

Brief Report

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Brief Report

# Considerations About Melanocytic Nevi

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**Abstract:** The purpose of the study is to analyse and to identify specific structural characteristics of melanocytic nevi, to youth patients. Using the optical and electronic microscope, could be possible a proper description related melanocytic nevi. In this study play a significant role, different factors, such as genetic, epigenetic, microbiomic and proteomic factors. Disease diagnostic management and future trends, directions are also important key points As future directions good to mention preventive and prophylactic methods.

**Keywords:** patients; epiderm; nevi; analyse; diagnosis

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## Introduction

In order to define a disease, must have in attention a lot of different factors such as historical points, or social and cultural. Results of research studies, show us that some connective cells such as fibroblasts, lose their identity, in pathological conditions. [1] Another specific cells, namely melanocytes are known that having a specific structural point that is consider important in structural pathological description. [2] Referring to melanocytic nevi, in medical specific field of study and of research, various pigmented lesions of the epiderm, known as nevi, could be observe in different parts of the body. [3] For a proper diagnostic, an atypical nevus, can be biopsied. [4] In this direction, is important to practice a biopsy beside the extended clinical evaluation in melanocytic nevi A great point in this field of research, could be possible the genetic susceptibility for morphological and functional alterations, in nevi with that surrounding nevi changes. [5] A complete medical examination, play a great point for establishing the medical conduct, for a healthy status improving. [6,7] Structural analysis describe specific cells namely melanocytes as aggregated in 'nests', which conduct forming the nevus cells. [8] To the youth patients researchers found specific cells knowing as melanocytes. This specific cells could be found in areas of the epiderm of the parts of the body. [9,10] Theoretical and practical studies, show that melanocytic nevi developing in utero present genetical differences from those that appear later. [11,12] In the present field, we can mention about various informations from scientific literature, referring to specific nevi. [13] Also from literature and from practicum actually are known different scientific informations about extending melanocytic *nevi*, having specific scientific names. [14] Because are many cases in all of the world, diagnosed as melanocytic nevi, we can mention that currently, the proper treatment of epidermal nevi is challenging. [15–18] Congenital melanocytic nevi it is known as a subject of research that offer controversy. [19] Clinical monitoring in congenital melanocytic nevi is important for diagnosis and for possible medical treatment strategies applications. [20] A complete examination of the human body, during a medical examination, is important. [21,22] Best to mention that the nowadays higher incidence in melanoma is in accompaniment of the nevi existence of the body and of the increase exposure to the ultraviolet light. [23,24] Practical biopsy is important for diagnosis. [25] One of an important point in the diagnosis of melanocytic nevi is to differentiate melanocytic nevi from a possible melanoma. [26,27]. An earlier diagnosis of the melanoma play a great role in idea that neoplastic lesions could be develop from pre-existing nevi in many cases. [28] Unfortunately, the epidermal melanoma is growing faster., depending of various conditions. [29,30]

