Unusual Abdominal Metastasis from Marjolin's Ulcer (Case Report and Review of Literature)

Munaser S. Alamoodi

Assistant Professor and Consultant General Surgeon, Faculty of Medicine, King Abdulaziz University, Jeddah, Saudi Arabia.
munas88@yahoo.com

Abstract: Marjolin's ulcer is a malignant transformation of a long standing scar tissue into squamous cell carcinoma that can often be aggressive if not dealt with early. We are dealing with a 34 year old patient who presented with Marjolin's ulcer with metastasis to the peritoneal cavity.
[Munaser S. Alamoodi. **Unusual Abdominal Metastasis from Marjolin's Ulcer (Case Report and Review of Literature**. *Life Sci. J* 20132;10(1):2060-2062]. (ISSN: 1097-8135). http://www.lifesciencesite.com. 292

Key words: Marjolin's ulcer, metastasis, Peritoneal cavity

Introduction

Marjolin's ulcer is a malignant transformation of a chronic ulcer usually of a burn scar first described by Jean-Nicholas Marjolin in 1828.Over 90% of malignancies are of aggressive squamous cell carcinomas. To my knowledge this is the first report in the literature of Marjolin's ulcer metastasizing to the peritoneal cavity.

Case Report

34 year old male presented to the ER department with abdominal pain, distension and vomiting secondary to small bowel obstruction.

He presented 5 months prior to the above episode with a non healing ulcer over the left popliteal fossa where he had a burn scar at the age of 4 years old. Biopsy of the ulcer confirmed squamous cell carcinoma for which he underwent excision and full thickness skin grafting. The histopathology of the specimen confirmed a well differentiated squamous cell carcinoma with free margins.

CT scan of the abdomen was carried out which showed free abdominal fluid with dilated proximal small bowel and collapsed distal ileal loops with thickened wall (figure1).

The decision to perform a laparatomy was taken. At laparatomy there were multiple deposits involving the peritoneum, small bowel and omentum(Figure 2), with multiple small perforations in the small bowel. The loop where these perforations were, was resected and primary anastomosis was carried out. Biopsies from the omentum, peritoneum, small bowel mesentery and small bowel serosa were taken. The histopathology showed metastatic squamous cell carcinoma involving the omentum and predominantly the serosal surface of the small bowel.

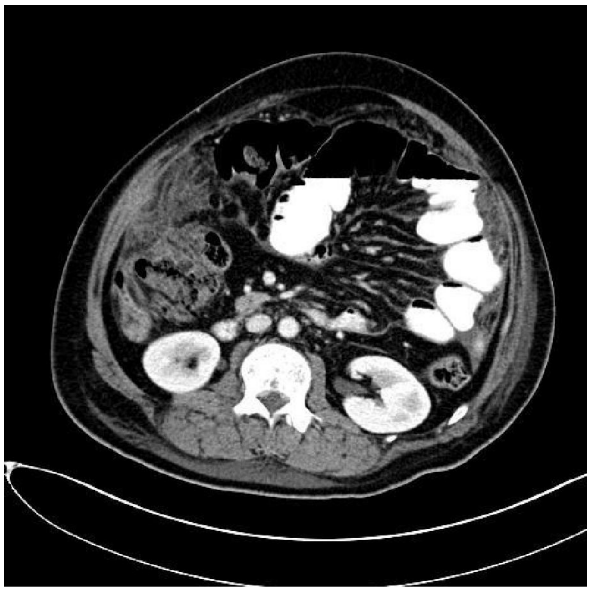

Figure 1: CT Abdomen showing small bowel thickening suggesting tumor invasion.

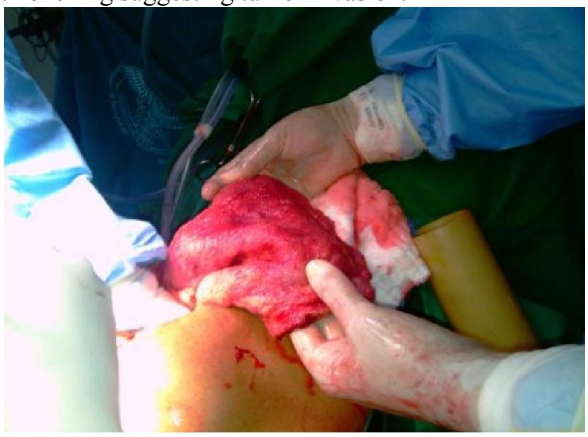

Figure 2: Picture showing thickened Greater Omentum due to metastasis.

