International Dermoscopy Society

IN THIS ISSUE

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elvira.moscarella@gmail.com

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EDITORIAL BOARD

A major update of our web platform

Welcome to the new IDS website !

Dear Readers,

During the last general assembly of our society, held in Miami on February 2010, the election of the new IDS representatives took place.

Our president, Peter Soyer, expressed his intention to resign from his role as president and the assembly agreed to give to myself the responsibility to continue his action.

Iris Zalaudek was designated to be the new general secretary and Rainer Hofmann-Wellenhof was confirmed in his role as treasurer.

In this context, I would really like to thank all of you for your continuous support and let you know that I will try to do my best to continue what Peter started and to keep going with the improvement of our society.

At the assembly we briefly discussed the program for 2010/2012, in which we identified 3 priorities, namely, to promote membership and dermoscopy worldwide, to expand education, and to promote research. Ash Marghoob, Harald Kittler, and Scott Menzies were designated to be in charge for these 3 tasks, respectively. An executive board was also established in order to discuss twice a year the developments of our program.

One of the first challenges for me was to relaunch our website with

new contents and a brand new style. Together with Gery Gabler, our coordinator and webmaster, we are proud to announce that we just went live!

On the website you will find a number of new sections, including tutorials, pubmed news, and a dermoscopy podcast section. This was developed with the help of Ralph Braun in the role of coordinator and we are really very curious to verify if this new way of delivering education in dermoscopy will meet the interest and appreciation of our members.

Looking forward to seeing you soon at one of the next meetings

With all my best regards

Geppi Argenziano

MELANOCYTIC LESIONS IN CHILDREN

In the current issue of the IDS newsletter we focus on **diagnosis and management of melanocytic lesions in children**. Melanocytic lesions in children are almost invariably benign, and consequently their management should be different from the usual management of melanocytic lesions in adults. Kipping in mind that melanoma is extremely rare in the pediatric population, clinicians should rise their threshold for malignancy when dealing with pediatric patients. However there are two issues that can be considered problematic, namely congenital melanocytic nevi and Spitz/Reed nevi.

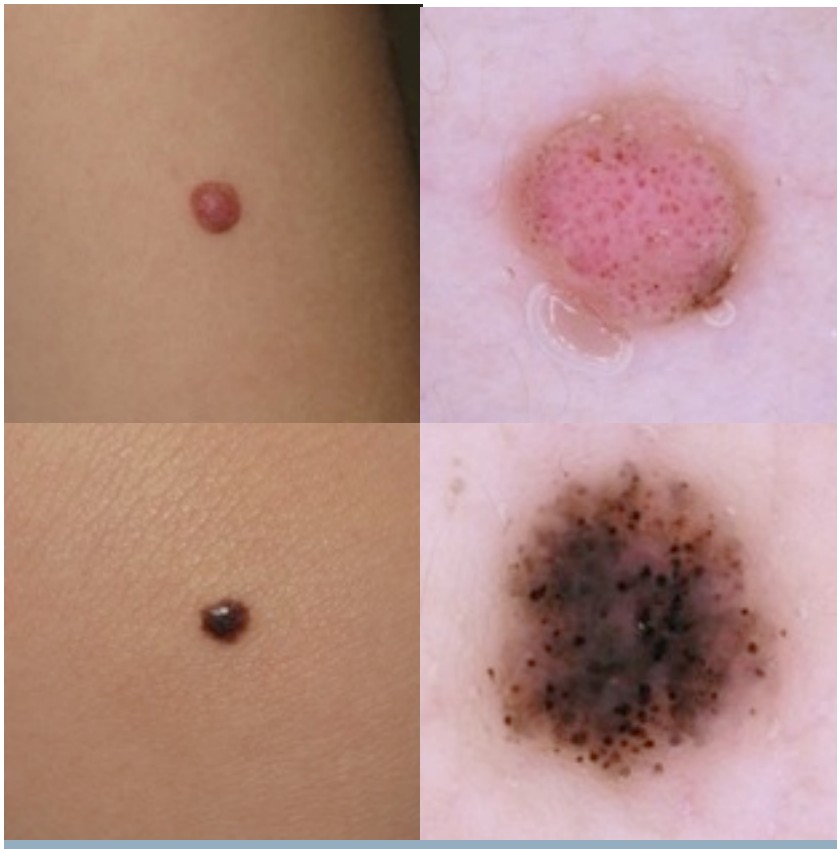


Fig1 A 3 year-old boy presenting with a non-pigmented Spitz nevus located on the right arm and a pigmented Spitz nevus on the knee. Digital dermoscopic follow-up has been scheduled every 4 months.