## Melanocytic Nevi an Approach

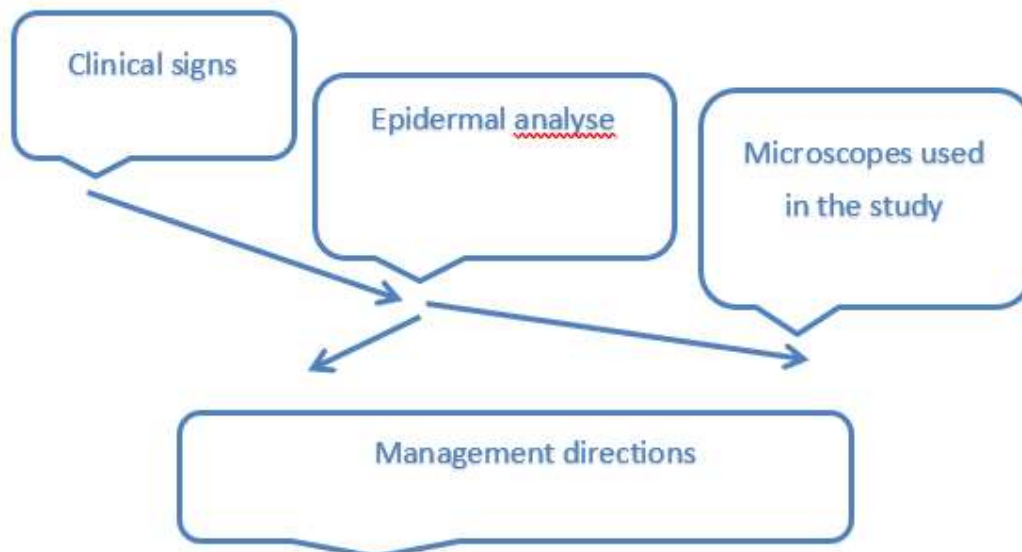
From many types of nevi, in the next short written text, we will describe a little bit on Ito's nevus and Ota's nevus. This two types of nevi, could be observe in pregnancy, at birth and also to puberty. Their presence is in concordance with hormonal changes. Research studies described possible malignant status in Ota's nevus, rarely in Ito's nevus. [31,32] These two previously mentioned types of nevi, namely Ito and Ota, do not differ from a histological point of view. Ito's nevus and Ota's nevus are distinguished by specific location on the body. So, typically, Ito nevus occurs in the arm region and Ota nevus could be found on the face. [33,34] Ota's nevus could also be found in the supply areas of the first two branches of the trigeminal nerve. [34–37] Structurally, Ito's nevus presents as a slate-blue/gray-blue macula in the shoulder/breast and lateral arm region in the supply area of the brachial nerve, in infants or prior to puberty. [38] It is known that a specific sign of melanoma within the existing Ito's nevus as a typical nodule. [39] In rarely malignant cases in patients diagnosed with Ito's nevi have been reported in addition, typical nodules. [40,41]

From birth age, congenital melanocytic nevi (CMN) is known as one of the frequent skin lesions. [42] From research results and conclusions, could be found rarely medical namely, neuroid differentiation. To a specific analysis, it is possible to observe specific areas of cells with myxoid stroma in addition. Possible resemble later than, as neurofibromas. [42]

From a currently research perspective we can mention that in utero, specific stem cells from the neuroectoderm play a significant role such as migration to the skin as melanoblasts. Mechanism refers to a differentiation process into melanocytes. In addition, mutations arising in specific cells can occur to well known mosaicism. Good to know that in the early embryogenesis, multipotent progenitor cells can be affected, leading to the presence of multiple congenital melanocytic nevi and also to extracutaneous alterations. [43,44]

In addition to the previously mentioned idea, congenital melanocytic nevi occur as a result of in-utero somatic mutations. In this idea, genes play a great role. So there are known the mitogen-activated protein kinase (MAPK) pathway (mainly NRAS and BRAF). More than, their specific mutations refer to damages in the development of cutaneous and/or extracutaneous previously mentioned mosaicism. [45] Additionally to congenital melanocytic nevi, proliferative nodules (PN) constitute nodular lesions. [46] All described epidermal alterations, are factors incriminate in differentiating proliferative nodule from melanoma. (Figure 1a,b)

Good to mention that neurocutaneous melanosis is a disease where congenital melanocytic nevi are associated with melanocyte proliferation. Besides, satellite lesions are especially at risk. Clinically are signs and specific symptoms So could be describe neurological symptoms, with possible intracranial pressure. [47]



(a)

