International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2019): 7.583

Various Dermoscopic Features of Verruca Vulgaris, Verruca Filiformis and Verruca Palmaris: A Case Series

Ennesta Asri[1], Vesri Yossy[2]

[1]Andalas University, Medical Faculty, Department of Dermatovenereology / Dr M. Djamil Hospital
PerintisKemerdekaan, Padang, West Sumatra25171, Indonesia
ennestaasri[at]gmail.com

[2]Andalas University, Medical Faculty, Department of Dermatovenereology / Dr M. Djamil Hospital
PerintisKemerdekaan, Padang, West Sumatra 25171, Indonesia
vesriyossy[at]gmail.com

Abstract: ***Background: In general, classification of warts is based on morphology, histology, and anatomic location. Diagnostic accuracy can be improved by dermoscopy examination comparison to the naked eye. There are only few studies about dermoscopic findings in cutaneus warts.Case: We presented 6 cases of verruca vulgaris, palmaris and filiformis with dermoscopy examination. All cases had warts with various location and morphology, there are location in hands, finger and foot. The dermoscopic aspects in verruca vulgaris were based on the presence of verrucous, greyish structureless surrounded by whitish halos and irregularly distributed multiple punctate haemorrhages; frogspawn appearance. In verruca palmaris, we found a well-defined yellowish papilliform surface with interrupted palmaris lines and multiple punctate haemorrhages was observed. Whereas on verruca filiformis, finger like papilliform structure and hairpin vessel.Discussion: Dermoscopic findings in different type of warts can be varied. Multiple punctate haemorrhages; red, brown or black dot are the most common dermoscopic finding that can be observed in all cases of warts.***

Keywords: dermoscopic features, verruca vulgaris, verruca palmaris, verruca filiformis

1. Introduction

Viral warts are initially asymptomatic and often unnoticed but grow to form well-defined, thickened, hyperkeratotic lesions. Common sites are the hands and feet, especially at areas of minor trauma, such as knuckles or around nails. Cutaneous warts are caused by a small group of specific HPV types with a prevalence of up to 30% in primary schoolchildren and a decline thereafter with increasing age13–15. Patients living in larger households often report an infected cohabitant, supporting the concept of person to-person transmission. The majority of warts will regress spontaneously within 1–2 years. [1, 2]

In general, classification of warts is based on morphology, histology, and anatomic location. There are types of warts namely verruca vulgaris (common warts), verruca plana (plana warts), verruca filiformis (filiform warts), verruca palmaris-plantaris (palmoplantar warts), verruca myrmercia, mosaic warts, corneiform warts, epidermodysplasiaverruciformis and condylomaacuminata (genital warts).[1, 2, 3]Incidence of cutaneus warts in the division of skin and tumor surgery of Dermatovenereology Outpatient Clinic Dr. M Djamil Hospital Padang in 2018-2019 was 117 cases found.

Warts can usually be diagnosed clinically without the need for histologic confirmation. Paring the surface of a dermoscopy has been used for the evaluation of pigmentary lesions and other purposes. Dermoscopically, verruca vulgaris displays multiple densely packed papillae, each containing a central red dot or loop, which is surrounded by a whitish halo and frogspawn appeareance. In contrast to plane warts, the dotted vessels are usually larger and often associated with hemorrhages. The latter appear as irregularly distributed, small, red to black to brown tiny dots or streak. These features are helpful to reassure an eventually clinical doubtful diagnosis, for example in cases of irritated or subungual/periungual warts. Verruca plantaris usually lack dotted or looped vessels. The dermoscopic diagnosis is based on the presence of a verrucous, yellowish structureless area exhibiting a variable number of irregularly distributed red to brown to black dots or linear streaks (haemorrhages), which are thought to be caused by the chronically high vascular pressure at plantar sites.[3, 4]

Existing modalities focus primarily on the destruction or removal of visible lesions or induction of cytotoxicity against infected cells. Because of the benign and self-limited nature of warts, treatments that cause scarring should be avoided. Cutaneus warts often regress spontaneously in children and therefore may not require treatment.[5, 6]Cutaneous warts may be treated by daily application of salicylic acid/ lactic acid/collodion (1 : 1 : 4), if possible with occlusion and after removing the thickened stratum corneum, or other salicylic acid preparations for 3–4 months; this results in regression in two-thirds of patients. The most commonly used treatments for warts are destructive and include topical applications with salicylic acid and physical treatment with cryotherapy. Other treatments that damage or destroy the infected epithelium include caustics such as silver nitrate, phenol, mono- or trichloroacetic acid, photodinamictheraphy, imiquimod, immunodulator, and surgical approaches with laser, eloctrocautery or excisional surgery.[6, 7, 8]

2. Case Report

Here we report 6 cases with varied clinical manifestations with dermoscopy examination at presentation. All cases had warts with various location and morphology; there are location in hands, finger and foot.