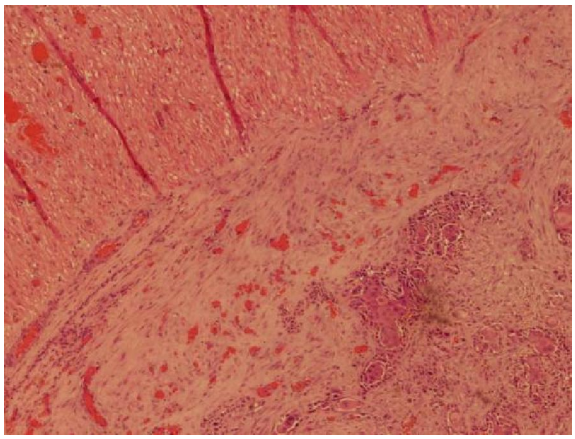

Figure 3:Image showing invasion of serosal layer of the small bowel by tumor cells

Discussion

Marjolin's ulcer is a rare but aggressive disease occurring years post a burn scar, but has been known in very rare cases to have occurred over chronic skin diseases such as hydradenitis and pilonidal sinus amongst other conditions. Commonest mode of metastasis is locally and through lymphatics.

It was first described in 1928 by Jean Nicholas Marjolin. Marjolin's ulcer make up 1.2% of all skin cancers (1,2). It has 1-2% incidence in all burn scars but can also develop from traumatized and scared tissue of other etiologies as stated above.

The mechanism of malignant transformation of Marjolin's ulcer remains unclear and controversial (3,4). The latency period from time of injury to onset of malignant transformation averages 36 years(5). In my patient it was almost 30 years since his initial burn. Having said that it is also known to arise earlier (6). Although the average age of diagnosis is usually the fifth decade, my patient was in his 3rd. It is 3 times commoner in males than in females (6). Most lesions occur on the extremities(60%) , with ulcers on the head and face occurring less frequently(30%) and lowest frequency in the trunk(10%)(7).

The diagnosis in this case was made early and treatment plan initiated but due to the disease's aggressiveness the survival of the patient was not possible. In usual circumstances early diagnosis and treatment is the goal standard for increased survival ratio(8). Most Marjolin's ulcers 75%-96%(9) present as squamous cell carcinoma. Other neoplasms have also been reported and these include basal cell carcinoma, melanoma, osteogenic sarcoma, fibrosarcoma and liposarcoma(10).

The recognition of malignant transformation can be confused with infection, but changes such as appearance of flat non-healing ulcers enlarging in circumference with elevated and indurated borders, foul smelling, painful with exudates and bloody drainage suggest malignant transformation(11,12).

Macroscopically, Marjolin's ulcer has been reported to exist in two forms which are prognostically important,(a) exophytic and (b)infilterative. The former is less likely to metastasize and leads a benign course while the later is more aggressive (13).

Marjolin's ulcers have been reported to have an aggressive course and a much greater tendency to metastasize than other types of skin cancer, which makes early diagnosis a must. Metastasis to the brain, liver, lung, kidney and distant lymph nodes has been commonly reported (14,15,16,17). In my case it was found to metastasize to the peritoneal cavity, which to my knowledge has not been reported before.

The treatment of Marjolin's ulcers requires a multidisciplinary approach. Treatment modalities include wide local excision, block dissection of regional lymph nodes, amputation in advanced lesions of limbs, radiotherapy and chemotherapy given as neo or adjuvant therapy(17). In my patient excision with a surgical margin plus primary skin graft was carried out but no lymph node dissection was necessary since non were felt.

Recurrence and fatality rates are higher due to the aggressive nature of this tumour (18&19). This was evident in my patient who within a very short period after his presentation with Marjolin's ulcer presented with peritoneal cavity metastasis that resulted in small bowel perforation.

Conclusion

Although metastasis from Marjolin's ulcer to the peritoneal cavity is rare, it should be considered in patients with previous history of the disease presenting with abdominal symptoms. Unfortunately the survival is poor due to the aggressive nature of the disease.

