Keratoacanthomas (KAs) are common skin tumors that most often appear on sun-exposed areas of fair-skinned adults. They are commonly found on the face, forearm, and hands. KAs are often described as pseudotumors due to their ability to grow rapidly and histologically appear identical to squamous cell carcinoma (SCC). Debate exists over the classification of KAs with some physicians describing them as a distinct, follicular based tumors following a benign course. Others describe the lesions as an abortive malignant form of SCC that rarely can be aggressive. Histologically, they can be indistinguishable from one another. However, an overall histological picture along with clinical findings can aid in the diagnosis. Multiple causes of KAs have been reported in the literature including UV exposure, trauma, chemical exposures, drug exposures and genetics. KAs are treated in multiple ways including most often surgery, electrodesiccation and curettage (ED&C), and occasionally radiation in poor surgical candidates or cosmetically sensitive areas. The lesions were biopsied and found to be consistent with KAs. Treatment options were again discussed, which were now limited considering the recently treated area with radiation. The patient was treated with weekly injections of fluorouracil 50mg/ml at 0.1-0.3 ccs per lesion. The patient’s KAs showed improvement after one week and appeared to be resolved within 3 weeks of treatment. Further follow up will be required to assess any evidence of recurrence.

Discussion

KAs are often viewed as abortive malignancies, which rarely progress into an invasive SCC. However, their histologic similarity to SCC often leads dermatologists to treat them as such. This patient demonstrates an uncommon effect of eruptive KAs secondary to superficial radiation therapy. KAs have been known to develop from trauma to UV exposed areas, however, few articles have reported KAs appearing secondary to radiation. Shaw demonstrated in a case of eruptive KAs after receiving megavoltage x-ray and electron beam therapy, which improved after a six month course of isotretinoin. Robertson presented a case of exacerbation of multiple KAs in a patient with Ferguson-Smith disease after receiving radiation. One further case was noted by Bashir of a patient developing eruptive KAs after receiving radiation to treat a SCC, which resolved with oral acitretin. This patient had a history of multiple SCCs, but no personal or family history of KAs to suggest the autosomal dominant condition of Ferguson-Smith disease. Considering the patient’s recent treatment with superficial radiation, the treatment options were limited. Previously radiated skin is noted to have poor surgical wound healing with surgery and once a region is radiated, cannot receive a second treatment. When recurrence or eruptive KAs occur post radiation, this can limit options. The patient was treated with fluorouracil injections, which acts as an antimetabolite inhibiting RNA synthesis and its metabolites inhibiting DNA synthesis. Multiple small studies have demonstrated intraläsional fluorouracil curing KAs with 96% clearance after 3-6 weekly injections. By