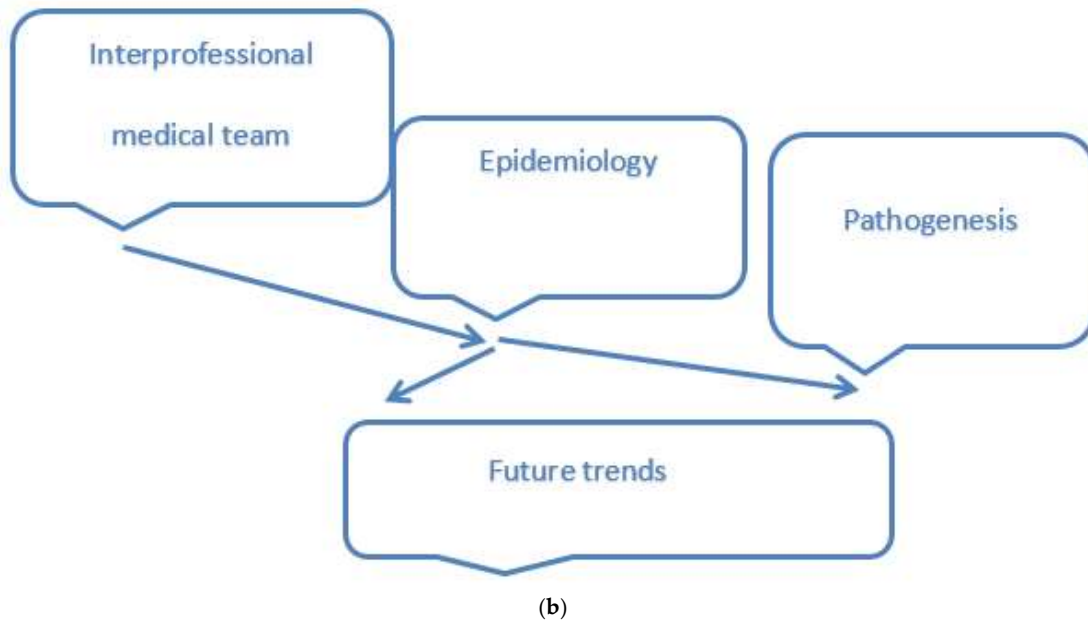


Figure 1. a. Congenital melanocytic nevi. Study objectives. b. Congenital melanocytic nevi. Study objectives.

## Material and Methods

For the purpose of the study we can mention about classic laboratory technique used and about the materials needed. In the specific laboratory, were followed the steps of the classic method, using Hematoxylin & Eosin staining. The samples used were from male and female youth patients, before mature age, from urban and rural residence. This are examined by performing the optical microscopic analysis. The operative pieces are intended to bring in the pathological anatomy service for macroscopic examination for diagnostic purposes

## Results

Epiderm protect us during the life, from different factors. For a morphological analyse, structural and ultrastructural characteristics could be describes, using optical and electron microscope. Structural analyse of the epiderm, using colour laboratory techniques, is able to describe the specific layers with their characteristics. More than, using electron microscope, specific compounds as filaggrin which is knowing as an important epidermal protein and/or tight junction located in the granular layer of the epiderm, could be observed. For this purpose, transmission electron microscope examination, is consider one proper method for analyse. Scanning electron microscopy is also a modern method for analyse, which offer results that demonstrate abnormalities in the epiderm ultrastructure. (Figure 2)

