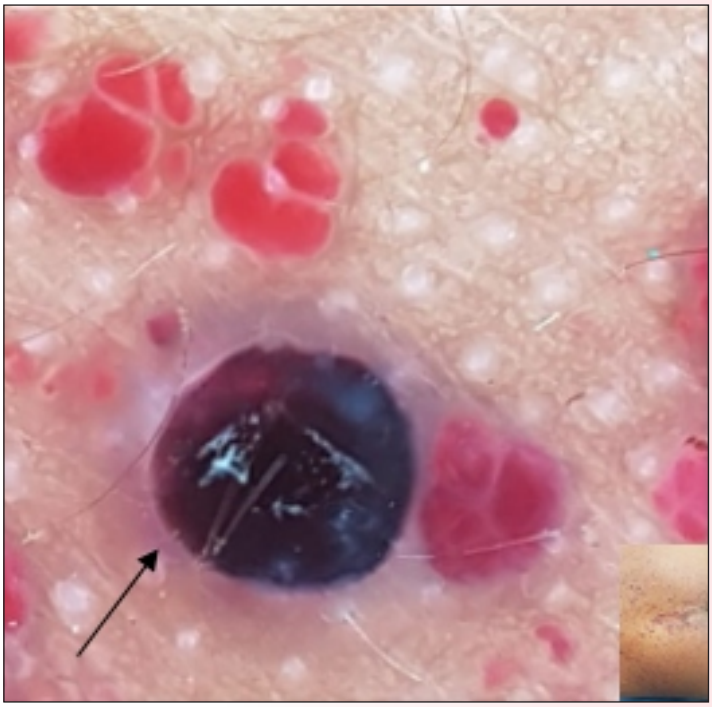
- Bluish-white/ whitish veil covering the surface of the lesion is seen in angiokeratoma.



Angiokeratoma showing whitish veil (yellow arrow) and hemorrhagic crust (black arrow)

Peripheral erythema :

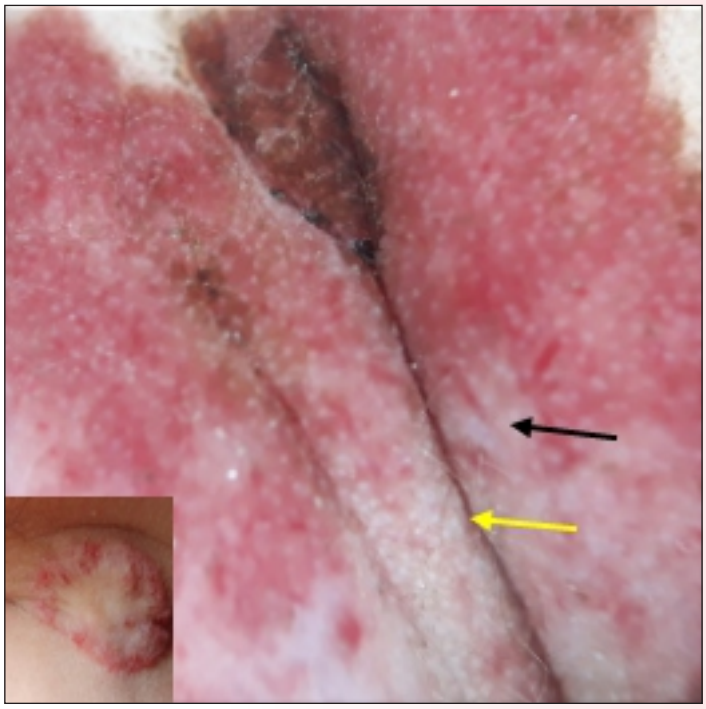
- It is seen in angiokeratoma, pyogenic granuloma, Infantile hemangioma, vasculitis.



Angiokeratoma showing peripheral erythema (black arrow)

Fissure and ridges :

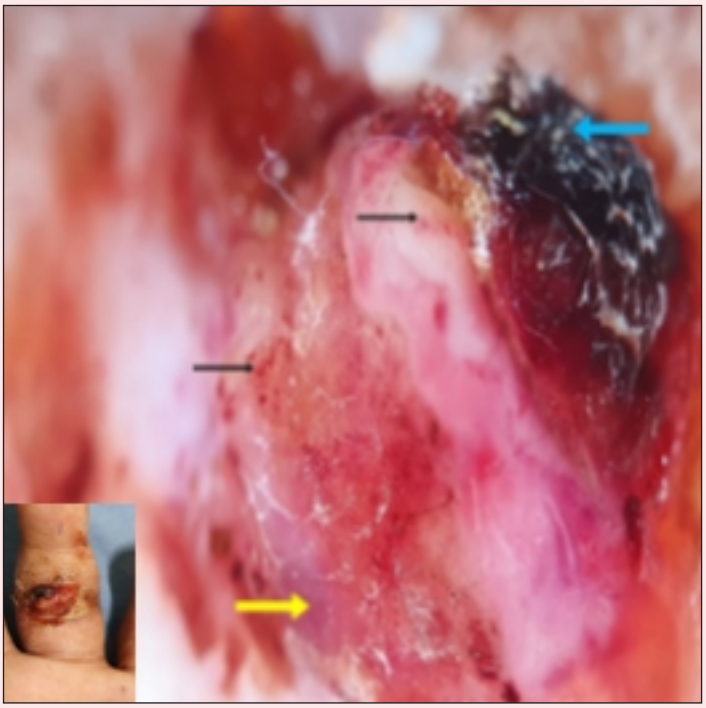
- Can be found in few cherry angiomas and infantile hemangiomas



Infantile hemangioma showing fissures(black arrow)and ridges(yellow arrow)

Ulceration:

- Ulceration can be observed when lesions are traumatised.



Pyogenic granuloma showing ulceration with crusting (blue arrow), dotted vessels (black arrow), red homogenous area (yellow arrow)

Thus, this approach will play a key role in the dermoscopic diagnosis of cutaneous vascular lesion and differentiating it from other similar conditions.

Now we will see dermoscopic features of common cutaneous vascular lesions[1]

VASCULAR LESIONS	DERMOSCOPIC FEATURES
Infantile hemangioma and cherry angioma	○ Variable coloured lacunae and background ○ Isolated vessels ○ Jet black area (thrombosed haemangioma)
Angiokeratoma	○ Dark lacunae ○ Blue whitish veils ○ Ulceration ○ Rainbow pattern
Pyogenic Granuloma	○ Reddish homogenous areas ○ White rail lines ○ White collarette ○ Ulceration ○ Vessels
Targetoid hemosiderotic hemangioma	○ Lacunae ○ Ecchymotic ring ○ Peripheral network ○ Shiny lines
Angioma serpiginosum	○ Small multiple round to oval lacunae
Microvenular hemangioma	○ Small regular red globules ○ Fines pigment network
Port wine stain	○ Superficial port wine stain : Dotted or globular vessels. ○ Deep port wine stain : Linear or tortuous vessels, grey- whitish veil, pale circular areas surrounding brownish dots.
Lymphangioma circumscriptum	○ Variably colored lacunae ○ Vascular structures ○ Hypopyon sign ○ Scales
Pigmented purpuric dermatoses	○ Coppery – red background ○ Round to oval dots ○ Gray dots ○ Network

References:

(1) Vincenzo Piccolo, MDa,*, Teresa Russo, MDa, Elvira Moscarella, MDa, Gabriella Brancaccio, MDa, Roberto Alfano, MDb, Giuseppe Argenziano, MD, PhDa. Dermatol Clin. 2018 Oct.

IS PIGMENT BOOST MODE HELPFUL IN DERMOSCOPY ? (ORANGE/YELLOW LIGHT)

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Newer model of dermoscopes have polarized, non-polarized as well as pigment boost mode.

What is pigment boost mode & how does it work?

