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Breast cancer and paraneoplastic dermatomyositis: A literature review

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Objective: Breast cancer (BC) is the most common malignancy in women. Contrastingly, dermatomyositis (DM) is a rare idiopathic inflammatory myopathy characterized by symmetric proximal muscle weakness and skin lesions. Gottron's papules and heliotrope are pathognomonic signs. This article aimed to describe how the diagnosis and treatment of patients with both diseases have been performed. **Methodology:** As this study consists of a literature review, submission to the Research Ethics Committee was not necessary. Articles indexed in the PubMed and SciELO electronic databases were collected. Cross-sectional and retrospective observational studies were selected using the following descriptors: (Breast Cancer) AND (Dermatomyositis). Finally, 19 studies were read in full and included in this systematic review. **Results:** An underlying neoplasm is present in 50% of DM patients older than 45 years. A newly diagnosed DM in the latter, should, therefore, be associated with an etiologic search of paraneoplastic origin. This may allow an early BC detection. This is corroborated by the significant stage I BC detected in patients with rheumatic diseases, according to a cohort analysis. Furthermore, cases in which DM indicated cancer recurrence have been reported. DM is associated with higher BC mortality, and the most correlated histotype is invasive ductal carcinoma. Currently, there are no guidelines or randomized trials for the management of BC complicated by DM. Therapeutic management of DM is mainly based on corticosteroids and immunosuppressive agents. However, previously published case reports indicated that surgical excision of the tumor is successful, as it can stop the progression of DM and prevent deterioration of muscle function. **Conclusion:** BC can feature uncommon presentations, such as paraneoplastic DM. Due to the absence of guidelines for the management of BC concomitant with DM, a multidisciplinary approach, including oncologists, dermatologists, and rheumatologists, is mandatory.

Keywords: breast cancer; dermatomyositis; rheumatic diseases.