Congenital melanocytic nevi (CMN) are defined as nevi present at birth or developing at least within the first year of life. They are subdivided into 3 groups based on their size: small (<1.5 cm), medium (1.5 to 20 cm), and large (>20 cm). The latter group may be further classified as G1 (20 to 30 cm), G2 (30 to 40 cm), and G3 (>40 cm). They are genetically determined and persist throughout all life. The risk of malignant transformation is matter of an ongoing debate. Melanoma risk seems to be strongly dependent on the nevus size, being highest for giant CMN, with a maximum risk during childhood. The risk of melanoma development within small and medium sized CMN is controversial and it is thought to be up to 1% over a lifetime. The risk increases with increasing age, being higher after puberty and in the late decades of life. On dermoscopy, the main pattern is the globular/cobblestone pattern (large and angulated globules resembling cobblestones). Medium-sized CMN can also display reticular pattern, mixed globular/reticular pattern and also a diffuse pigmentation. A reticular pattern is usually seen in CMN arising on lower extremities. Milia like cysts, hypertrichosis, comma like vessels, and small brown dots typically seen within the network holes, represent additional dermoscopic criteria frequently seen in CMN. Occasionally, CMN can present blue white structures that do not allow an easy differential diagnosis with melanoma and require complete surgical excision or, if not possible, biopsy of the suspicious area.

Surgical excision is usually recommended for large congenital nevi as a prophylaxis against the development of melanoma. Clinical follow up should be performed annually for medium and small size CMN, and digital clinical dermoscopic imaging can be helpful. It is important to explain to the parents that the lesion can increase in size during time but it should be always proportional to the growth of the child.

The classical **Spitz nevus** is a rapidly growing, pink or flesh-colored papule or nodule of the lower extremities or the face in the childhood or early adulthood; its histopathologic hallmark is the presence of large spindle and/or epithelioid cells, usually in the paucity or absence of melanin.

Reed nevus is another eponymic designation for a benign melanocytic lesion described by Reed et al. in 1975 as pigmented spindle cell nevus. It is mostly found in young adults on the lower extremities as a rapidly growing brownish-black macule or papule; histopathologically, it is described as made up by interconnecting junctional fascicles of heavily pigmented spindle cells. Spitz/Reed nevi are the true melanoma mimickers in children. Classical Spitz nevus is an amelanotic or hypopigmented lesions with a vascular pattern composed by dotted vessels that are monomorphic, regularly distributed throughout the lesion, often grouped and surrounded by regularly intersecting white lines, the so-called reticular depigmentation. In frankly pigmented lesions, globules are brown to black, large and regularly distributed at the periphery, or again surrounded by reticular

depigmentation. In most cases of pigmented Spitz nevi, peripheral globules are fused with the central body of the lesion; these regular, 'on focus' radial projections (so-called streaks) are responsible for a 'starburst' appearance. In a minority of cases, a heavy pigmentation also gives rise to a regular black network, which rests above the lesion and can be removed by tape stripping (superficial black network).

Several of these features can be simultaneously present and/or irregularly distributed within a given lesion, thus giving an atypical or 'melanoma-like' pattern. Dermoscopic atypia can be also increased by virtue of the presence of a blue-whitish veil as a result of a deep dermal pigmentation with an overlying epidermal hyperplasia. The occurrence of an atypical dermoscopic pattern in Spitz nevus is well recognized as is the occurrence of melanomas showing very few or no dermoscopic features suggestive of malignancy but exhibiting either the globular or the starburst pattern.

Based on these considerations, a classical or pigmented Spitz nevus appearing up to the age of 12 can be easily diagnosed and managed conservatively if it is relatively small (up to 1 cm) and shows no atypical clinical and dermoscopic features. Under these circumstances, a follow-up can be scheduled with controls every three-six months (fig 1). In the absence of dramatic changes in color, shape, or size, such a follow-up protocol can be held until the appearance of a homogeneous pattern; since then, a one-year follow-up can be employed.

Large (>1 cm), nodular, ulcerated, rapidly changing, or otherwise atypical Spitz nevi of the childhood must be excised. Because of the absence of criteria that allow an accurate differentiation of classical Spitz nevi from pyogenic granuloma, histopathologic examination is also recommended for those lesions showing features of pyogenic granuloma, independently from age.