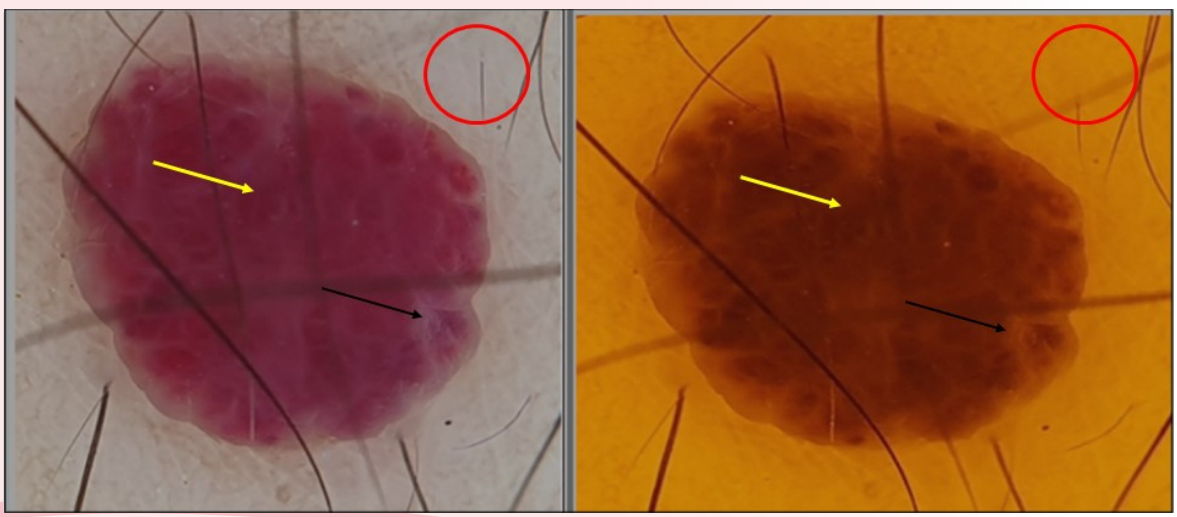
Pigment boost mode has been designed to enhance the visualisation of haemoglobin in the vascular structures and the melanin in pigmented structures within the skin lesions.

Hemoglobin has absorption peaks at UVA, blue (400 nm), green (541 nm), and yellow (577 nm) wavelengths. [(1)]Yellow, orange, and red with higher wavelengths penetrate deeper into the dermis because penetration of light into tissues increases with increase in wavelength.[(2) (3)]The most important chromophore in nonpigmented cutaneous tumours is hemoglobin, a pigment found in the erythrocytes of the vascular lumen. To visualize dermal pigment and vasculature, wavelength of light should correspond to that of the absorption peaks of melanin and hemoglobin.

The imaging of the deeply pigmented lesions and deeper blood vessels can be enhanced by the addition of an orange light (581 nm to 600 nm) when added to, or compared against the blue tinted white LED light in dermatoscopes. It is absorbed by hemoglobin in the blood. Also, the polarized orange light can penetrate 1-2 mm deeper in tissue and include less reflected glare as compared to the conventional surface light. Orange light enhancement is specially adapted for viewing pigmented skin, when used alone or combined with the white light of the other LEDs.

What happens to the vascular structures and pigmentation?

Vascular structures and pigmentation stand out brown against orange. Background (areas other than vascular and pigmentation turn orange) providing better contrast.



Polarised white light	Orange light
Lacuna- Multiple lacunae in varying shades of red(yellow arrow)	**Lacuna-** Same lacunae appear brown in color and more apparent as compared to other structures (yellow arrow)
Septa- White (black arrow)	**Septa-** Less well defined and orange in color (black arrow)
Surrounding area-Clearly visible (red circle)	**Surrounding area-** Orange , providing better contrast to the lesion (red circle)

Is it really worthwhile?

Toggling between white and orange modes provide better contrast and enhanced perspective of the vascular lesions.

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1) Barlow RJ. Lasers and Flashlamps in the Treatment of Skin Disorders. In: Burns T, Breathnach S, Cox N, Griffiths C, editors. Rook's Textbook of Dermatology. 8th ed. Oxford: Wiley-Blackwell; 2010. pp. 73.2–5.

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3) Barolet D. Light-Emitting Diodes (LEDs) in Dermatology. Semin Cutan Med Surg. 2008;27:227–38. [PubMed] [Google Scholar]

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DIFFERENTIAL DIAGNOSIS

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A) Dermoscopic distinction of angioma serpiginosum and port wine stain

Dermoscopy is a reliable tool in the assessment of vascular lesions. Angioma serpiginosum (AS) and port wine stain (PWS) appear similar clinically. Histopathology is confirmative. Dermoscopy demonstrates definitive features which are characteristic to AS and PWS. Here authors describe the dermoscopic differentiation of PWS from AS.

Clinically AS manifests as red lesions in a linear or serpiginous pattern, especially in the arm or upper back. The congenital variant is noted in the new born on the head and neck region (Figure 1). Dermoscopy reveals multiple well demarcated round to oval reddish lagoons, also called as lacunae (Figure 2). These lacunae are referred to as 'school of red fish in a pond'. [1]

PWS is characterized by reddish patch clinically (Figure 3) and under dermoscopy, short linear vessels are found. These vessels take semicircular or arcuate patterns by interconnecting each other giving a serpiginous pattern (Figure 4). [2] Other dermoscopic features include linear red vessels and globules which are suggestive of superficial and deeper location of vessels in the dermis, respectively. [3] This would assist the treating physician to adjust the parameters of the laser equipment while treating PWS.

Figure 1: Clinical image of angioma serpiginosum showing red lesions on the left forearm

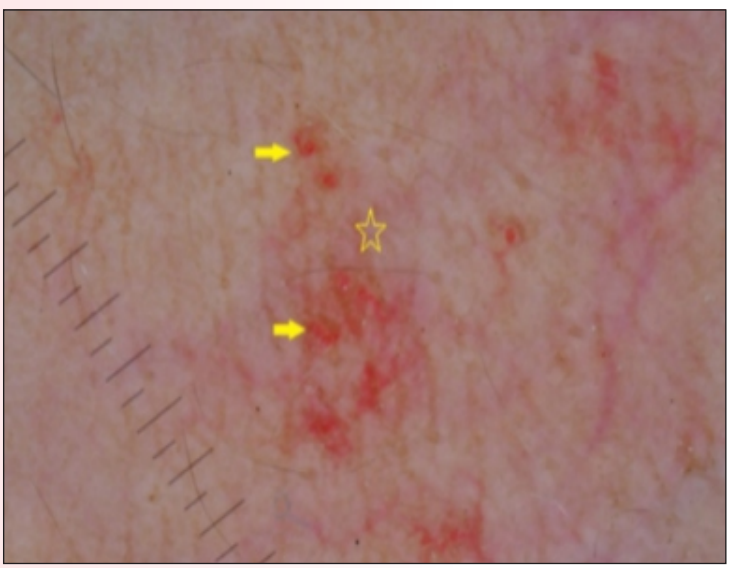

Figure 2: Dermoscopy of angioma serpiginosum shows red lacunae (arrows) as 'school of red fish in a pond' pattern with pigment network (star).

Figure 3: Clinical image of port wine stain showing reddish patch on the occipital region.

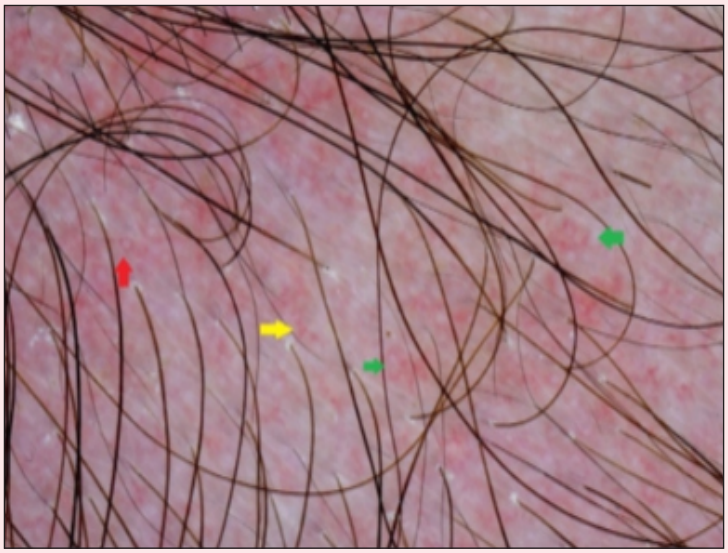

Figure 4: Dermoscopy of port wine stain shows short linear vessels in circular (red arrow), semicircular (green arrow) and arcuate (yellow arrow) pattern.

