

# **Dermoscopy, reflectance confocal microscopy and optical coherence tomography for the diagnosis of lichen simplex chronicus localized on the scalp**

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## **Introduction**

Lichen simplex chronicus (LSC) is characterized by lichenified plaques that occur as a result of constant scratching or rubbing of the skin. The scalp is one of the most common locations involved by this chronic condition. No data on reflectance confocal microscopy (RCM) and dynamic optical coherence tomography (D-OCT) of LSC on the scalp exist, while the usefulness of dermoscopy for the diagnosis of this disease was described in three cases.

## **Objective**

The aim of this study was to evaluate features of LSC at dermoscopy, RCM and D-OCT in order to provide a rapid non-invasive bedside diagnosis.

## **Material and Methods**

This was an observational, retrospective study carried out in our dermatology center from January 2015 to September 2018. A clinical assessment, digital dermatoscope examination, RCM (VivaScope® 3000: Mavig GmbH, Munich, Germany) and D-OCT (VivoSight®: Michelson Diagnostics, Maidstone, UK) were performed in patients with suspicious LSC of scalp. The diagnosis of LSC was confirmed histologically in all cases.

## **Results**

In total, 3 lesions of the scalp from 2 patients with LSC were evaluated. We show that dermoscopy, RCM and OCT can be useful tools for the diagnosis of LSC. We also correlate the dermatoscopic, RCM and OCT signs with the pathological features observed in transversely sectioned scalp biopsies from affected scalp of these two patients.

## **Conclusions**

Dermoscopy, RCM and OCT provide useful information for a rapid diagnosis of LSC of scalp and for the identification of biopsy site.