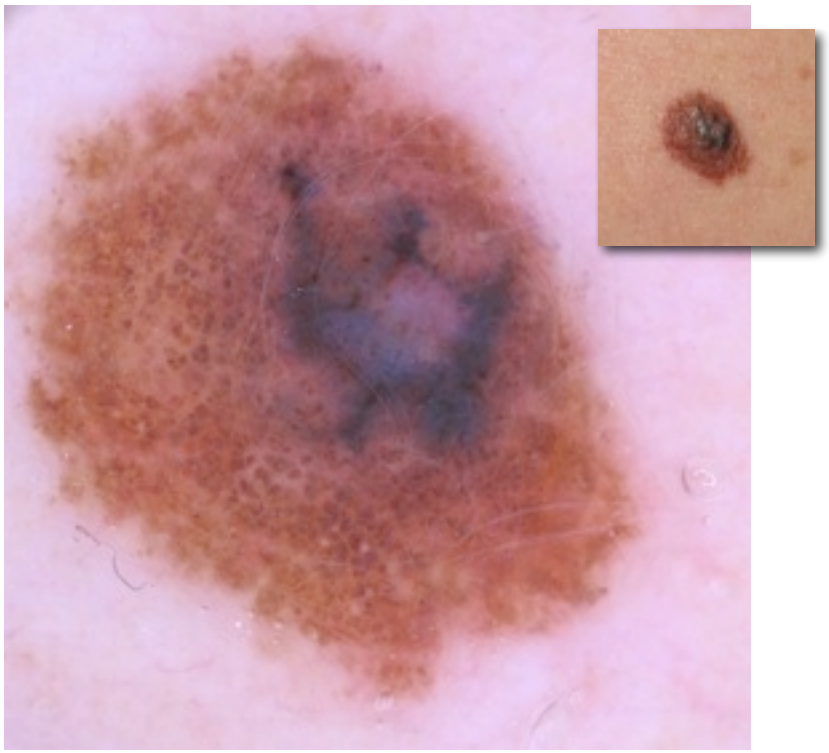


Fig 2. Melanoma arising on a congenital nevus in a 13 year-old girl. Presence of a focal area exhibiting a bluish veil. Early changes were detected by dermoscopy much before the development of clear-cut clinical signs suggestive of melanoma.

Melanoma in children can be subdivided in prepubescent and postpubescent. Melanoma has an estimated annual incidence of 0.8 per million children. Recent reports indicated an increasing incidence of pediatric melanoma, this rising incidence of melanoma has been mostly reported for postpubescent melanoma, whereas no increase has been registered when considering the first decade of life. A part from genetic disorders (xeroderma pigmentosum) and immunosuppression, the most important melanoma risk factor in childhood is the presence of giant CMN. This is responsible for one third of melanomas in children up to 12 years, and it also associated with a less favorable prognosis (70% of deaths).

Some authors have postulated the hypothesis that melanoma behaves differently in children than in adults based on the higher tumor thickness at diagnosis and the higher rate of positive sentinel lymph nodes, but a more favorable overall survival rate of children compared with adults. Even in the context of spitzoid melanoma, children have a better prognosis than adults, despite the presence of lymph node metastases. An alternative explanation to the more favorable biology of pediatric melanoma is misdiagnosis. In several histopathologic studies, lesions initially diagnosed as melanoma were reclassified as Spitz nevi/tumors when reviewed retrospectively.

Due to the exceptional rarity of pediatric melanoma, no clear-cut clinical and dermoscopic criteria have been described to date. Some argue that childhood melanoma often lacks the classical features of pigmented melanoma, and it is more often an amelanotic and nodular lesion resembling pyogenic granuloma or non pigmented Spitz nevus.

However, by this description the question is raised whether these overlapping features between Spitz nevus and melanoma are due to the difficult

differentiation between these two entities. As a guideline for management, a biopsy should be always considered when a growing amelanotic nodule is discovered, or a recent change is detected clinically, and especially dermoscopically, within a CMN (fig 2).

