

## DERMOSCOPY OF THE MONTH

### Dermoscopy of Primary Cutaneous B-Cell Lymphoma

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#### Abstract

Primary cutaneous B- cell lymphomas (PCBLs) are B-cell malignant neoplasms that originate in the skin, and have no extracutaneous manifestations of disease at the time of diagnosis. PCBLs are classified into three main types: primary cutaneous marginal zone lymphoma (PCMZL), primary cutaneous follicle center lymphoma (PCFCL), and primary cutaneous diffuse large B-cell lymphoma, leg type (PCDLBCL- LT). Dermoscopic characterization of PCBLs has been limited and dermoscopy may help to augment the clinical recognition of PCBLs with the most common dermoscopic findings of salmon colored areas and serpentine vessels. Recognition of dermoscopic features of primary cutaneous B- cell lymphomas can improve the early diagnosis of these tumors and their proper management.

**Key words:** Lymphoma, B-Cell; Dermoscopy; Skin Neoplasms; Early Diagnosis; Case Reports

#### Introduction

Primary cutaneous B-cell lymphomas (PCBLs) are B-cell malignant neoplasms that originate in the skin, and have no extracutaneous manifestations of disease at the time of diagnosis. PCBLs are classified into three main types: primary cutaneous marginal zone lymphoma (PCMZL), primary cutaneous follicle center lymphoma (PCFCL), and primary cutaneous diffuse large B-cell lymphoma, leg type (PCDLBCL- LT). The first two types are recognized as indolent forms, and the third

one has aggressive behavior (1). While dermoscopic features of melanoma and non-melanoma skin cancers are largely defined, dermoscopic characterization of PCBLs has been limited. Recently, case reports (2, 3) and small case series (4) have suggested that dermoscopy may help to improve the clinical recognition of PCBLs with the most common dermoscopic findings of salmon colored areas and serpentine vessels. The presence of these features, however, is not sufficient to differentiate PCLBs from wide spectrum of

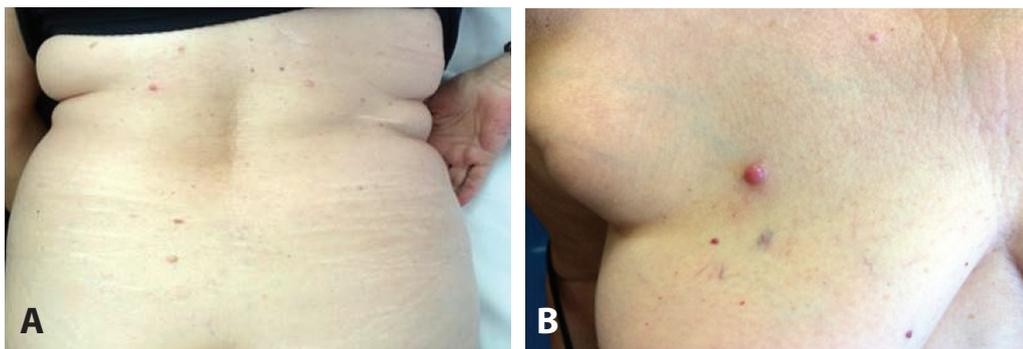
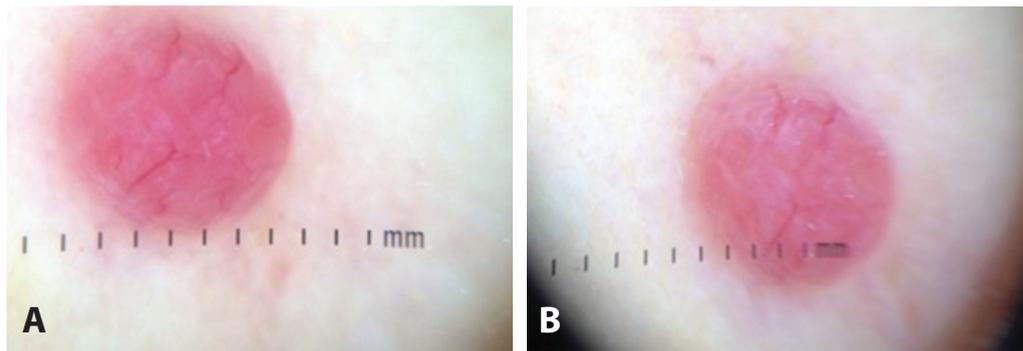


Figure 1. A, B Multiple nodular lesions on the trunk



**Figure 2.** A, B Multiple nodular non-pigmented lesions with fine, arborizing and linear irregular vessels on dermoscopy

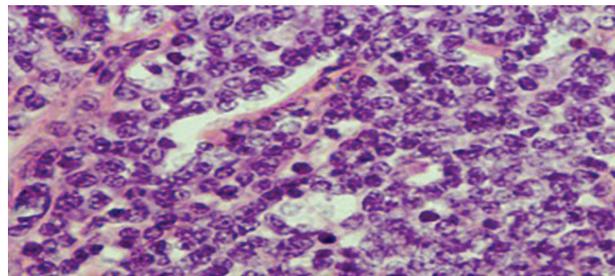
other entities, such as BCC, insect bites and amelanotic melanoma.

### Case Report

We present a 61-year-old female, who was followed up at our Department due to recent melanoma excision. During regular complete skin examination, new multiple nodular non-pigmented lesions on the trunk were noticed that had appeared in the previous 3 months (Figure 1).

Dermoscopy of the lesions showed fine, arborizing and linear irregular vessels on the pinkish background (Figure 2).