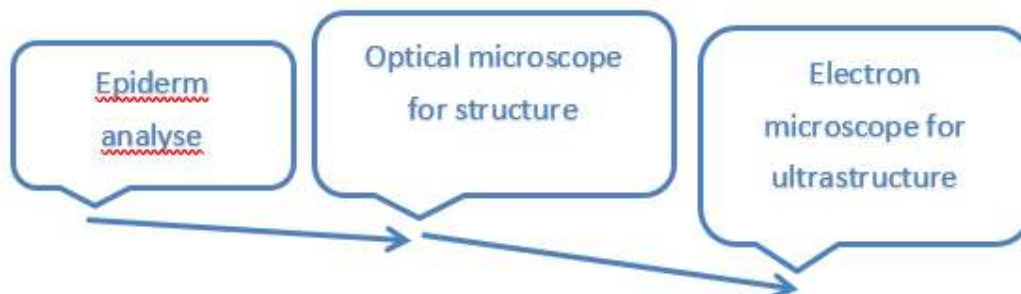
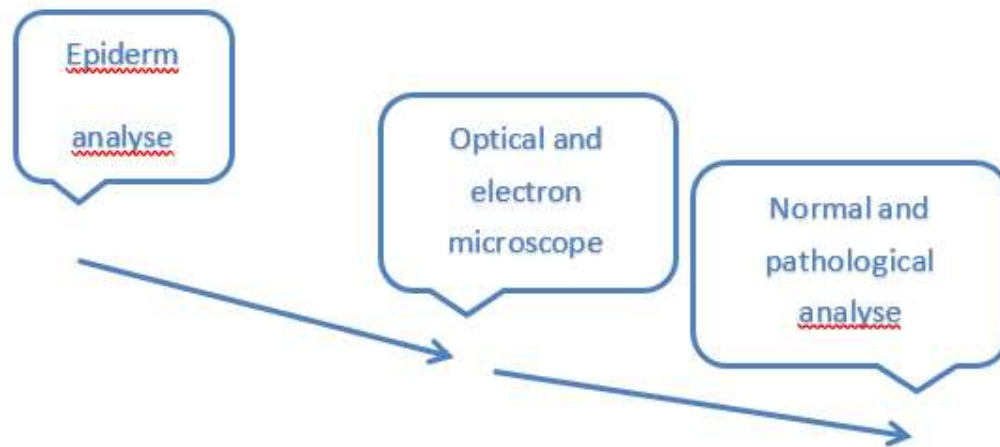


Figure 2. Methods for epiderm analyse.

The human body is covered by skin and the epidermis contains different types of glands, as sebaceous glands and sudoripar glands. In this study direction, it is known a typical physiopathologic mechanism for the functionality of the body, including epidermal compounds and their body surroundings. Histopathological analysis describes various modifications to the melanocytic nevi aspect, located on various regions of the body. So we can mention asymmetry, irregular form, cytologic atypia, and mitotic activity. Medical specialists describe and conclude that to benign melanocytic nevi, could be possible a description for atypical pathological characteristics of nevi and more important to mention characteristics when benign nevi are traumatized.(Figure 3)



**Figure 3.** Changes in epidermal compounds - from normal to pathological.

Epidermis is a barrier, but is able for conducting to an illness status if include modifications in structural compounds. Histopathological analysis describes the melanocytic nevi located on various regions of the body, with asymmetry, irregular form, cytologic atypia and mitotic activity. More than, medical specialists describe and conclude related to the structural aspects in benign traumatized melanocytic nevi. **In this field**, dermoscopy plays a role for a proper diagnostic. Dermoscopy plays a role for a proper diagnostic important in practice to all ages, including, youth age and children.

## Discussions

Great interest in knowing epidermal compounds. So, the epidermis is composed of a number of specific layers. Specific cells are known. One of the roles of the epidermis is implication in different injuries. Alterations in the compounds of the epidermis layers, contribute to the visual signs of pathologic conditions. One research direction, refers to the role of benign melanocytic lesions with alterations, which conduct to malignant cutaneous melanoma. Related to melanocytic nevi, in some circumstances, could be possible that the prognosis be poor having in attention the health of the patients having comorbidities. Pathological analysis and diagnosis referring to melanocytic nevi located on different regions from the body can find asymmetry, irregularity, cytologic atypia, and mitotic activity. Medical team including dermatologists, pathologists and dermatopathologists play a great role, in idea referring to differentiate benign melanocytic nevi from malignant melanoma. This is important in order to avoid unnecessary surgical intervention or a treatment.

## Conclusions

Techniques for the laboratory diagnosis, as a key point in monitoring pathological status to patients diagnosed with melanocytic nevi, conduct to a proper quality of life. Implication of an interprofessional team is a condition that plays a great medical role. Congenital melanocytic nevi are pigmented lesions that are usually present at birth. They are generally benign, but a small percentage

(especially the larger ones) can potentially transform into malignant melanoma. Future trends, new laboratory methods and techniques for diagnosis. are in attention, for the next coming period of time.

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