The first patient, we reported a 18-year-old malewith chief complaint there were warts on the both of hands sometimes felt itchy and increase number and size since 2 months ago. It started as small wart that slowly enlarge, patient sometimes scratch warts and became thicker since 1 years ago. He never get any medical treatment previously. History warts of another body was denied. History of trauma or pain was denied. His brother have warts since 3 years ago but never get treated. On dermatologic states there were multiple papules with verrucous surface, grey brownish in colour, circumscribe, round and oval with size 0, 3cmx 0, 6cmx 0, 2cm and 0, 6cmx 0, 3cmx 0, 3cm on the both of digitimanus and palmaris. Dermoscopic features were found the presence of verrucous, greyish-yellowish structureless, well defined with interrupted palmar lines and multiple punctate haemorrhages; black and brown dots. Patient was diagnosed with verruca vulgaris etpalmaris. Patient was treated with cryotheraphy 2 session and gentamycin oint 0, 1% at erosion after therapy, side effect include pain was minimal but patient didn't control after that.

The second patient, we reported a 34-year-old female with chief complaint there were warts on the right hand and increase number and size since 1 months ago. It started as small wart that slowly enlarge and became harder since 6 months ago. The warts no pain and no itchy. History of trauma or pain was denied. She never get any medical treatment previously. History of her daughter has warts before but regress spontaneously. On dermatologic states, multiple papules coalesce with verrucous surface, greyish, circumscribe, round and oval with size 0, 4cmx 0, 9cmx 0, 2cm and 0, 2x 0, 2cmx 0, 1cm on digiti II dextramanus. Dermoscopic features were found the presence of verrucous, brownish structureless, well defined with interrupted palmaris lines and multiple punctate haemorrhages; black and brown dots. Patient was diagnosed with verruca palmaris. Patient was plan treated by electrosurgery and curretage but patient didn't control after laboratory examination.

The third patient, we reported a 25-year-old male with chief complaint there were warts on thumb right of hand that increase in number and size since 3 months ago. The warts no pain and no itchy. Initially the wart was small that slowly enlarge and became thicker since 1 years ago. History of trauma on the area before warts was denied. History of her brother have warts before but regress spontaneously. On dermatologic states, multiple papule coalesce with verrucous surface, brownish, circumscribe, round until unspecified with size 1, 5cmx 2cmx 0, 2cm on the digiti I dextramanus. Dermoscopic features were found well defined brown yellowish, multiple dense papillae with interrupted palmaris lines and multiple punctate haemorrhages; black and brown dots. Patient was diagnosed with verruca palmaris. Patient was treated by electrosurgery and curretage but patient didn't control after therapy.

The fourth patient, we reported a 8-year-old femalewith chief complaint there were warts on the right midlle finger sometimes felt painful was increase size since 1 months ago. It started as small wart that slowly enlarge and became harder since 6 months ago. History of trauma on the area before warts was denied. She never get any medical treatment previously. Histories of her friend have warts before. On dermatologic examination, nodule with filiform surface, greyish, circumscribe, round with size 0, 7cmx 0, 8cmx 0, 5cm on digiti III dextramanus. Dermoscopic features we found finger like papilliform structure and hairpin vessel and brown dots. Patient was diagnosed with verruca filiformis. Patient was treated by electrosurgery and curretage but patient didn't control after theraphy.

The fifth patient, we reported a 14-year-old female with chief complaint there were warts on the right lower arm and both of instep that sometimes felt itchy; increased size and number since 2 months ago. Initially 6 months ago warts was small on the left lower arm and patient using Calusol® for 2 months; warts was decrease. But, three months ago there were new warts on the right hand and both of instep and didn't get any medical treatment. History of trauma on the area before warts was denied. Her cousin have waarts before. On dermatologic states, there were greyish papules with verrucous surface, circumscribe, round with size 0, 6cmx 0, 6cmx 0, 2cm and 0, 5cmx 0, 4cmx 0, 2cm on the lower arm and instep. Dermoscopic features consisted of well define with multiple densely packed papillae each which white halo; containing multiple punctate haemorrhages; brown and red dots reminiscent of frogspawn, which is surrounded by a whitish halo. Patient was diagnosed with verruca vulgaris. Patient was treated salicylic acid 40% once daily at night, for 3–4 months.