References

1. Kuonen F, Gaide O. Clues in dermoscopy: dermoscopy of angioma serpiginosum. Eur J Dermatol 2016; 26: 118.
2. Ankad BS, Arora P, Sardana K, Bhardwaj M. 'Acquired port wine stain and angioma serpiginosum: A dermoscopic perspective' in Int J of Dermatology 2019 Mar; 58(3):e62-e64.
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B) Dermoscopic differentiation of urticaria and urticarial vasculitis

Urticaria is an extremely common and rapidly occurring entity that is defined by wheals which lasts for about 6 hours to 20 hours (Figure 1).[1] Dermoscopy shows red dots and out-of-focus vessels with avascular areas (Figure 2).[2]

On the other hand, urticarial vasculitis is typified by the persistence of wheals for more than 24 hours. Clinically, smaller wheals with arcuate configuration are found (Figure 3). Dermoscopy demonstrates multiple purpuric dots with linear vessels (Figure 4). Extravasation of erythrocytes and hemosiderin deposits are usually associated giving yellow-brown hue in the background. [2]Thus linear vessels with purpuric dots are useful in distinguishing urticarial vasculitis from common urticaria.

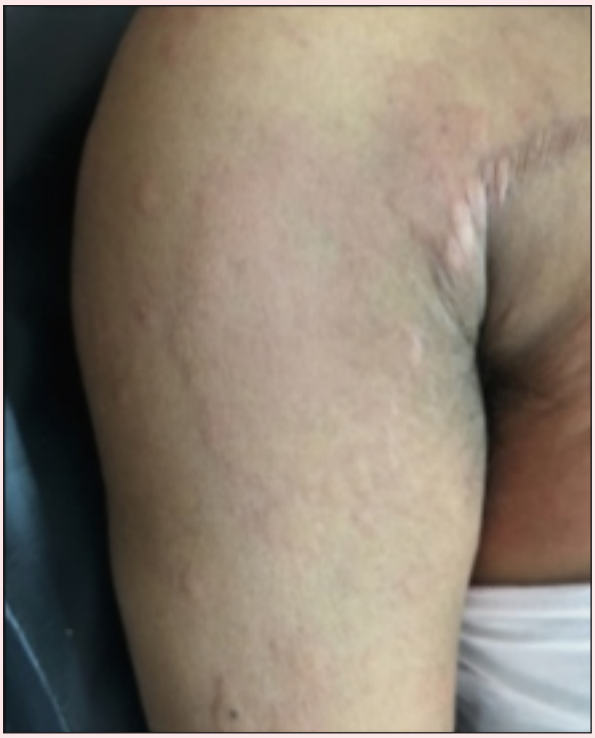

Figure 1: Clinical image of common urticaria showing erythematous wheals.

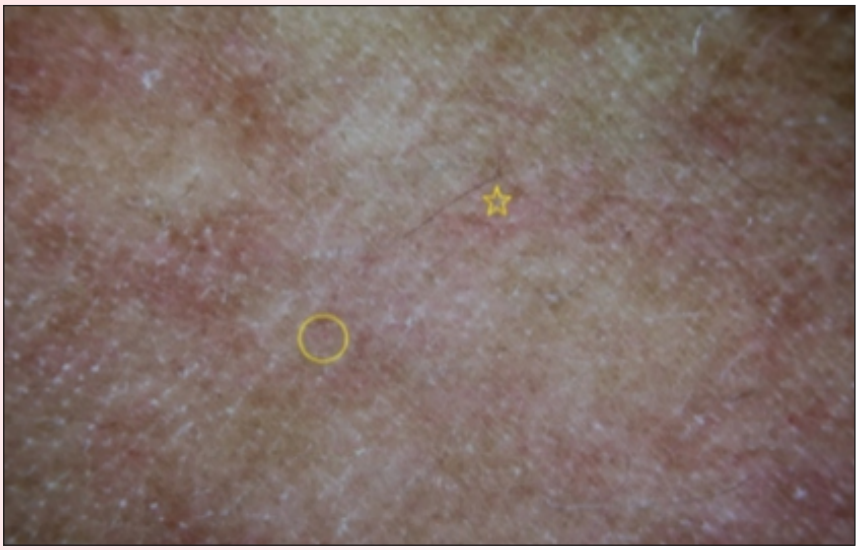

Figure 2: Dermoscopy of common urticaria shows red dots (circle) and pink hue (star).

Figure 3: Clinical image of urticarial vasculitis showing reddish weals with central clearing in a arcuate fashion.

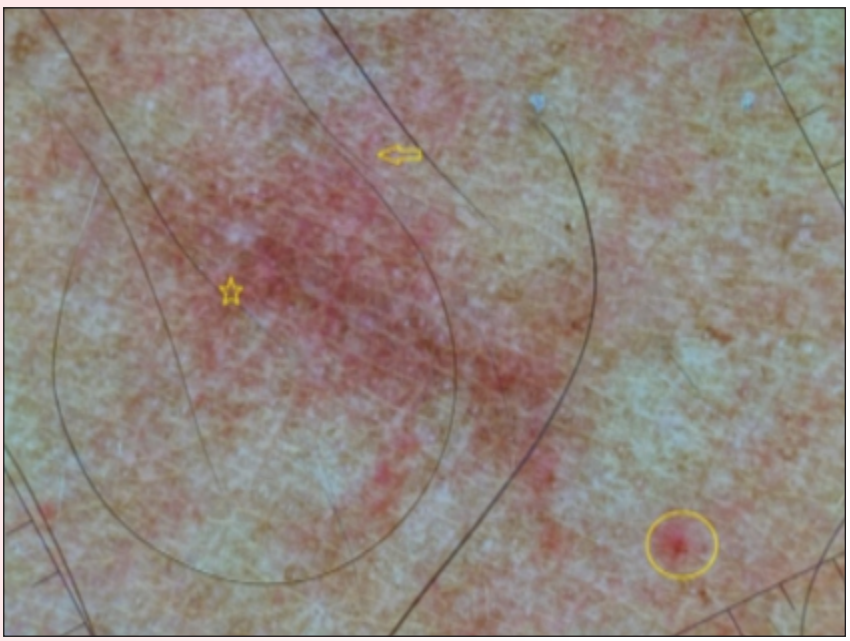

Figure 4: Dermoscopy of urticarial vasculitis shows linear vessels in circular (arrow), purpuric dots (circle) and bright pinkish hue (star).

References

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WOLF AND SHEEP OF REDDISH BUMPS ON THE SKIN- THE PATTERNS OF PYOGENIC GRANULOMA AND ANGIOKERATOMA

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Reddish papules and nodules reflect their resplendence in vasculature, and encompass a wide array of differentials both benign and malignant. Any dermoscopic feature in isolation may be found in either of the poles, necessitating the development of an algorithm or a combination of features to form discerning patterns. These have been well elucidated in two benign conditions - pyogenic granulomas (PG) and angiokeratomas (AK).

Pyogenic granuloma

Synonyms-Botryomycosehumaine, expression granuloma telangiectaticum, telangiectaticum granuloma, granuloma pediculatum and lobular capillary hemangioma. [2]

These are vascular hamartomas caused by trauma, medication, hormonal changes, infections and oncogenes.[1] They have a good prognosis and are amenable to surgical resection, beta adrenergic receptor blockers and lasers. Dermoscopically they are characterized by the presence of reddish homogenous areas (RHA), white collarette (WC), white rail lines (WRL), and vascular structures (VS).

The most common finding was that of RHA (96.7% sensitivity and 92.9% negative predictive value) and most specific was WC (specificity 90.7%). However, in isolation these findings cannot distinguish from melanoma. Hence Zaballos et al[3] had classified these lesions into 7 patterns (Table 1, Figure 1).