As also highlighted by the case of the newsletter (see below), there are some additional conditions in which a confident differential diagnosis with melanoma can be difficult when dealing with children. The eccentric hyperpigmentation (also called **Bolognia sign**) is a peculiar clinical and dermoscopic confounding feature. This is a rather common finding in children nevi, but it can be regarded as a sign of melanoma by clinicians. However, in contrast to melanoma, nevi with eccentric hyperpigmentation exhibit dermoscopically brown to gray-black homogenous pigmentation, in the absence of any melanoma-specific feature. In addition, this "innocent" hyperpigmentation may often disappear during follow up.

Combined nevi are histopathologically typified by the presence of two different nevus cell populations. The most frequent combination is between a small congenital and a blue nevus, but any other combination is also possible. Dermoscopically a globular component is usually combined with blue homogenous color, or a reticular pattern may be seen at the periphery surrounding a blue central area. Because of the striking similarity between combined nevi and melanoma, these lesions are usually excised for histopathologic examination.

Children presenting a high number of nevi, with some larger than 6 mm and slightly irregular in shape and color, should undergo annual regular follow-up starting from puberty. Those large and irregular nevi are also so called dysplastic nevi or atipica nevi. Atypical nevi usually appear after puberty and continue to develop until the 4th to 5th decade of life. They can be clinically flat or slightly elevated, and usually reveal color variegations and a diameter of more than 6 mm. Multiple atypical nevi represent a phenotypic marker of patients with an increased risk for melanoma. Thus, regular follow up should be performed after puberty, being the risk of melanoma development before that age almost inconsistent. In individuals with multiple atipical nevi, melanoma usually appears "de novo", being atypical nevi just a risk marker and not real melanoma precursors. The monitoring procedure is, therefore, directed to identify incipient melanomas that are difficult to differentiate from benign but atypical nevi.

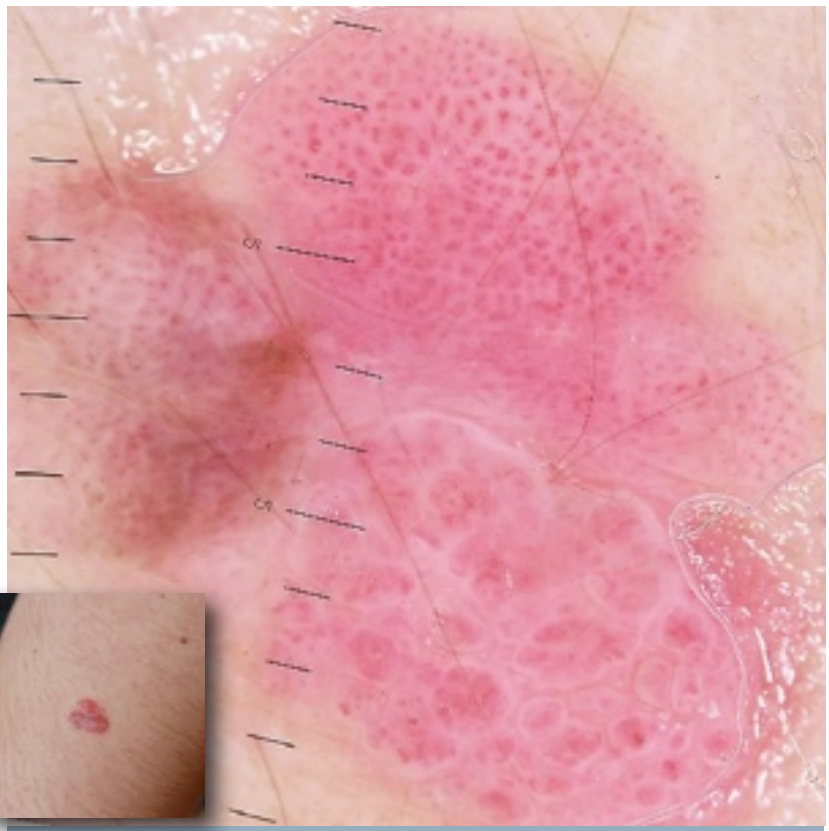


Fig 3. Atypical melanocytic proliferation arising on the leg in a 16 year-old girl. The clinical picture shows a pinkish papule with irregular borders. The lesion was enlarging over time. On dermoscopy there is a polymorphous vascular pattern (dotted, coiled, and serpiginous vessels) with remnants of brown pigment visible on the left side of the lesion (Case posted by doctor Jean Yves Gourhan in the IDS forum).