Corresponding author
Munaser S. Alamoodi,
Assistant Professor, Faculty of Medicine,King Abdulaziz University,P.O.BOX 80215,Jeddah 21589, Saudi Arabia.
munas88@yahoo.com

Reference

1. Er-Fan X, Li AO, Shi-ling W, Shao-Yu K, Guang-Xiu C. Burn scar carcinoma: Case reports and review of the literature. Annals of the MBC. 1992;5:2
2. Daya M, Balakrishan T. Advanced Marjolin's ulcer of the scalp in a 13-year-old boy treated by excision and free tissue transfer: Case report and

review of literature. Indian J Plast Surg. 2009;42:106-. doi: 10.4103/0970-0358.53020.
3. Tan O, Atik B, Bekerecioglu M, Tercan M, Bayram I. Squamous carcinoma in a pressure sore with a very short latency period. Eur J Plast Surg. 2003;26:360–2. doi: 10.1007/s00238-003-0565-y.
4. Thio D, Clarkson JH, Misra A, Srivastava S. Malignant change after 18 months in a lower limb ulcer: Acute Marjolin's ulcer revisited. British Journal of Plastic Surgery. 2003;56:825–8. doi: 10.1016/j.bjps.2003.08.016.
5. Ochenduszkiewicz U, Matkowski1 R, Szynglarewicz1 B, Kornafel J. Marjolin's ulcer: malignant neoplasm arising in scars. Rep PractOncolRadiother. 2006;11(3):135–138. doi: 10.1016/S1507-1367(06)71058-6.
6. Dávalos BA, Cortés-Flores AO, Bandera-Delgado A. Malignant neoplasm in burn scar: Marjolin's ulcer: Report of two cases and review of the literature. Cir Cir. 2008;76:329–31.
7. Treves N, Pack GT. The development of cancer in burn scars. SurgGynecol Obstet. 1930;51:749–782.
8. Calikapan GT, Akan M, Karaca M, Aköz T. Marjolin ulcer of the scalp: intruder of a burn scar. J Craniofac Surg. 2008;19:1020–1025. doi: 10.1097/SCS.0b013e31814b2a1f.
9. Ozek C, Celik N, Bilkay U, Akalin T, Erdem O, Cagdas A. Marjolin's ulcer of the scalp: Report of 5 cases and review of theliterature. J Burn Care Rehabil. 2001;22:65–9. doi: 10.1097/00004630-200101000-00013.
10. Suhag V, Singh S, Nimbrian VK, Dimri K, Sharma N. Marjolin's Ulcer developing in electrical burns: A rare case report. Pakistan Journal of Medical Science. 2005;21:375–6.
11. Celik E, ErogSlu S, KaracaogSlan N, Uzunismail A. Case report: Early arising Marjolin's ulcer in the scalp. Ann Burns Fire Disasters. 2003;16:217–21.
12. Malheiro E, Pinto A, Choupina M. Marjolin's ulcer of the scalp: case report and literature review. Ann Burns Fire Disasters. 2001;14:39–42.
13. Hahn SB, Kim DJ, Jeon CH. Clinical study of Marjolin's ulcer. Yonsei Med J. 1990;31(3):234–41.
14. Aydogdu E, Yildirim S, Akoz T. Is surgery an effective and adequate treatment in advanced matjolin'sulcer. Burns. 2005;31:421–31. doi: 10.1016/j.burns.2005.02.008.
15. Tutela RR Jr, Granick M, Benevenia J. Marjolin's ulcer arising in pressure ulcer. Adv Skin Wound Care. 2004;17:462–7. doi: 10.1097/00129334-200411000-00010.]
16. Kowal-Vern A, Criswell BK. Burn scar neoplasms: a literature review and statistical analysis. Burns. 2005;31:403–13. doi: 10.1016/j.burns.2005.02.015.
17. Gamatsi E, McCulloch TA, Bailie FB, Srinivasan JR. Malignant melanoma in a skin graft: burn scar neoplasm or a transferred melanoma. Br J Plast Surg. 2000;53:342–52. doi: 10.1054/bjps.2000.3322.
18. Copcu E, Aktas A, Sismant N, Oztan Y. Thirty-one cases of Marjolin's ulcer. Clinical and Experimental Dermatology. 2003;28:138–41. doi: 10.1046/j.1365-2230.2003.01210.x.
19. Gupta SK, Sandhir RK, Jaiswal AK, Kumar S. Marjolin's ulcer of the scalp invading calvarial bone, dura and brain. J ClinNeurosci. 2005; 12:693–696. doi: 10.1016/j.jocn.2004.08.030.

2/5/2013