The sixth patient, we reported a 24-year-old female with chief complaint there were warts on right hand and left middle finger sometimes felt itchy was increased size and number since 1 months ago. It started 1 years ago as small wart on the right hand. History of warts on another finger ever 10 years ago before, but regress spontaneously. Her brother have a warts but didn't get any medical treatment. On dermatologic examination, papule with verrucous surface, greyish, circumscribe, round and oval with size 0, 5cmx 0, 3cmx 0, 1cm on the right palmaris and digiti III sinistramanus. Dermoscopic features we found well defined yellowish verrucous surface with interrupted palmar lines and multiple punctate haemorrhages; brown dots. Patient was diagnosed with verruca palmaris. Patient was treated by daily application of salicylic acid 40% once daily at night, for 3–4 months.

3. Discussion

Verruca vulgaris are hyperkeratotic, exophytic, dome-shaped papules or plaques that are typically associated with HPV.

These warts are most frequently located on the fingers and dorsal surfaces of the hands or in other sites prone to trauma such as the knees or elbows, but they may occur anywhere on the skin surface. On the dorsal aspects of hands or feet or on the limbs, warts are exophytic or "cauliflower shaped" but on soles or palms, they are often relatively flat to the surface with a more endophytic growth pattern. The term mosaic warts is applied to a group of small adjacent but relatively flat warts on the sole. Smaller and flatter warts, often on the backs of the hands or face, may be verruca plana. On the face and limbs, warts can sometimes have a small base and longer, fingerlike projections, a morphological type called verruca filiformis.[1, 3] In this serial cases, there were verruca vulgaris, verruca palmaris and verruca filiformis based on location and clinical featured.

The dermoscope, a modified magnifying lens, makes the stratum corneum translucent and allows the visualization of sub-macroscopic structures located in the epidermis and upper dermis. The new devices use polarized light and, unlike traditional dermoscopy, no longer require direct physical contact between the optical lens and the skin.[9, 10]

Thus, they can be used without risk of transinfection, which is very important in its use for skin infections and infestations, even if this risk was considered low in traditional dermoscopy. Dermoscopy has been demonstrated to be a valuable tool in human papillomavirus infections both for diagnosis, prognostic marker and treatment monitoring. Although their diagnosis is usually based on typical clinical features, clinicians may sometimes be faced with features that overlap with other skin lesions or that make it difficult to accurately diagnose based on clinical criteria only.[4, 10, 11]

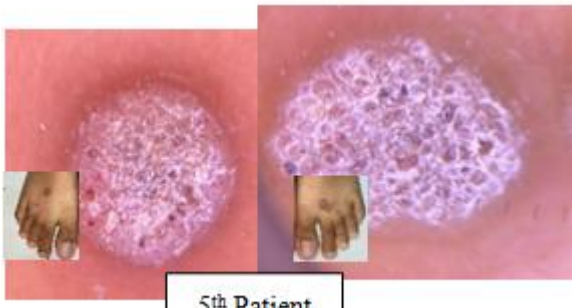
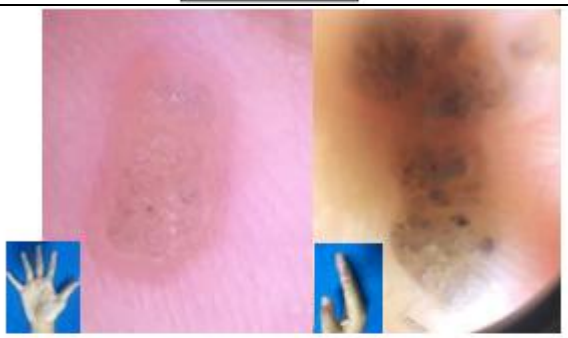
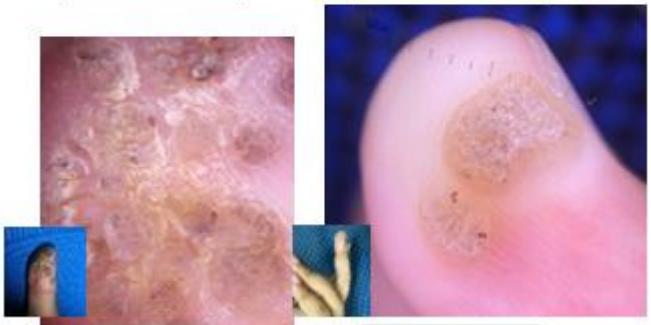
Verruca vulgaris dermoscopically display multiple densely packed papillae, each containing a central red dot or loop, which is surrounded by a whitish halo. Hemorrhages represent a possible additional feature, appearing as irregularly distributed, small, red to black, tiny dots or streaks. Characteristic features of verruca vulgaris are punctate black dots representing hemorrhage into the stratum corneum. Autoinoculation by scratching may cause a linear arrangement of warts. Slender, exophytic filiform warts can also develop, especially in periorificial locations on the face.[11, 12, 13] In this case, 2 case of verruca vulgaris showed well defined with multiple densely packed papillae each which white halo; containing multiple punctate haemorrhages; brown and red dots reminiscent of frogspawn.