Half of the cases of PG show either P1, P4 or P7. One can confidently proceed with a diagnosis of PG, excluding the malignant mimicker if any of these are present. Among these P4 is the most specific pattern for PG.[4]

The presence of vascular structures should put one on high alert for the possibility of melanoma. These can occur in concurrence in various permutations with either RHA, WC, or WRL in either PG or melanoma. One can be at ease if all the listed features of P7 are present.

Although valuable dermoscopic study of PG is still in infancy and should be amalgamated with clinical data. A high index of suspicion still warrants a biopsy to discern the underlying entity.

Table 1. The seven patterns of pyogenic granuloma

	RHA	WC	WRL	VS	SN (%)	SP (%)
P1	+	+	-	-	18.9	99.3
P2	+	-	+	-	5.7	98.6
P3	+	-	-	+	9.1	60
P4	+	+	+	-	22.1	100
P5	+	+	-	+	18.9	95
P6	+	-	+	+	5.7	90
P7	+	+	+	+	11.5	98.6

P: pattern, RHA: Red homogenous areas, WC: White collarette, WRL: White rail line, VS: Vascular structure, SN: Sensitivity, SP: Specificity.

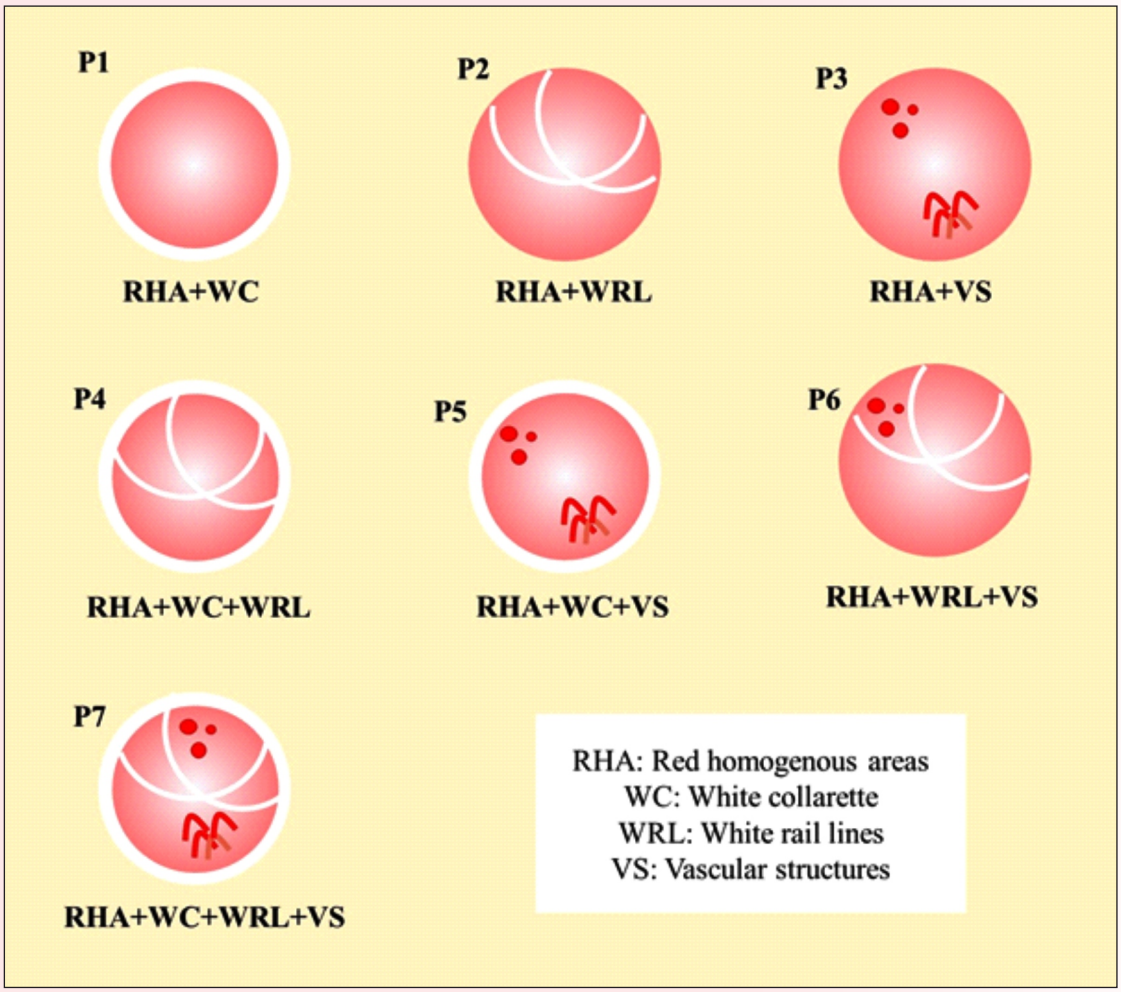

Figure 1 : Pictorial representation of the various dermoscopic patterns of pyogenic granuloma

Angiokeratoma

These are the byproduct of capillary malformations coupled with hyperkeratosis, papillomatosis, and acanthosis. They are classified topographically into five types.[5] (Table 2) Clinically they may be mistaken for melanocytic nevi, Spitz nevi and malignant melanoma.

They have been classified into three patterns, although any and all may occur in each of the topographical subtype.[7] (Table 3, Figure 2). Dermoscopic features include dark lagoons (DL), white veils (VW), peripheral erythema (PE) and hemorrhagic crusts (HC). Of these the dark lacunae are most commonly and easily observed and are most valuable in ruling in this entity (sensitivity 93.8%, specificity 99.1%).[6] Although not always present, peripheral erythema concurring with dark lagoons and white veil can help rule out virtually all mimickers.[8]

All red bleeding bumps are not malignant. Stand-alone these dermoscopic features may not be significant, but united they make up for more than the sum of their parts. A knowledge of these simple dermoscopic algorithms can sort the sheep from the wolves and offer comfort non-invasively.

Table 2. Types of angiokeratomas (decreasing order of frequency)

Type	Location	Gender	Age group
Solitary or multiple AK	Lower limb	M	Adolescent
AK of Fordyce	Scrotum/Vulva	M	Elderly
AK of Mibelli	Finger and toes	M=F	Adolescent
AK circumscriptum	Lower limb	F	Childhood
AK corporis diffusum	Bathing trunk	M=F	Childhood

AK: Angiokeratoma, M: male, F: Female

Table 3. Dermoscopic pattern of angiokeratoma

	DL	WV	PE	HC	SN	SP
P1	+	+	-	-	84.4	99.1
P2	+	+	+	-	43.8	100.0
P3	+	+	-	+	53.1	99.6

DL: Dark lagoons, WV: White veil, PE: Peripheral erythema, HC: Hemorrhagic crust, SN: sensitivity, SP: specificity