Elvira Moscarella, MD

CASE OF THE NEWSLETTER

FORUM CASE #2820 BY GEORGE JYOTHISH

Title of request: dysplastic nevus r/o melanoma

Age: I years

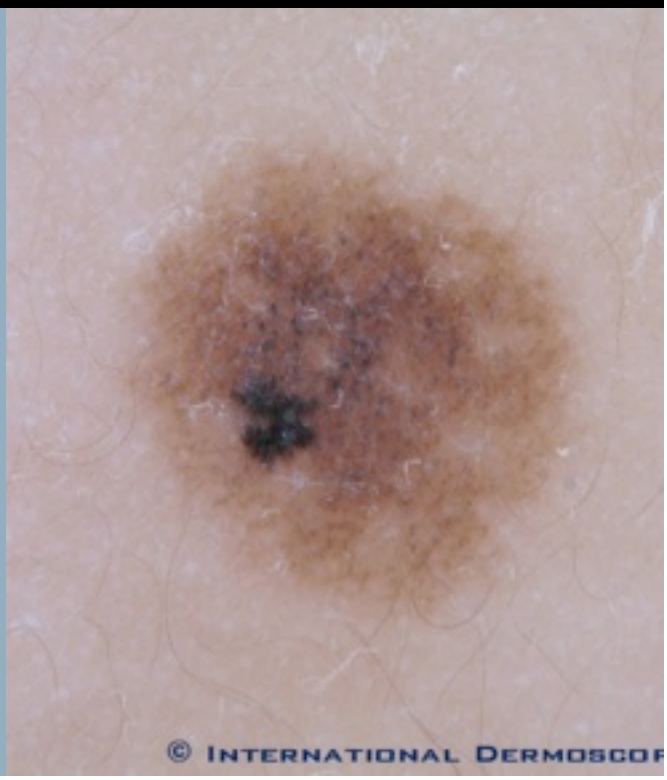
Sex: M

Location: inguinal region

Clinical history: since birth. Black spot seen recently by the mother.

Diagnosis: dysplastic nevus

Question: early malignant changes.



Comments

Zalaudek Iris (9/6/2010 11:58:28 PM):
so-called "Bolognia" sign - common in children and becomes usually less worrisome with time.

Burns John (9/7/2010 1:34:27 AM):
Will have to defer to IZ's experience. Thanks for the case.

Phillips Alison (9/7/2010 1:17:37 PM):
I don't see many one year olds. The black area looks very worrying, so thanks Iris for that info! Any reason for the name?

George Jyothish (9/7/2010 2:50:49 PM):
Thanks a lot. So, follow up?

Gourhant Jean-Yves (9/7/2010 2:51:30 PM):
Pr Bolognia I suppose.
He described this sign without dermatoscope.

Zalaudek Iris (9/8/2010 6:17:31 AM):
JYG is right, Bolognia described it - but he is a she :-)) but it should be indeed called Pizzichetta sign as she followed up such nevi by dermoscopy and found that the darker area disappears after 2-3 years.

Bergamo Antonella (9/8/2010 5:05:23 PM):
Thank you Iris! Very interesting. Thank for the case.

Gourhant Jean-Yves (9/8/2010 9:45:01 PM):
Sorry, it's the 2nd time it happens to me!
Last time it was with Dr Liu (her paper about melanoma growing rate).
In the future, I will be more prudent : as 75% of doctors are women now, I will always say "She" when I won't be sure :-)

Fox Gary (9/16/2010 8:33:36 PM):
Morphologic Changes of Acquired Melanocytic Nevi With Eccentric Foci of Hyperpigmentation ("Bolognia Sign") Assessed by Dermoscopy. Maria A. Pizzichetta, MD; Cesare Massone, MD; Giorgio Grandi, MD; Gloria Pelizzo, MD; H. Peter Soyer, MD. Arch Dermatol. 2006;142:479-483.
Total news to me. Bet if someone does this study: Sends clinical and dermoscopic pic to 100 US (excluding pediatric subspecialized) derms who do dermoscopy and ask management of this, 97.5% check the box "gone within one heartbeat." (Could include eclipse and reverse eclipse nevi, which are apparently a less well kept secret, just for fun.)

IDS MEETING AT THE EADV 2010

The last IDS meeting took place in Gothenburg during the 19th congress of European Academy of Dermatology and Venereology. Interesting news and updates about dermoscopy were shared among the numerous participants. Discussion focused on administrative agenda and scientific session. The scientific agenda was introduced by dr Argenziano, that presented updates about dermoscopy spreading worldwide and news about the activities of the society, like the new web site. The IDS web site will be more interactive, in order to promote sharing of knowledge and experience between members, and much more dedicated to educational purposes.