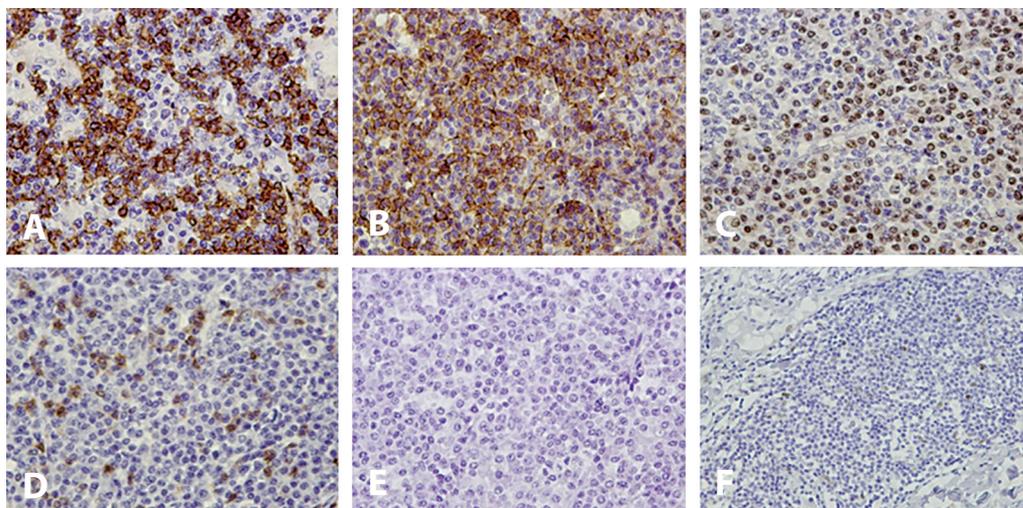
Multiple nodular basal cell carcinomas were the initial clinical diagnosis, and surgical excision was performed. Histopathological analysis revealed low grade mature B-cell cu-



**Figure 3.** Low grade mature B-cell cutaneous non-Hodgkin's lymphoma, with plasmacyte differentiation

taneous non-Hodgkin's lymphoma with plasmacyte differentiation (primary cutaneous marginal zone lymphoma).

Lymphoid cells in the infiltrate expressed CD138, CD20 and MUM1, while CyclinD1, CD23, CD5, TdT and CD3 were considered



**Figure 4.** Immunohistochemistry A . CD138+ (x400) B. CD20+ (x400) C. MUM1+ (x400) D. CyclinD- (x200) E. CD23- (x400) F. CD3- (x400)

negative on immunohistochemistry profiling (Figure 4).

Laboratory analyses, ultrasonography of peripheral lymph nodes and CT findings were within normal range. There was no pathologic infiltration on bone marrow biopsy. The presence of a polyclonal B-cell population was detected in the blood, while it was monoclonal in the skin sample (5).

The therapeutic option was surgical excision, which is the first-line recommended treatment of PCBCL based on current guidelines (6).

## Discussion

The clinical presentation of cutaneous lymphomas can be non-specific, and biopsy with histopathological analysis is necessary for a definitive diagnosis. Few studies and case series evaluated the diagnostic value of dermoscopy in cutaneous lymphoma (3, 4). The dermoscopic features that were reported for PCBCL lesions included white circles, salmon colored areas, scales, arborizing vessels or a polymorphous vascular pattern. In a retrospective study of 58 PCBCL, the most frequent dermoscopic features were salmon-colored background area and prominent serpentine blood vessels, and the lesions were most commonly localized on the trunk (7).

The increased vascularity in PCBCL is attributed to the angiogenesis that accompanies the neoplastic process. Although salmon-colored background and serpentine like vessels can suggest the diagnosis of cutaneous lymphoma, they are not specific and can raise wide clinical differential diagnosis spectrum of malignant and inflammatory conditions, as was shown in the retrospective study of 172 patients with biopsy proven PCBCL. In this study, the most common differential diagnoses were basal cell carcinoma, squamous cell carcinoma and dermatofibrosarcoma protuberans, while cutaneous metastasis and melanoma were suspected less frequently. Other non-neoplastic conditions, such as cyst, granulomatous processes and

infectious disease were also taken into consideration (7).

## Conclusion

Recognition of dermoscopic features of primary cutaneous B-cell lymphomas can improve the early diagnosis of these tumors and their proper management. For the diagnosis of PCBCL, clinical picture, dermoscopy, histopathology, immunohistochemistry and molecular studies are necessary. Although salmon colored and serpentine like vessels are frequently seen dermoscopic features of PCBCL, they are not specific and should be correlated to clinical findings.

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## Dermoskopija primarnih kutanih B-ćelijskih limfoma

### Sažetak

Primarni kutani B-ćelijski limfomi su maligne neoplazije koje vode poreklo od B-ćelija kože, u trenutku postavljanja dijagnoze najčešće nemaju ekstrakutane manifestacije. Klasifikovani su u tri osnovne grupe: primarni kutani B-ćelijski limfomi marginalne zone, primarni kutani B-ćelijski limfomi folikularnog centra i difuzni limfomi velikih B-ćelija. Dermoskopija može doprineti

ranijem postavljanju dijagnoze kutanih B-ćelijskih limfoma, a najčešće dermoskopske karakteristike su polja boje lososa i zmijoliki krvni sudovi. Prepoznavanjem dermoskopskih karakteristika ove vrste limfoma i ranijim postavljanjem dijagnoze, možemo doprineti i ranijem započinjanju lečenja, kao i njegovom boljem ishodu.

**Ključne reči:** B-ćelijski limfom; Dermoskopija; Kožne neoplazme; Rana dijagnoza; Prikazi slučajeva

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