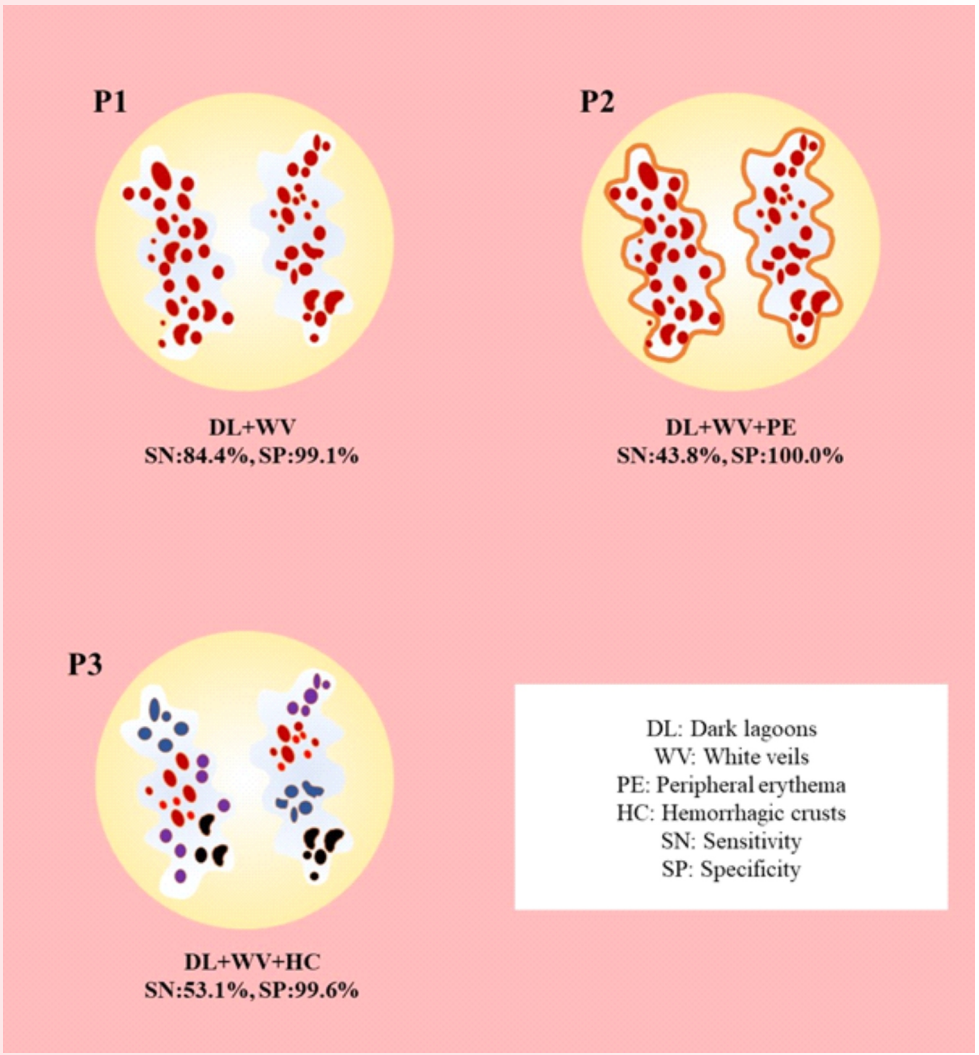

Figure 2 : Pictorial representation of the multiple dermoscopic patterns of angiokeratoma

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SNIPPETS FROM RECENT PUBLICATIONS

Dr. Sushrut Save
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1) A practical review of dermoscopy for pediatric dermatology part II: Vascular tumors, infections, and inflammatory dermatoses

- Infantile hemangiomas(IH) : Dermoscopy is useful to subclassify hemangiomas, the lacunae in superficial one are bright red in color while deeper ones are with a deep blue or violaceous hue. It also helps in management of IH , the white colour associated with impending ulceration is easier to see with dermoscopy and allows expedited treatment initiation when this cannot be appreciated with thenaked eye.
- The Lacunae in angiokeratoma have a violaceous hue with color variability in a single lesion(red, maroon, blue) Black lacunae seen due to thrombosis.
- Capillary malformations :Dermoscopy helps predict the depth and hence lesions which are more amenable to laser treatment. White linear structures within a rose, white or blue background are seen in lesions treated multiple times. These structures represent micro-scarring from previous laser burns . this finding correlates with a very poor response to subsequent therapy.

Natsis NE, Gordon SC, Kaushik A, Seiverling EV. A practical review of dermoscopy for pediatric dermatology part II: Vascular tumors, infections, and inflammatory dermatoses. Pediatr Dermatol. 2020 Sep;37(5):798-803

2) Dermoscope with near-ultraviolet (UV) Light :

It is useful for localization of glomus tumors which reveal a pinkish glow on UV light examination suggesting the vascular nature of the tumor. By using a videodermosope having white light, polarized light, and ultraviolet (UV) light it was possible to identify the glomus tumor that revealed a pinkish glow on UV light examination which corresponds histopathologically to the presence of glomus cells arranged around the vascular spaces lines by endothelial cells.

Thatte SS, Chikhalkar SB, Khopkar US. "Pink glow": A new sign for the diagnosis of glomus tumor on ultraviolet light dermoscopy. Indian Dermatol Online J 2015;6:21-3.

3) Dermoscopy of Vascular Lesions :

- The correct identification of vascular lesions through dermoscopy is important in avoiding useless excisions and ruling out aggressive malignant tumors.
- With dermoscopy, most vascular lesions exhibit lacunae; that is, well-demarcated, variably colored areas, corresponding to the vascular proliferation of the lesions.
- When no specific dermoscopic features are detectable, biopsy is mandatory for the diagnosis to exclude malignancies.

  Piccolo, Vincenzo; Russo, Teresa; Moscarella, Elvira; Brancaccio, Gabriella; Alfano, Roberto; Argenziano, Giuseppe . Dermatoscopy of Vascular Lesions. Dermatologic Clinics. 2018 ;36(4), 389–395.

4) A Deep Learning Approach to Vascular Structure Segmentation in Dermoscopy Colour Images

Atypical vascular pattern is one of the most important features by differentiating between benign and malignant pigmented skin lesions. Detection and analysis of vascular structures is a necessary initial step for skin mole assessment. Atypical vascular pattern is one of the most important features for differentiating between benign and malignant pigmented skin lesions.

Jaworek-Korjakowska J. A Deep Learning Approach to Vascular Structure Segmentation in Dermoscopy Colour Images. Biomed Res Int. 2018 ;2018:5049390.

DERMOSCOPIC AND HISTOPATHOLOGICAL INTEGRATION MADE EASY!

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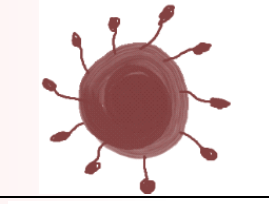
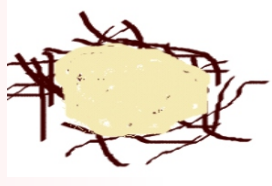
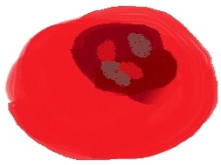
Table showing various dermoscopic features with definition and histopathological interpretation

Dermoscopic feature	Interpretation	Histopathological correlation	Image
Lacunae (or lagoons)	Large well-demarcated round or oval areas or globules in which the colour can range from red to reddish-brown or reddish-blue, and the size can vary within the – lesion	Dilated vascular spaces in the upper dermis	
Half & half lacuna	Lacuna with two different colors	Sedimentation of blood occurs, its corpuscles aggregate according to density, with cellular components lying at the bottom and serum at the upper part, leading to a color transition	
Red homogeneous area	A structureless zone whose colour varied from completely red to red with whitish zones	Numerous small capillaries or proliferating vessels that are set in a myxoid stroma of pyogenic granuloma	
Irregular/tortuous vessels & Arborizing vessels	Vascular Polymorphism without a specific pattern (Irregular/Tortuous vessels) In focus large caliber vessels that branch into finer secondary vessels. (Arborizing vessels)	Corresponding to deeper dilated horizontal subpapillary capillaries	

White collarette	Ring shaped or arcuate structure usually located at the periphery of the lesion	the epidermis extending down into the base of the lesion,	
White rail lines	White lines intersecting the lesions	Fibrous septa encompassing the capillary tufts and lobules	
White veils	Light white area covering the surface of the lesion	Epidermal hyperkeratosis and acanthosis	
Pseudopods	Bulbous and often kinked projections seen at the lesion edge, either directly associated with a network or solid tumor border	Distal end of a haemorrhage In case of subungual hematoma	
Fissures and ridges	Cerebriform surface resulting in gyri (ridges) and sulci (fissures)	Wedge-shaped clefts of the surface of the epidermis often filled with keratin	
White / brown structureless areas	Areas devoid of dermoscopic structures including regression structures. These areas are usually hypopigmented compared with the surrounding lesion, but not in comparison to the surrounding normal skin.	Flattening of the rete ridge pattern and/or decrease in concentration of eumelanin. It may also simply be due to a loss of contrast between the holes and lines of the network , brown due to hemosiderin deposition	
Blurred violaceous purpuric globules/patches	Multiple small, speckled, purpuric blotches, and globules over a purplish background	Correspond to the presence of vasculitis and are associated with perivascular extravasation and degradation of red blood cells.	