New board members of the Society were officially presented, namely dr Antonella Tosti from Italy, dr Haenssle from Germany, dr Alexander Stratigos from Greece, dr Renato Bakos from Brasil, dr John Paoli from Sweden, and dr Ana Maria Forsea from Romania.

Here we resume the scientific program of the meeting.

Bowling J. The commercialisation of cancer - eroding the pillars of professionalism.

Dr Bowling discussed about the risk of commercialization of cancer, in particular when non physicians are allowed to practice skin cancer prevention in private settings. The risk for patients to be visited by non specialized practitioners is high when non physicians are allowed to perform skin cancer screening for commercial purposes and without the needed expertise.

Zaballos P. Pyogenic granuloma - an update

Dr Zaballos presented his recent work of evaluation and classification of dermoscopic features of pyogenic granuloma. Pyogenic granuloma can rise the question of differential diagnosis with melanocytic lesions, in particular Spitz nevi and amelanotic melanoma. Pyogenic granuloma is a common, benign, vascular lesion of the skin and mucous membranes which is a simulator of amelanotic/hypomelanotic melanoma Digital dermoscopic images of histopathologically proven cases of 122 pyogenic granulomas and 140 other tumors (28 amelanotic melanomas, 7 melanoma metastases, 22 basal cell carcinomas and 83 other tumors) were collected Seven exclusive patterns were made up from the combination of the structures "reddish homogeneous area" (RHA), "white collarette" (WC), "white rail lines" (WRL) and vascular structures (VS). The pattern composed of RHA, WC and WRL showed the highest sensitivity (22.1%; p< .001) and a specificity of 100% (p< .001) for pyogenic granulomas. Other two patterns (RHA + WC and RHA + WC + WRL + VS) showed a 100% specificity when compared to melanoma (p<.001) However the conclusion is that even though some dermoscopic patterns are useful in the recognition of pyogenic granulomas, dermoscopy does not substitute histology, mostly when vessels are present, since melanoma should not be ruled out.

Ozdemir F. Nevi with severe dysplasia, nevi with low to moderate dysplasia, and melanoma in situ - are there differences dermoscopically and histopathologically?

Dr Ozedmir discussed about the never ending question about the differential diagnosis between highly dysplastic nevi and melanoma, trying to find different dermoscopic features that can allow an easier differentiation between these entities.

Kittler H. Why the first step is misleading and why it should be abandoned!

Dr Kittler shared with the audience his thoughts about a new approach to the dermoscopic diagnostic process. In particular he focused on the first step of the dermoscopic diagnosis, namely differential diagnosis between melanocytic and non melanocytic lesions, and he explained why in his view this first step can be misleading, especially for non expert dermoscopists, and should it be abandoned.

Haenssle H. Long term experience using the 7-point checklist in melanoma screening.

Dr Haenssle showed his work of assessing the sensitivity, specificity, and diagnostic accuracy of the 7-point checklist in the setting of a prospective Patients at increased melanoma risk (n = 688) were screened at regular intervals by naked-eye examination, the dermatoscopic 7-point checklist, and digital dermatoscopy follow-up (10-year study interval). The specificity of the 7-point checklist was 97% (compared with 65%-87% in retrospective settings). Regression patterns, atypical vascular patterns, and radial streaming were associated with the highest relative risk for melanoma (odds ratio 3.26, 95% confidence interval 2.05-5.16; odds ratio 3.04, 95% confidence interval 1.70-5.46; odds ratio 2.91, 95% confidence interval 1.64-5.15; P < .0003, respectively). Melanomas thicker than 0.5 mm exhibited significantly more regression patterns and atypical vascular patterns (P < .02). The malignant versus benign ratio for all excised lesions was 1:8.6 (127).

In conclusion, the 7-point checklist for dermatoscopy was less sensitive but highly specific in this prospective clinical setting. Complementary information clearly increased the sensitivity. Regression patterns or radial streaming in nevi of patients at high risk should raise a higher melanoma suspicion than might be concluded from retrospective studies.

NEW ARTICLES IN DERMOSCOPY

Br J Dermatol. 2010 Aug;163(2): 302-9. Epub 2010 Apr 23.

