Axillary Basal Cell Carcinoma: Case Report and Literature Review

Chin-Ta Lin, Shyi-Gen Chen, Tim-Mo Chen, Shun-Chen Chang

Division of Plastic and Reconstructive Surgery, Department of Surgery, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan

Corresponding author:

Shun-Chen Chang, MD Division of Plastic and Reconstructive Surgery Department of Surgery, Tri-Service General Hospital National Defense Medical Center No. 325, Section 2 Cheng-Gung Road Taipei, 11490, Taiwan *aarondakimo@yahoo.com.tw* **SUMMARY** Axillary basal cell carcinoma (BCC) has been rarely reported. The axilla is a site that is less likely to be monitored by the patient, thus there is a potential for delay in diagnosis and treatment. Surgical excision is the most widely used treatment method for its effectiveness, simplicity and histologic control. BCC is easily treated when it is detected early. There are 33 cases of axillary BCCs reported in the literature, and only one case has been reported in Asia. Herein we report on the second case of primary axillary BCC in an Asian female.

KEY WORDS: basal cell carcinoma, axilla, sun-protected, Asian

Received: October 11, 2010 Accepted: April 8, 2011

INTRODUCTION

Basal cell carcinoma (BCC) is the most common skin cancer and mostly occurs on sun-exposed skin, with nearly 85% of tumors occurring in the head and neck regions (1). BCCs arising at the sun-protected sites are very rare, and the axilla is one of the rarest sites at which primary BCCs develop. We presented an unusual case of primary BCC arising in the right axilla.

CASE REPORT

A 60-year-old female presented to our hospital with a pigmented lesion over the right axilla region for half a year and ulcerative change observed for a week. On admission, she was afebrile with normal pulse rate and blood pressure. There were no changes in her appetite and body weight. There were no contributory findings in her medical and family histories. Physical examination demonstrated a welldefined brown plaque measuring 2.5 cm x 1.5 cm in size with central ulcerative change (Fig. 1). Blood tests showed normal leukocytes and tumor marker testing revealed normal squamous cell carcinoma antigen (SCCAg). Plain film of the chest showed no remarkable findings. Biopsy was done and histopathology revealed lobular proliferations of basaloid cells with extension to the dermis layer, consistent with BCC (Fig. 2). Therefore, the patient underwent surgical excision of the lesion. Postoperative course was uneventful. The patient remained free from any further event at 36-month follow-up.

DISCUSSION

Basal cell carcinoma is the most common skin malignant neoplasm, accounting for approximately 75% of all skin cancers (2). While BCCs occur most



Figure 1. Basal cell carcinoma of the right axilla in a 60year-old female. The lesion demonstrated a well-defined brown plaque measuring 2.5 cm x 1.5 cm in size with central ulcerative change.

frequently on sun-exposed areas of the body, the single most important risk factor for BCC is ultraviolet (UV) radiation (3). However, 10% to 15% of BCCs arise at sun-protected sites (4). Moreover, the axilla is one of the best sun-protected sites of the body (5,6).

In 1917, Hazen reported the first case of primary BCC arising in the axilla (7). To the best of our knowledge, approximately 33 cases of axillary BCC have been reported in the literature, and only one case has been reported in Asia (5-18). No clear explanation exists for the occurrence of BCC in sun-protected sites. Factors contributing to the development of BCC at sun-protected sites include light skin color, exposure



Figure 2. Histopathology showed lobular proliferations of basaloid cells and obvious peripheral palisading (hematoxylin-eosin stain, x200).

to ionizing radiation or arsenic, immunosuppression, prior injury such as trauma and burns, nevus sebaceous, or genodermatoses (8,11,14).

Several theories explaining why BCC occurs at sun-protected sites have been proposed. Strickland *et al.* have proposed that depressed immune surveillance caused by UV radiation at distant sites may also be involved in the tumorigenesis of BCCs at sun-protected sites (19). Heckmann *et al.* report that the disturbed cell matrix interactions may be a cofactor for developing BCCs (20).

Generally, BCC rarely metastasizes and is easily treated by surgical excision if detected early (21). Wolf *et al.* propose that larger tumors and more aggressive histologic types are best treated by surgical excision with a 2- to 4-mm safe margin (22). The recurrence of BCC is associated with the fact whether complete excision has been achieved. When BCCs are completely excised, only 1% will recur, as compared with 33%-39% if they are incompletely excised (23-25).

CONCLUSION

We report an unusual case of primary BCC arising in the right axilla of an Asian female. Despite the wellknown risk factors and associations with BCC, it is important to realize that rare cases do occur in Asians with yellowish skin color. A neglect of the lesion can contribute to increased tumor size and following incomplete excision rate.