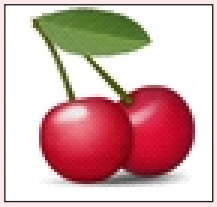
Peripheral erythema	Seen in the periphery of the lesion	Inflammation and erythrocyte extravasation in papillary dermis	
Hemorrhagic crusts	Reddish brown area due to trauma	Bleeding into lesion	
Coppery brown background	Color of the background	Associated with lymphohistiocytic dermal infiltration, extravasated erythrocytes and hemosiderin deposition	
Brown background	Color of the background	Increased epidermal melanin	
Red background	Color of the background	Increased density of dermal vessels	
Homogenous purpuric patch	A homogenous zone	Homogenous and prominent dermal hemorrhages	

Reference :

Harald Kittler, MD,a Ashfaq A. Marghoob, MD,b Giuseppe Argenziano, MD,c Cristina Carrera, MD,d Clara Curiel-Lewandrowski, MD,e Rainer Hofmann-Wellenhof, MD,f Josep Malveh,Luc Thomas, MD,p Philipp Tschandl, MD,a Iris Zalaudek, MD,f and Allan Halpern, MDb, etal ; Standardization of terminology in dermoscopy/ dermatoscopy: Results of the third consensusconference of the International Society of Dermoscopy , DOI: 10.1016/j.jaad.2015.12.038

RIDDLES

Dr. Dilip Singh
2nd year Resident, Govt. Medical College, Bhavnagar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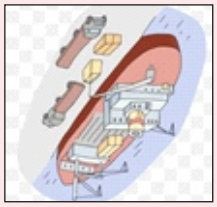
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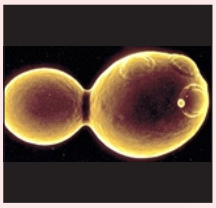
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Answer

1) Cherry Angioma
2) Hemangioma
3) Port wine stain
4) Blue rubber bleb nevus syndrome

Oh! Thanks Dermoscopy

Dr. Manal Dave
2nd year Resident, Govt. Medical College, Bhavnagar

I was known only for my reds,
Dermoscopy gave me vasculature and lacunae,
Under the orange light my red turns brown so bright.
Oh! Thanks to dermoscopy.

I have red areas with white collars,
They named me wrong, but that is not my fault,
Pyogenic granuloma is my name,but have no pus nor granuloma.
Oh! Thanks to dermoscopy who gave me seven patterns.

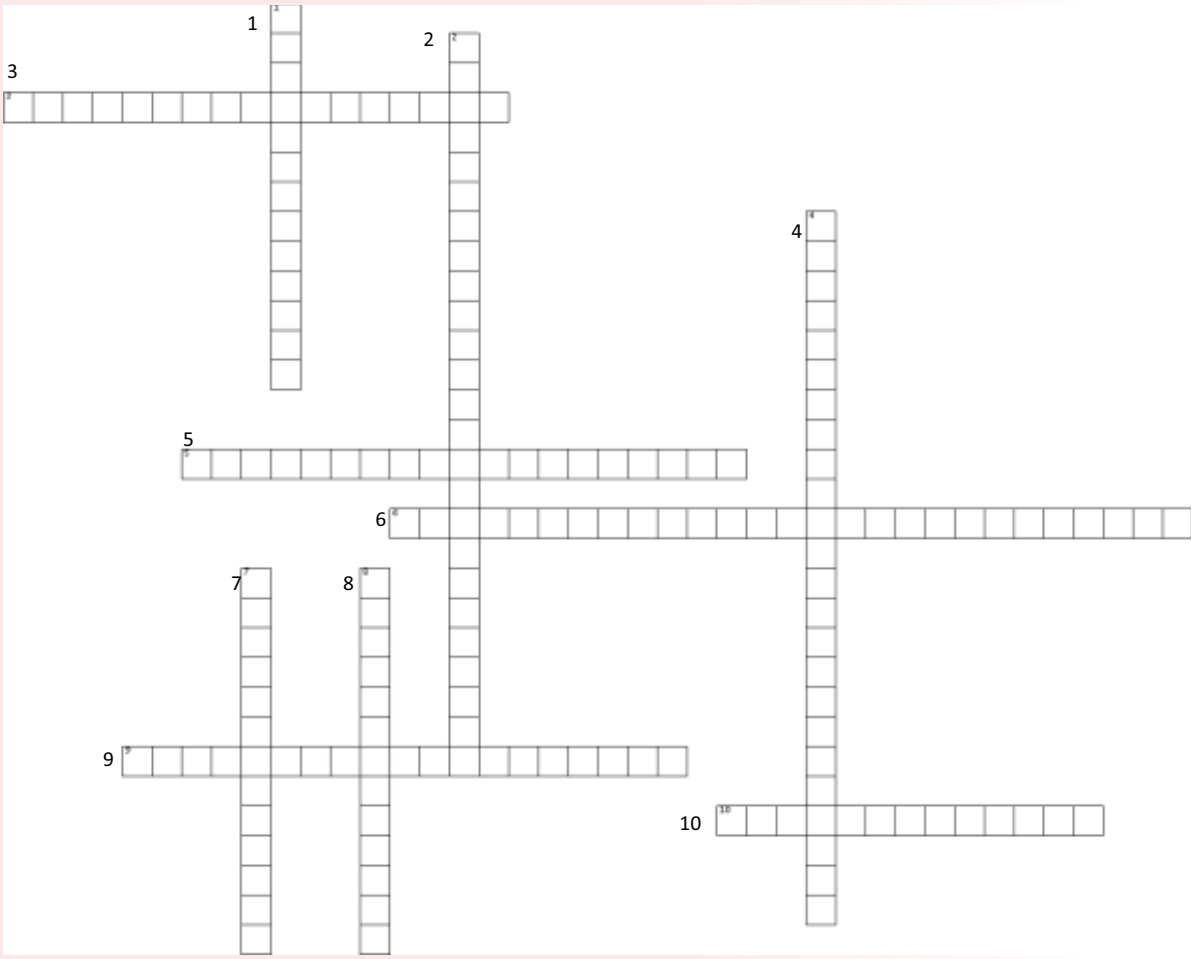
My love for elderly is known,
I have various shades of red and purple,
Fruit in my name, Cherry angioma is what I am called.
Oh! Thanks to dermoscopy I adorn a veil at times.

Parents are scared when they find me,
I may fade with age, if not, there is propranolol to save.
My lacunae are not so well defined, Infantile Hemangioma is my name.
Oh! Thanks to dermoscopy you can show my chronicity.

Different from the rest,
I have problem of lymphatics with hypopyon like features in me.
Lymphangioma circumcriptum is what I am called.
Oh! Thanks to dermoscopy I am rosy at times.