Reticular grey-blue areas of regression as a dermoscopic marker of melanoma in situ.

Seidenari S, Ferrari C, Borsari S, Benati E, Ponti G, Bassoli S, Giusti F, Schianchi S, Pellacani G.

Department of Dermatology, University of Modena and Reggio Emilia, Modena, Italy.

The aim of this study was to assess the frequency and extent of dermoscopic signs of regression in melanoma in situ (MIS) and to describe its dermoscopic features. Dermoscopic images of 85 MIS, 85 invasive MMs and 85 dermoscopically equivocal lesions with a histological diagnosis of naevus were evaluated by three dermatologists, who assessed the presence of 11 parameters of regression. The number of regression parameters per lesion increased according to melanoma thickness. White areas, the grey-blue veil and widespread blue areas were more frequent in invasive MMs than in the other two lesion groups, whereas light brown areas and regression of dermoscopic structures were more frequent in MIS. Peppering was observable in the same percentage of MIS and invasive MMs. Blue areas were more frequently structureless in equivocal lesions and invasive MMs, whereas the reticular pattern prevailed in MIS.

CONCLUSIONS: Frequency, morphology, extent and distribution of regression vary according to melanoma thickness and diameter. Lesions with reticular blue regression and light brown areas should undergo surgical excision for the suspicion of MIS. Moreover, the identification of the reticular pattern of blue regression can be considered a significant discriminator and a reliable predictor of MIS.

J Am Acad Dermatol. 2010 Sep;63 (3):361-74.

How to diagnose nonpigmented skin tumors: a review of vascular structures seen with dermoscopy: PART I: MELANOCYTIC TUMORS, AND PART II. NON MELANOCYTIC SKIN TUMORS

Zalaudek I, Kreusch J, Giacomel J, Ferrara G, Catricalà C, Argenziano G.

Division of Dermatology, Medical University of Graz, Graz, Austria.

Much work has concentrated on the identification of specific morphologic types of vessels that allow a classification into melanocytic versus nonmelanocytic and benign versus malignant nonpigmented skin tumors. Among a broad spectrum of different types of vascular patterns, six main morphologies can be identified. These are comma-like, dotted, linear-irregular, hairpin, glomerular, and arborizing vessels. With some exceptions, comma, dotted, and linear irregular vessels are associated with melanocytic tumors, while the latter three vascular types are generally indicative of keratinocytic tumors. Aside from vascular morphology, the architectural arrangement of vessels within the tumor and the presence of additional dermoscopic clues are equally important for the diagnosis. This article provides a general overview of the dermoscopic evaluation of nonpigmented skin tumors and is divided into two parts. Part I discusses the dermoscopic vascular patterns of benign and malignant melanocytic skin tumors. Part II discusses the dermoscopic vascular patterns of benign and malignant nonmelanocytic nonpigmented skin tumors.

Dermatol Venereol. 2010 Jun 17. [Epub ahead of print]

Vascular patterns in basal cell carcinoma.

Micantonio T, Gulia A, Altobelli E, Di Cesare A, Fidanza R, Riitano A, Fargnoli MC, Peris K.

Department of Dermatology, University of L'Aquila, L'Aquila, Italy.

Dermoscopy has been proved to increase the diagnostic accuracy of basal cell carcinoma (BCC). Objective To characterize the type and frequency of vascular patterns in superficial and nodular BCCs. Authors retrospectively analysed the dermoscopic images of 504 histopathologically proven BCCs. Results The most common vascular pattern was represented by arborizing vessels (306/504; 60.7%), which were significantly more frequent in nodular BCCs (nBCCs) compared with superficial BCCs (sBCCs), and in pigmented sBCCs vs. non-pigmented sBCCs ($P < 0.0001$). Short fine telangectasias (SFTs) were found in 33.1% (167/504) of cases and were significantly more frequent in sBCCs compared with nBCCs ($P < 0.0001$). Hairpin vessels were detected in 52/504 (10.3%) BCCs. Minor vascular patterns included glomerular vessels (41/504; 8.1%), dotted (21/504; 4.2%), comma vessels (5/504; 1.0%) and polymorphous pattern (9/504; 1.8%).

CONCLUSIONS Arborizing vessels are prototypic of nBCCs, whereas SFTs are characteristics of sBCCs. Differential diagnosis with squamous cell carcinoma or melanoma is mandatory when a polymorphous pattern is detected.