Primary cutaneous amyloidosis (PCA) is a form of localized amyloidosis. It is characterized by the deposition of a fibrillar material in the superficial dermis, without affecting other systems or organs. The diagnosis can be made clinically, but usually a skin biopsy is performed in order to exclude other skin diseases with similar appearance. Reflectance confocal microscopy (RCM) is a novel imaging tool that enables in vivo characterization of various skin changes with a high, quasi-microscopic resolution. This technique might have an important role in the differential diagnosis of cutaneous amyloidosis, by the in vivo assessment of epidermal changes and dermal amyloid deposition. Moreover, it is completely non-invasive and can be safely repeated on the same skin area. However, to date, there is only one published paper presenting the confocal features of primary cutaneous amyloidosis. Hereby, we describe the in vivo RCM features of PCA lesions from a patient with diabetes and correlate them with histologic findings. This strengthens the clinical usefulness of in vivo RCM examination for the non-invasive diagnosis of cutaneous amyloidosis, especially in patients that might associate diseases with impaired wound healing. KEYWORDS: cutaneous amyloidosis; in vivo; non-invasive; reflectance confocal microscopy PMID:31252549 DOI:10.3390/diagnostics9030066 Free full text