ABSTRACT
Non-invasive, real-time microscopic imaging using in vivo reflectance confocal microscopy (RCM) has been demonstrated to be a useful tool for the evaluation of skin diseases and in particular for skin neoplasms. Recently, the RCM devices dedicated to the skin have also been applied to perform "virtual biopsies" of the oral, genital and ocular mucosa. In fact, mucosa is a sensitive area where non-invasive imaging techniques are of high interest in order to spare biopsies and excisions. Mucosa is particularly suitable for RCM because of its thin or absent cornified layer and its thin epithelium that allows a deeper penetration of the laser with the consequent possibility of exploring deeper tissue levels. Besides, being useful for the diagnosis, RCM may be helpful to identify the area to be biopsied in case of large or multifocal lesions and may be regarded as a complementary technique for non-invasive assessment of treatment efficacy. The RCM features of healthy mucosa are described and a revision of the literature of the mucosal diseases that can be diagnosed by RCM has been performed. PMID: 26099354