Verruca palmoplantar as thick, endophytic papules on the palms, soles, and lateral aspects of the hands and feet, with gently sloping sides and a central depression resembling an anthill (hence the term myrmecia, meaning anthill). On the soles, these are often painful from pressure when walking, due to their deep inward growth. Verruca plantar is very common skin disease occurring on the sole. Sometimes, it is difficult to distinguish from corn. The diagnosis of a verruca plantar is made by paring down the hypertrophic epithelium until multiple black dots are detected in the dermis representing the thrombosed vessels supplying the wart.[14, 15] Dermoscopy of verruca palmoplantar typically reveals multiple prominent hemorrhages within a well-defined, yellowish papilliform surface in which skin lines are interrupted. This pattern is particularly useful for their discrimination from callus, which lacks blood spots, but instead displays central reddish to bluish structureless pigmentation. More recently, a study including a large number of patients identified 4 different dermoscopic patterns that may also coexist in a single wart: unspecific, fingerlike, mosaic, and knoblike patterns. Glomerular, hairpin/dotted, and glomerular/dotted vessel morphologies were detected.[16, 17] In this case, we found 4 case of verruca palmaris based on the presence of verrucous showed greyish-yellowish structureless, well defined with interrupted palmar lines and multiple punctate haemorrhages; black and brown dots.

Recently, we introduced dermoscopy using Derm LiteIII for the assessment of skin diseases. It is very useful for the diagnosis of warts. By using the polarizing light mode, black or red dots can be seen without paring the hypertrophic epithelium. Reported 6 cases of verruca were presented which examined with dermoscopy. All cases had warts with various location and morphology with dermoscopic findings multiple punctate haemorrhages; red, brown or black dots was observed. The dermoscopic aspects found in verruca vulgaris were based on the presence verrucous surrounded by whitish halos and irregularly distributed punctate haemorrhages; frogspawn appearance. In verruca palmaris, a well-defined yellowish papilliform surface with interrupted palmaris lines and multiple punctate haemorrhages was observed. Whereas for verruca filiformis, finger like papilliform structure and hairpin vessel. (Table 1.)

Existing modalities focus primarily on the destruction or removal of visible lesions or induction of cytotoxicity against infected cells. Because of the benign and self-limited nature of warts, treatments that cause scarring should be avoided. Cutaneus warts often regress spontaneously in children and therefore may not require treatment.[1, 6, 7]Cutaneous warts may be treated by daily application of salicylic acid. The most commonly used treatments for warts are destructive and include topical applications with salicylic acid and physical treatment with cryotherapy. Cryotherapy is an established, generally safe, and simple method in the treatment of warts. It can be offered as a first or second-line treatment, especially for patients with few warts of short duration. Other treatments that damage or destroy the infected epithelium include caustics such as silver nitrate, phenol, mono- or trichloroacetic acid, photodinamic theraphy, imiquimod, immunodulator, and surgical approaches with laser, eloctrocautery or excisional surgery.[7, 8] In this case series, 1 patient was treated with cryotheraphy; 2 patient was treated with electrocautery and curettage; 2 patient was treated salicylic acid 40%.

Table 1: Various Dermoscopic Features of Verruca Vulgaris, Verruca Filiformis and Verruca Palmaris

Literature	Patient
 Verruca Vulgaris[16] Multiple dense papillae surrounded by whitish halos; multiple punctate haemorrhages brown and black dots.	 1st Patient  5th Patient
 Verruca Palmaris[4] Well-defined yellowish papilliform surface with interrupted palmar lines, multiple punctate haemorrhages.	 1st Patient 2nd Patient  3rd Patient 6th Patient

Verruca Filiformis[16]
Finger-like papilliform structure and black dots.

