

## LETTER TO THE EDITOR

# ULTRASONOGRAPHY AND MRI FINDINGS OF CUTANEOUS B-CELL LYMPHOMA, LEG TYPE

E. Öztürk<sup>1</sup>, S. Sipahioglu<sup>1</sup>, Ü. Han<sup>2</sup>, C. Yücesoy<sup>1</sup>, A. Dilli<sup>1</sup>, B. Hekimoğlu<sup>1</sup>

We read the case report about imaging findings of cutaneous B-cell lymphoma in JBR-BTR with great interest (1). We would like to share ultrasonographic and magnetic resonance imaging (MRI) findings of our case with primary cutaneous B-cell lymphoma, leg type.

Our patient (an 84-year-old woman) presented with fast progressing swelling and reddish open wounded skin lesion on her left lower leg and palpable masses occurred at the left groin and inner side of thigh without ulceration. Ultrasonography (US) showed subcutaneous edema around open wound. Sharply demarcated subcutaneous nodules, which had hyperechoic peripheral zone and hypoechoic central zone, were observed during US examination at palpable masses located in the groin and thigh (Fig. 1). T1 weighted MRI images of the calf revealed diffuse edema in subcutaneous tissue (Fig. 2). There were clearly defined nodules, which were isointense to muscle on T1 weighted images, and slightly hyperintense to muscle on fat saturated T2 weighted images in the subcutaneous inner thigh tissue (Fig. 3). Patient could not tolerate staying in the gantry, therefore contrast-enhanced examination was not completed. Histopathological examination revealed cutaneous large B-cell lymphoma that was confirmed by immunohistochemical examination. Imaging procedures did not show an evidence of nodal or extranodal focus, therefore the diagnosis of a primary cutaneous large B cell lymphoma of leg type was made. The skin lesions regressed and palpable masses disappeared within a few days after chemotherapy. Unfortunately, patient died shortly after the diagnosis.



*Fig. 1.* — There are sharply demarcated, nodular subcutaneous lesions which had hyperechoic peripheral zone and hypoechoic santral zone. Hypoechoic bands are extending from santral echogenity to periferal zones.



*Fig. 2.* — T1 weighted coronal MRI sequences shows there are skin infiltration/edema in left calf skin (arrows).

The term “primary cutaneous lymphoma” refers to cutaneous T-cell lymphomas (CTCLs) and cutaneous B-cell lymphomas (CBCLs), that present in skin with no evidence of extracutaneous disease at the time of diagnosis (2). CBCLs are most frequently presented as skin nodules or tumors without ulcerations. Primary cutaneous B-cell lymphoma, leg type (PCBCL LT) is more common in women older than age of 70 years and has a poor prognosis. It appears clinically as non-specific, reddish-

bluish skin lesions with or without palpable subcutaneous nodular masses on lower leg(s). It can mimic panniculitis/cellulitis clinically so misdiagnosis is possible (2).

In their case, Vanhoenacker et al. reported a CBCL presented as a slowly growing painless cutaneous nodule on upper arm with favorable prognosis (1), whereas it appeared as a fast progressing swelling and reddish, open wounded skin lesion on lower leg and subcutaneous nodules within thigh with poor prognosis in our case. Lesion locations, disease onset and prognosis of our case are different from Vanhoenacker’s case, however patients’ ages and MRI findings were similar. As emphasized in the article of Vanhoenacker et al., MRI has a potential role in assessing the

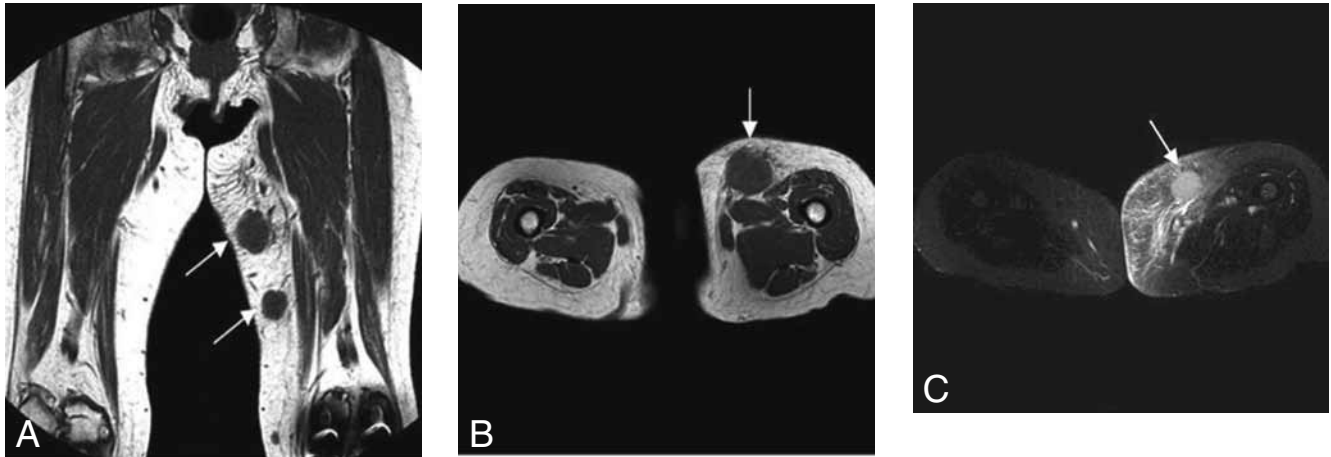


Fig. 3. — T1 weighted coronal (A) and axial (B) images of left thigh shows multiple subcutaneous well demarcated nodules (arrows) that are isointense to muscle. Fat saturated T2 weighted images (C) shows slightly hyperintense lesion (arrow) and skin edema.

exact size of lesions and local staging of disease. On the other hand  $^{18}\text{F}$ -fluorodeoxyglucose (FDG)-positron emission tomography (PET) has value for distant staging and treatment monitoring. In our case, MRI showed extension of the disease but FDG-PET could not be performed as it was not existing in our hospital.

Although a rare diagnosis, PCBCL should be included in the differential diagnosis of thickening and edema of subcutaneous tissue and multiple subcutaneous nodules with or without skin lesions detected on US and MRI. Awareness of PCBCL LT by radiologists can facilitate the differential diagnosis in patients with masses and skin lesions on leg(s).

#### References

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