AN AGGRESSIVE PRESENTATION OF EXOPHYTIC MARJOLIN’S ULCER AND IMPORTANCE OF RADIOTHERAPY IN ITS TREATMENT

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ABSTRACT

Marjolin’s ulcer is a rare squamous cell cancer that is most often associated with chronic burn wounds. Wide local excision or amputation remains the first treatment of choice. We present here a case of squamous cell carcinoma of thumb in a 39 year old female. In view of aggressive spread to regional nodes we feel the need for thorough evaluation of regional lymph nodes before surgery and consider adjuvant concomitant chemoradiation and need to include infraclavicular (deltpectorals) lymph nodes in treatment volume in view of direct drainage of lymphatics from thumb malignancy.

Key Words: Chronic fistulas, Exophytic papillary carcinoma, Cell carcinoma

INTRODUCTION

Marjolin’s ulcer is a malignant tumor that usually develops in a chronic skin lesion (especially burn scars in 75% cases, also include vaccination scars, venous stasis ulcers, chronic fistulas and osteomyelitis scars, etc.).¹ Pathologically most of cases are squamous cell carcinoma, few cases are basal cell carcinoma and malignant melanoma.² The incidence of burn scar undergoing malignant transformation has been reported to be 0.77 – 2 %.³ Marjolin’s ulcer is of two clinical types – 1) flat, indurated, infiltrative, ulcerative carcinoma (most common) and 2) exophytic papillary carcinoma. Exophytic form is infrequent and generally less severe with low probability of metastasis. Well differentiated exophytic lesions have a better prognosis than poorly differentiated infiltrating forms. When confined to scar the growth is slow and it can be completely cured. Once it breaks free of scar it metastasizes rapidly to the regional nodes.⁴

CASE REPORT

We present here a case of marjolin’s ulcer of right thumb in a 39 year old female. She initially presented to a private practitioner with complaints of large exophytic growth on dorsal aspect of distal phalange of right thumb on a 15 year old post burn scar. She underwent amputation of thumb. Histopathology reported as well differentiated squamous cell carcinoma invading into underlying tissues (Figure 1 and 2). One month after surgery she developed axillary lymph nodes and a small ulcerated lesion at the surgical site for which she was referred to GSL Medical College, Rajahmundry Andhra Pradesh (Figure 3 and 4). In view of axillary lymph node metastasis and local recurrence, revision amputations of 1st metacarpal and axillary lymph node dissection were performed. Histopathological examination showed negative margins with squamous cell carcinomatous deposits in right axillary lymph nodes (Figure 5). By the time patient planned for adjuvant radiotherapy she developed infraclavicular swelling (Figure 6). Hence excision of right infraclavicular lymph node was done. Histopathological examination showed squamous cell carcinomatous deposits in right infraclavicular lymph nodes (Figure 7). In view of rapid progression adjuvant radiotherapy was given to right axillary, infraclavicular and supraclavicular regions. Patient is under follow-up for last 6 months without any further recurrence.
DISCUSSION

Etiology of marjolin’s ulcer is not yet clear. Squamous cell carcinomas resulting from the marjolin’s ulcer have a greater tendency to metastasis than squamous cell carcinoma resulting from other causes. Poorly differentiated squamous cell carcinomas have a greater tendency to spread to lymph nodes earlier. Regional node metastasis and recurrence after surgery is not uncommon. Metastasis to regional lymph nodes is seen in 30% cases and local recurrence occurs in 17% cases.

Surgery (wide local excision or amputation) is remains the first treatment of choice. Marjolin’s ulcer should be excised with a 2 cm margin of normal healthy tissue (which may necessitate amputation with lesion involving joint space). Sentinel lymph node biopsy is recommended in patients with squamous cell carcinoma. Lymph node block dissection should be done if nodes are clinically palpable or sentinel lymph node biopsy positive and analyzed pathologically. Prophylactic lymph node resection has not been recommended. Radiotherapy is not indicated because of poorly vascularized tumor tissue. Radiotherapy must be used as an adjuvant therapy only and should not replace aggressive resection.

Indications of radiotherapy include:

1) Inoperable lymph node metastasis, 2) high grade lesions with positive lymph nodes after regional lymph node dissection (RLND), 3) Tumor diameter greater than 10 cm, with positive lymph nodes after RLND, 4) High grade lesions, with tumor diameter greater than 10 cm and no positive lymph nodes after RLND, 5) Lesions of head and neck, with positive lymph nodes after RLND.

CONCLUSION

In view of aggressive spread to regional nodes we feel the need for thorough evaluation of regional lymph nodes before surgery and consider adjuvant concomitant chemoradiation and need to include infraclavicular (deltopectoral) lymph nodes in treatment volume in view of direct drainage of lymphatics from thumb malignancy.

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REFERENCES

2. Interesting Case Series, Chronic Ulcer. Correspondence: williamaboumd@hotmail.com William Abouhassan, MD, Johns Hopkins Burn Center, Johns Hopkins University, Baltimore, Md.
Nandhana et. al.: An aggressive presentation of exophytic marjolin’s ulcer and importance of radiotherapy in its treatment

Figure 1: Low power view of well differentiated squamous cell carcinoma of right thumb

Figure 2: High power view of well differentiated squamous cell carcinoma of same tumor

Figure 3: Photograph showing post-amputated right thumb with a small nodule over scar.

Figure 4: Photograph showing old burn scar and right axillary lymphadenopathy

Figure 5: Low power view of well differentiated squamous cell carcinoma deposits in axillary lymph node. Numerous keratin pearls are seen.
Nandhana et al.: An aggressive presentation of exophytic marjolin's ulcer and importance of radiotherapy in its treatment

Figure 6: Photograph showing right infraclavicular (deltoper- cotoral) which has been marked with the pen.

Figure 7: Low power view of well differentiated squamous cell carcinoma deposits in subclavicular lymph node. Numerous keratin pearls are seen.