

DERMATOSCOPY IN BASAL CELL CARCINOMA AND ITS HISTOPATHOLOGICAL CORRELATION

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Abstract: Introduction: Dermoscopy is a non-invasive diagnostic method developed for the early detection of patterns, by visualizing their components they help determine certain characteristics compatible with malignant skin pathologies. This method has become an essential tool during the dermatological physical examination to make an early diagnosis of potentially malignant lesions and with this to provide timely therapy according to the degree of malignancy of the lesion. Basal cell carcinoma represents one of the pathologies most diagnosed with this method. It is one of the most common malignant skin tumors with an incidence of approximately 75%. Dermoscopic signs have been demonstrated histopathologically, which has increased the sensitivity and specificity of this method as a non-invasive diagnostic tool for malignant lesions. **Goal:** To describe the dermoscopic characteristics in the diagnosis of basal cell carcinoma and its histopathological correlation. **Methods:** This is a non-experimental descriptive study, through an exhaustive search of scientific articles in digital repositories such as PUBMED, Google Scholar and Cochrane from the last 5 years. **Results:** There are no significant differences regarding age, skin type or location, but there are changes in the size of the lesion and the time of evolution. Well, in the dermoscopic findings, ovoid nests and arborizing vessels associated with the neoplastic process of the cells in the basement membrane of the skin were observed. **Conclusions:** Despite being a non-invasive diagnostic tool, dermoscopy has a high sensitivity and specificity, since the patterns found in it represent the histopathological changes observed in a skin biopsy.

Keywords: dermoscopy, basal cell carcinoma, arboriform vessels.

INTRODUCTION

Dermoscopy is a non-invasive diagnostic method developed for the early detection of patterns, by visualizing their components they help to determine certain characteristics compatible with malignant skin pathologies. This method has become an essential tool during the dermatological physical examination to make an early diagnosis of potentially malignant lesions and with this to provide timely therapy according to the degree of malignancy of the lesion. Basal cell carcinoma represents one of the pathologies most diagnosed with this method. It is one of the most common malignant skin tumors with an incidence of approximately 75%. Dermoscopic signs have been demonstrated histopathologically, which has increased the sensitivity and specificity of this method as a non-invasive diagnostic tool for malignant lesions.

Dermoscopy can distinguish between different subtypes of basal cell carcinoma, in addition to differentiating poorly differentiated squamous cell carcinomas to predict diagnosis and optimize therapy. Basal cell carcinoma is characterized by a wide variety of clinical and dermoscopic features due to a large number of combinations of histological features, therefore the diagnosis of basal cell carcinoma is not always easy. Dermoscopy is often useful to identify basal cell carcinoma and, with the help of various dermoscopic criteria, to discriminate it from other skin cancers, still most dermoscopic studies have been performed mainly on pigmented basal cell carcinoma. However, basal cell carcinoma lesions are often difficult to diagnose due to the lack of pigmented structures. Therefore, detection and quantification of the vasculature of the lesion can provide critical information for diagnosis and prognosis.

This review article plans to describe the vascular aspects of basal cell carcinoma, beginning with anatomical observations, observable with the naked eye, by dermatoscopy, pathophysiological and histological foundations of the development and evolution of the vasculature of basal cell carcinoma.

DEVELOPMENT

According to Lallas, the dermatoscopic criteria for basal cell cancer confirmed the importance of the classical criteria for basal cell carcinoma such as branched vessels (arborizing), blue lumps (ovoid blue nests), blue or gray dots and globules, peripheral radial lines (similar areas to maple leaves), radial lines that converge to a central point (spoked wheel areas), and ulceration or small erosions. They also discussed new criteria such as concentric structures (lump in a lump) and bright white structures.

Another study by Navarrette evaluated the diagnostic significance of different types of bright white structures, ie spots, strands, and short white lines. Although bright white structures can be found in a variety of malignancies including basal cell carcinoma, squamous cell carcinoma, and melanoma, they found that the coexistence of bright white flecks and strands is typical of basal cell carcinomas. Navarrette et al. suggested that bright white structures must be added to the criteria for basal cell carcinomas. The classical criteria for basal cell carcinoma described by Menzies did not include bright white structures because they are better seen with polarized dermoscopy than with traditional contact fluid dermoscopy, and portable polarized dermatoscopes did not exist when Menzies proposed them.

In addition, other studies have attempted to differentiate between superficial basal cell carcinomas and other subtypes by

dermoscopy, which may have important implications for treatment. According to Menzies, the presence of maple leaf-like areas (peripheral radial lines) with superficial fine telangiectasias is typical of superficial basal cell carcinoma. Additional dermatoscopic features of superficial basal cell carcinoma are multiple small erosions and white or red structureless areas. Superficial basal cell carcinoma generally lacks bluish ovoid nests and arborizing vessels.

Nodular basal cell carcinoma is characterized by arborizing (branching) vessels and a single ulceration. Large blue ovoid nests (blue lumps), blue dots and globules, and arborizing (branching) vessels are characteristic dermatoscopic findings of pigmented nodular basal cell carcinoma.

According to Zalaudek, the arborizing vessels of scleroderma-like basal cell carcinoma are more dispersed, thinner, and show fewer branches compared to the arborizing vessels of nodular basal cell carcinoma. Structureless red and white areas are another typical feature of infiltrative or sclerodermiform basal cell carcinoma. Another typical sign of infiltrating growth of basal cell carcinoma is the so-called “stellate pattern.” This term was used to describe radial vessels and radial white lines at the periphery of the lesion.

There are no significant differences regarding age, skin type or location, but there are changes in the size of the lesion and the time of evolution. Well, in the dermatoscopic findings, ovoid nests and arborizing vessels associated with the neoplastic process of the cells in the basement membrane of the skin were observed.

CONCLUSION

Despite being a non-invasive diagnostic tool, dermatoscopy has a high sensitivity and specificity, since the patterns found in

it represent the histopathological changes observed in a skin biopsy.

By means of dermoscopy, the pigmented structures in basal cell carcinoma, dermal nevi and keratoacanthomas are visible with exceptional clarity, giving instant access to diagnosis. However, vascular characteristics can become decisive in poorly pigmented lesions or not, when dermoscopy is performed correctly. Many dermoscopic images of tumors published in the literature show the abrupt end of blood vessels, indicating a compression artifact. As a result, valuable information is lost. Unlike dermoscopy, the identification and quantification of the vascular structure in histopathology provides less benefit for the diagnosis of these tumors, since vertical sections of the tissue do not allow observation of the complete structure of the vasculature. It is therefore inconsistent that most studies on vascularization of skin tumors refer to statistical analysis of findings in histological sections, such as microvessel density, on the

other hand, it has the advantage of real-time observation of the vasculature and blood flow. Taking into account the time taken per lesion, confocal reflectance of a lesion takes, in our experience, less than 10 minutes and can be easily performed at the bedside, whereas histology, even frozen sections, requires much more time, considering the time needed to obtain a skin biopsy.

Dermoscopy has been shown to increase sensitivity and specificity in diagnosing melanoma. It also allows diagnosis of melanoma at an earlier stage. In addition, several studies have established dermoscopy as a diagnostic aid for basal cell carcinoma and more recently to clinically determine its histopathologic subtype. Well, they share common dermoscopic characteristics, although multiple specific characteristics have been described that allow an accurate diagnosis of specific tumors. Diagnostic algorithms are often used to aid in the dermatoscopic evaluation and diagnosis of skin lesions.

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