4th Patient

4. Conclusion

Diagnosis is made based on anamnesis, physical examination and dermoscopic findings. We presented 6 cases variants of dermoscopic examination results; verruca vulgaris, verruca filiformis and verruca palmaris. Dermoscopic features and classifications is important to determine variants of warts. Classification depend on morphology, histology, and anatomic location is important. Multiple punctate haemorrhages; red, brown or black dots are the most common dermoscopic finding that can be observed in all cases of warts.

References

[1] Sterling JC. Human Papillomavirus Infections. In: Kang S, Amagai M, Bruckner A, Enk A, Margolis D, McMichael A, editors. Fitzpatrick's Dermatology 9th edition. New york: McGraw-Hill; 2019. p. 3096–106.
[2] De Koning MN, terSchegget J, Eekhof JA, et al. Evaluation of a novel broad-spectrum PCR-multiplex genotyping assay for identification of cutaneous wart-associated human papillomavirus types. J ClinMicrobiol 2010; 48:1706–11.
[3] Kirnbauer R, Lenz P. Human Papillomaviruses. In: Bolognia JL, Schaffeer J V, Cerroni L, editors. Dermatology. 4th ed. US: Elsevier; 2018. p. 1382–99
[4] Aqil N, Nassiri A, Baybay H, Gallouj S, Sara E, Mernissi FZ. Warts under the dermoscope. SM Dermatolog J. 2019; 5(1):1030-1033.
[5] Piccolo V. Update on Dermoscopy and Infectious Skin Diseases. DermatolPract Concept. 2019; 10(1):e2020003.
[6] Ockenfels HM. Therapeutic management of cutaneous and genital warts. Deutsche DermatologischeGesellschaft. 2016; 892-899.
[7] Kwok CS, Gibbs S, Bennett C, et al. Topical treatments for cutaneous warts. Cochrane Database Syst Rev. 2013; 9:CD001781.
[8] Sterling JC, Gibbs S, HaqueHussain S, et al. British Association of Dermatologists. Guidelines for the management of cutaneous warts 2014. Br J Dermatol. 2014; 171(4):696-712. Dermatology.
[9] Zalaudek I, Giacomel J, Cabo H, Stefani AD, Ferrara G, Hofmann-Wellenhof R, et al. Entodermoscopy: A New Tool for Diagnosing Skin Infections and Infestations. Dermatology. 2008; 216: 14-23.
[10] Scharf C. Dermoscopy finding in infectious and parasitic diseases. In: Kon K, Rai M, editors. Volume 2 in Clinical Microbiology: Diagnosis, Treatments and Prophylaxis of Infections. Academic press; 2017: p.303-313.
[11] Haliasos EC, Kerner M, Jaimes-Lopez N, Rudnicka L, Zalaudek I, Malvehy J, et al. Dermoscopy for the Pediatric Dermatologist Part I: Dermoscopy of Pediatric Infectious and Inflammatory Skin Lesions and Hair Disorders. Pediatric Dermatology. 2013; 30(2): 163-171.
[12] Bae JM, KangH, KimHOet al.Differential diagnosis of plantar wart from corn, callus and healed wart with the aid of dermoscopy. Br J Dermatol 2009; 160:220–222.
[13] Yoong C, Di Stefani A, Hofmann-Wellenhof R. Unusual clinical and dermoscopic presentation of a wart. Australas J Dermatol. 2009; 50: 228-229.
[14] Teoli M, Di Stefani A, Botti E, Mio G, Chimenti S: Dermoscopy for treatment monitoring of viral warts. Dermatology 2006; 212: 318.
[15] Tanioka M, Nakagawa Y, Maruta N. Pigmented wart due to human papillomavirus type 60 showing parallel ridge pattern in dermoscopy. Eur J Dermatol. 2009; 19: 643-644.
[16] Nayak SS, Mehta HH, Gajjar PC, Nimbark VN. Dermoscopy of general dermatological conditions in Indian population: A descriptive study. Clinical Dermatology Review. 2017;1(2): 41-51.
[17] Leiding JW, Holland SM. Warts and all: human papillomavirus in primary immunodeficiencies. J Allergy ClinImmunol 2012; 130:1030–48.

Author Profile

Faculty, Andalas University in 2013. She also received a Fellow Indonesian Society of Dermato Venereology (FINSDV)in 2019. She now with Dr M Djamil Hospital, Padang, West Sumatera, Indonesia as a Head of dermatosurgery division.

Vesri Yossy is a resident of dermatology and venereology, medical faculty, Andalas University.