Crossword

Dr. Hita Mehta, Dr. Neha Agrawal



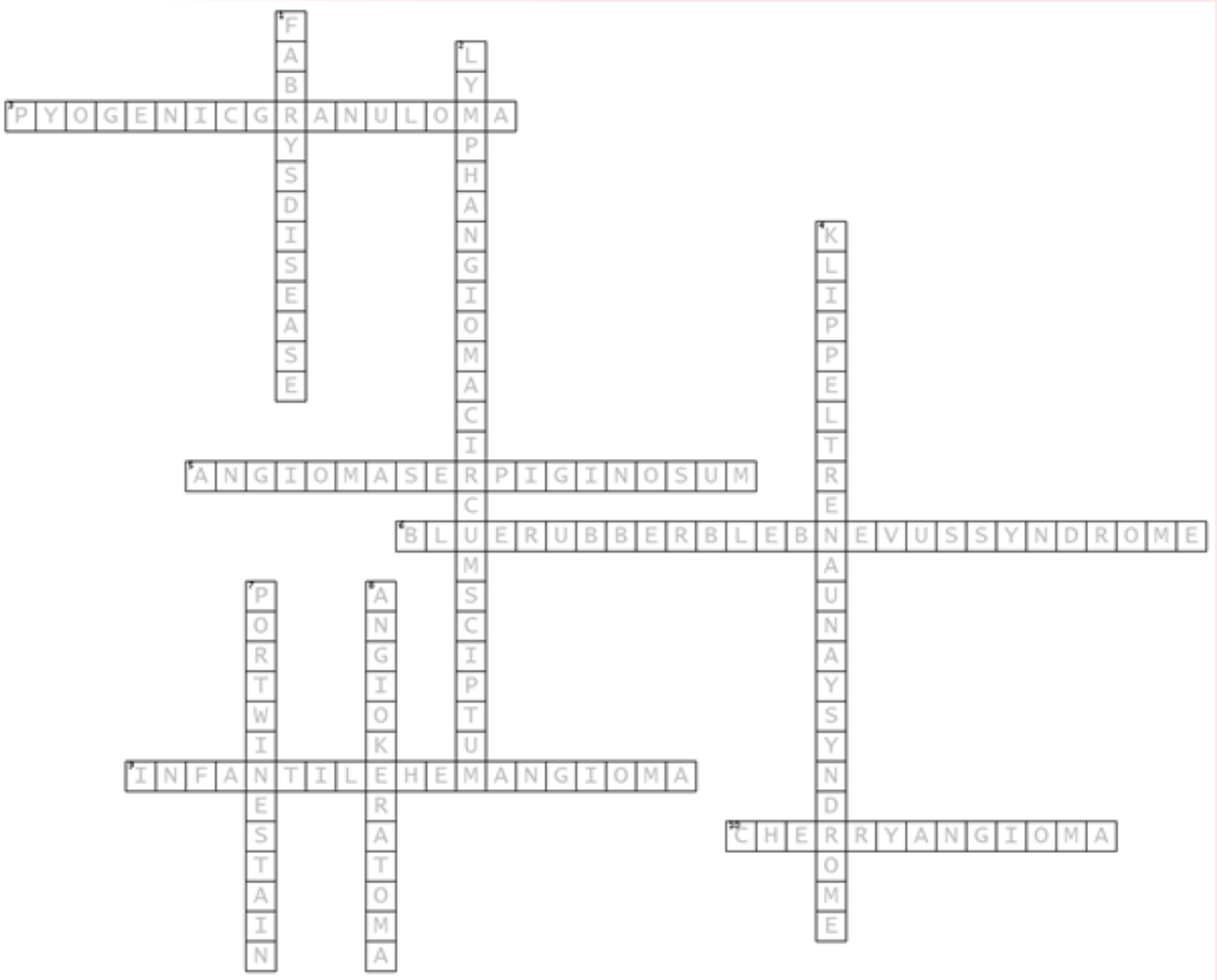
ACROSS

3. A misnomer amongst the vascular lesions and I am also known as lobular capillary hemangioma.
5. Look alike of port wine stain but I show multiple small lacunae.
6. Hello, I am Bean shape and cause problems in skin and Gut, I am also known as?
9. I grow and fade with time; if I become a problem you may try propranolol.
10. I am very common and I love the elderly, you can find lacunae and septa inside me.

DOWN

1. I have decreased alfa galactosidase and I have lesions in bathing trunk
2. I have half and half lacunae, I look like frog spawn, who am I?
4. I have enlarged limbs and the flow is disturbed in all types of vessels except AV fistula, I need Doppler, find me?
7. I do not fade easily and I am made up of dotted and short linear vessels only, guess me.
8. I present lacunae with multiple colors, veil, scale and erythematous rim.

CROSSWORD ANSWER



ACROSS

3. A misnomer amongst the vascular lesions and I am also known as lobular capillary hemangioma – Pyogenic Granuloma
5. Look alike of port wine stain but I show multiple small lacunae – Angioma Serpenginosum
6. Hello, I am Bean shape and cause problems in skin and Gut, I am also known as? – Blue rubber bleb nevus syndrome
9. I grow and fade with time; if I become a problem you may try propranolol- Infantile Hemangioma
10. I am very common and I love the elderly, you can find lacunae and septa inside me – Cherry Angioma

DOWN

1. I have decreased alfa galactosidase and cause lesions in bathing trunk – Fabrys Disease
2. I have half and half lacunae, I look like frog spawn, who am I? – Lymphangioma Circumscriptum
4. I have enlarged limbs and the flow is disturbed in all types of vessels except AV fistula, I need Doppler, find me? – Klippel Trenaunay Syndrome
7. I do not fade easily and I am made up of dotted and short linear vessels only, guess me - Port wine stain
8. I present lacunae with multiple colors, veil, scale and erythematous rim - Angiokeratoma

PHOTOQUIZ

Dr. Vinay Keshavmurthy
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A) Who am I ?

A 33-year-old lady presented with a 6-month history of an ill-defined, reddish brown, asymptomatic lesion on her lower leg. On examination we noted that the lesions were rust coloured patches, few discrete and few confluent. The largest of the lesion was 30 X 8 cm and had a lichenoid hue. (Fig 1) On dermoscopy we noted the presence of coppery-red diffuse background discoloration, oval red dots and a network of brownish interconnected lines. (Fig2) Which of the following is the most likely diagnosis?

a) Pigmented purpuric dermatosis
b) Lichen planus pigmentosus
c) Lichen planus
d) Post inflammatory hyperpigmentation

Figure 1: Rust coloured patches on both legs

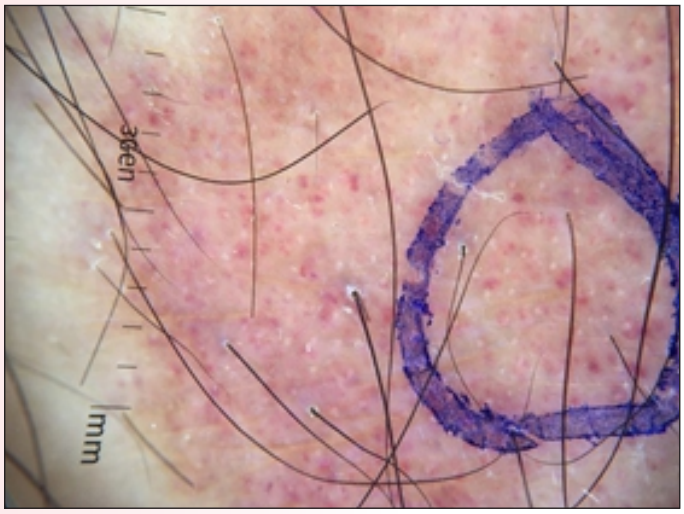

Figure 2: Dermoscopic images of the patches showing coppery-red diffuse background discoloration and oval red dots. DermLite DL4 10X magnification polarized mode.

Answer:

Pigmented purpuric dermatosis

It is dermoscopically characterised by the presence of coppery red background corresponding to the infiltration by lymphocytes, and hemosiderin in the histiocytes.[1] Red dots correspond to extravasated RBCs and increased vessel density. Basal layer hyperpigmentation corresponds to the presence of the brownish interconnected lines.[2] Lichen planus would have reticular whitish striae with surrounding red lines and dots. Lichen planus pigmentosus would have the presence of blue gray dots. Post inflammatory pigmentation would have the presence of both brown and gray dots in a mixed pattern and would not have the presence of a coppery red background.

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B) Who am I ?