Acknowledgment. The authors thank the Civilian Administration Division of Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan.

References

- 1. Kopf AW. Computer analysis of 3531 basal-cell carcinomas of the skin. J Dermatol 1979;6:267-81.
- Wermuth BM, Fajardo LF. Metastatic basal cell carcinoma. A review. Arch Pathol 1970;90:458-62.
- 3. Joseph C, Daniel R, Eric M. Axillary basal cell carcinoma: a need for full cutaneous examination. Am Fam Physician 1998;57:1860-4.
- van Dam RM, Huang Z, Rimm EB, Weinstock MA, Spiegelman D, Coldlitz GA, et al. Risk factors for basal cell carcinoma of the skin in men: results from the health professionals follow-up study. Am J Epidemiol 1999;150:459-68.
- 5. Johnson TM, Tschen J, Ho C, Lowe L, Nelson BR. Unusual basal cell carcinomas. Cutis 1994;54:85-92.
- 6. Betti R, Bruscagin C, Inselvini E, Crosti C. Basal cell carcinomas of covered and unusual sites of the body. Int J Dermatol 1997;36:503-5.

- 7. Hazen HH. Basal celled cancers of the skin. South Med J 1917;10:241-6.
- 8. Woo SH, Kim IH, Son SW. Axillary basal cell carcinoma. J Eur Acad Dermatol Venereol 2006;20:222-3.
- 9. Rahbari H, Mehregan AH. Basal cell epitheliomas in usual and unusual sites. J Cutan Pathol 1979;6:425-31.
- Robins P, Rabinovitz HS, Rigel D. Basal-cell carcinomas on covered or unusual sites of the body. J Dermatol Surg Oncol 1981;7:803-6.
- 11. Susong CR, Ratz JL. Basal-cell carcinoma occurring in an axilla: a case presentation and a review of factors related to tumor development. J Dermatol Surg Oncol 1985;11:526-30.
- 12. Altermatt HJ, Nguyen-Tran Q, Kraft R. Adenoids Basaliom der Axilla. Hautarzt 1989;40:94-8.
- 13. Hayes AG, Berry AD. Basal cell carcinoma arising in a fibroepithelial polyp. J Am Acad Dermatol 1993;28:493-4.
- 14. English JC, Canchola DR, Finley EM. Axillary basal cell carcinoma: a need for full cutaneous examination. Am Fam Physician 1998;57:1860-4.
- 15. Gardner ES, Goldberg LH. Axillary basal cell carcinoma: literature survey and case report. Dermatol Surg 2001;27:966-8.
- Yii NW, Niranjan NS. Metastatic basal cell carcinoma of the axilla: report of a case and reconstruction with an island lateral pectoral flap. Ann Plast Surg 2000;45:78-82.

- 17. Pon K, Trauner MA, Rogers GS. Axillary basal cell carcinoma. Dermatol Surg 2001;27:415-6.
- 18. Lesueur BW, Dicaudo DJ, Connolly SM. Axillary basal cell carcinoma. Dermatol Surg 2003;29:1105-8.
- 19. Strickland PT, Creasia D, Kripke ML. Enhancement of two-stage skin carcinogenesis by exposure of distant skin to UV radiation. J Natl Cancer Inst 1985;74:1129-34.
- 20. Heckmann M, Zogelmeier F, Konz B. Frequency of facial basal cell carcinoma does not correlate with site-specific UV exposure. Arch Dermatol 2002;138:1494-7.
- 21. Boon KG, Por A, Ying JW, Chee LG. Characteristics of basal cell carcinoma amongst Asians in Singapore and a comparison between completely and incompletely excised tumors. Int J Dermatol 2006;45:561-4.
- 22. Wolf DJ, Zitelli JA. Surgical margins for basal cell carcinoma. Arch Dermatol 1987;123:340-4.
- 23. Gooding CA, White G, Yatsuhashi M. Significance of marginal extension in excised basal-cell carcinoma. N Engl J Med 1965;273:923-4.
- 24. Park AJ, Strick M, Watson JD. Basal cell carcinomas: do they need to be followed up? J R Coll Surg Edinb 1994;39:109-11.
- Pascal RR, Hobby LW, Lattes R, Crikelair GF. Prognosis of «incompletely excised» versus «completely excised» basal cell carcinoma. Plast Reconstr Surg 1968;41:328-32.



Cream Simon - one and only cream for beauty; year 1929. (From the collection of Mr. Zlatko Puntijar)