A 54-year-old male had presented with a painful lesion on his right palm that had rapidly evolved over the past month. On examination there was a well-defined 1.5 cm, red exophytic polypoid lesion on the palmar surface (Fig 1). There were no other skin lesions or palpable lymphadenopathy. A dermoscopy was performed and it revealed the presence of red homogenous backgrounds, white collarette, white rail lines (Fig 2). No vascular structures could be discerned. Which of the following could have been the most probable diagnosis?

a) Eccrine poroma
b) Pyogenic granuloma
c) Amelanotic melanoma
d) Angiokeratoma

Figure 1: A red exophytic lesion of size 1.5cm over right palm

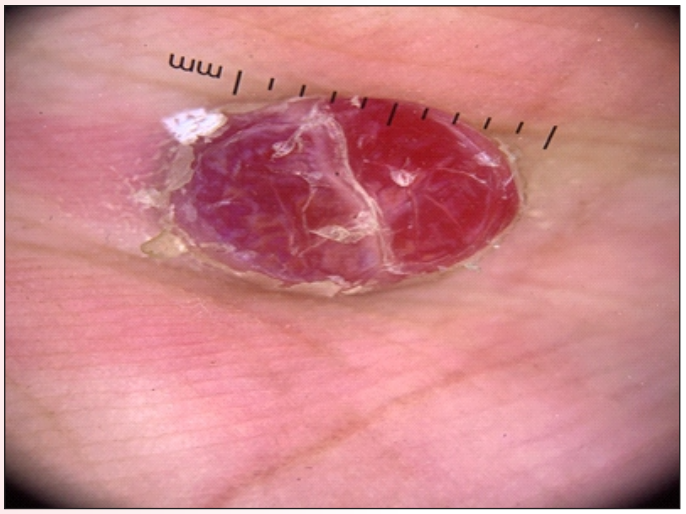

Figure 2: Dermoscopic image showing red homogenous backgrounds, white collarette and white rail lines. DermLite DL4 10X magnification polarized mode.

Answer

Pyogenic Granuloma

The presence of red homogenous background, white rail lines and white collarette is highly specific for pyogenic granuloma. The features histologically correspond to the presence of capillaries embedded in a myoxid stroma, fibrous septa between lobules and hyperplastic adnexal epithelium respectively.[1] Eccrine poromas would have background that is reddish or blue-white, but usually have the presence of vascular structures.[2] Also they lack the presence of white rail lines.[3] Angiokeratomas would have the presence of lacunae.[4] Amelanotic melanoma may will have the presence of vascular structures.[5]

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GLIMPSE OF SIG DERMOSCOPY (2020-2021)

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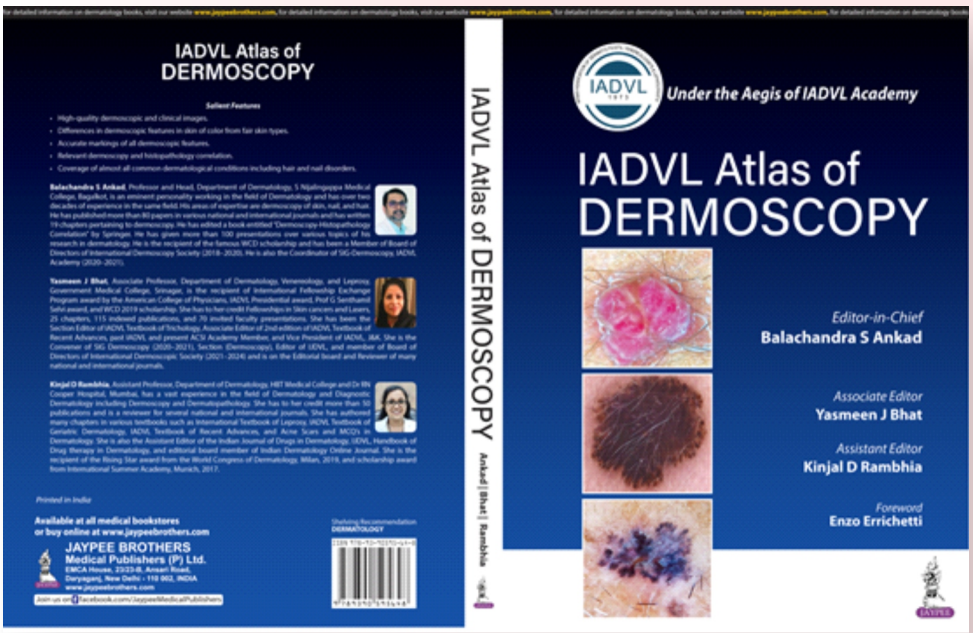
HSK Hospital and Research Centre, Bagalkot, Karnataka

Dr. Yasmeen J Bhat
Associate Professor, Govt. Medical College,
Srinagar, J&K

Following activities were done by SIG Dermoscopy from the release of Newsletter in Mar-April 2021.

1. Consensus draft on Dermoscopy Device Guidelines (technical specifications and cost) has been prepared by SIG to help needy institutions.
2. Thirty thesis topics related to Dermoscopy were submitted to IADVL academy.
3. Dr Balachandra Ankad & Dr Abhijit Jha participated as faculty in the virtual World Congress of Dermatology, 10th June 2021.
4. Multicentric project on Artificial Intelligence with Dr Balachandra Ankad as Principal Investigator and other members as co-investigators got approved by Jury on IADVL research grants.
5. Virtual zoom meetings were conducted by SIG wherein all the members participated.
6. Members participated in SIG Dermoscopy session in Mid-Dermacon.
7. IADVL Atlas of Dermoscopy, with Dr Balachandra Ankad as chief editor, Dr Yasmeen Bhat as Associate editor and Dr Kinjal Rambhia as assistant editor, was released in Middermacon of which the members of SIG are authors besides non-SIG IADVL members.
8. Members of SIG participated in postgraduate lecture series on Dermoscopic-Histopathologic corelation those was conducted in two parts on 27th Nov and 18th Dec, 2021.
9. Three members of the SIG Dr Abhijit Jha, Dr Vinay Keshvmurthy and Dr Yasmeen Jabeen were selected as board members (2021-2024) of International Dermoscopy Society.
10. Dr Yasmeen Jabeen Bhat was selected for the IADVL BM Ambady oration for Dermacon 2022.



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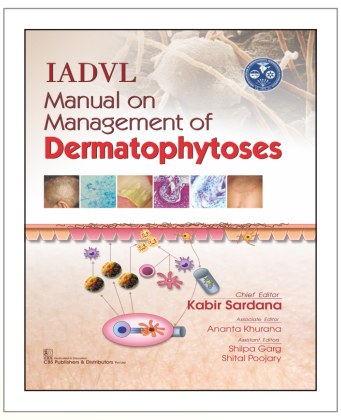

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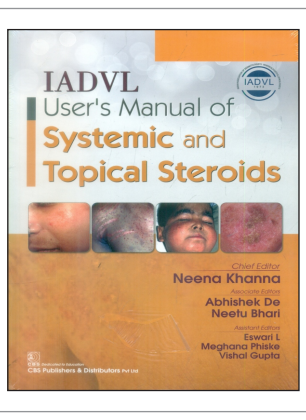

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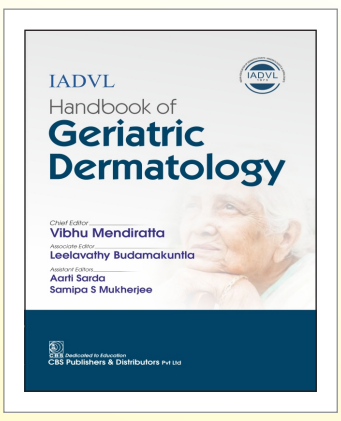

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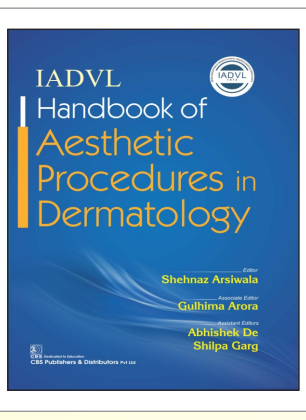

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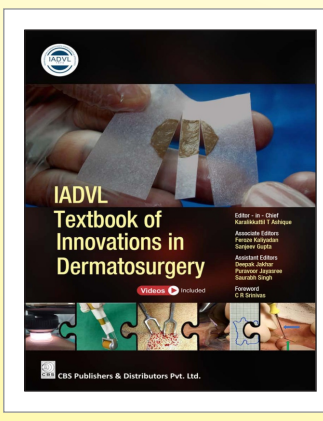

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