

MARJOLIN'S ULCER

(A Study of 40 Cases)

F. M. Tripathi, M. S., M. Ch. (Plastic),* *(Mrs.) S. Khanna, M. D.*
****N. N. Khanna, M. S., M. A. M. S.,* *****J. K. Sinha, M. S. (Plastic), F. R. C. S.*
******V. Bhattacharya, M. S., M. Ch. (Plastic) and*
******L. M. Bariar, M. S., M. Ch. (Plastic)*

Summary :

Present series is based on 40 cases of histologically proved Marjolin's ulcer, attending Plastic Surgery Service of University Hospital B. H. U. over a period of 8 years. This tumour is fairly common in this part of India. Adolescents and adult males are commonly affected by this disease. Limbs, especially around joints are the commonest site of involvement. Marjolin's ulcer is rather slow growing malignant tumour mostly over unstable scar of burns, which is not primarily grafted. The lag period in present series is 17 years and lymph node metastasis is less common and distant metastasis is rare. Squamous cell carcinoma is the commonest histologic type and majority of patients have been treated by surgery.

Celsus in the first century A.D. was the first man to describe malignant degeneration in a burn scar, however, the term Marjolin's ulcer was given to the carcinoma arising in post traumatic scar which was described for the first time by Jean-Nicholas Marjolin in the year 1828. Since then the term Marjolin's ulcer has been used for the malignant degeneration

in chronic ulcers of the skin, sinuses as well as burn scars. Though the lesion described by Marjolin was not thought to be malignant by Marjolin himself, it was identified as malignant by Smith in 1850 and Da Costa (1903) used the term 'Marjolin's ulcer' for all such malignant lesions.

Material and Methods :

The present study is based on the observations on 40 cases of scar carcinoma of different aetiology attending the Plastic Surgery Service of University Hospital Banaras Hindu University over a period of 8 years.

Observations :

In this part of the country the overall incidence of various malignant tumours of skin accounts for 2% of all cancers of the body. The squamous cell carcinoma is found to be 61% among different kinds of skin cancers, out of which 25% is Marjolin's ulcer. In present series of 46 cases of Marjolin's ulcer, 28 were males and 12 were females. The age distribution of Marjolin's ulcer is shown in Table I which shows more number of patients below 40 years of age. Youngest patient in this

*Reader, Plastic Surgery **Reader, Pathology ***Professor of Surgery
****Professor and Head, Plastic Surgery, ****Lecturer, Plastic Surgery
*****Pool Officer, Plastic Surgery

Institute of Medical Sciences, Banaras Hindu University, Varanasi-221005, (INDIA)

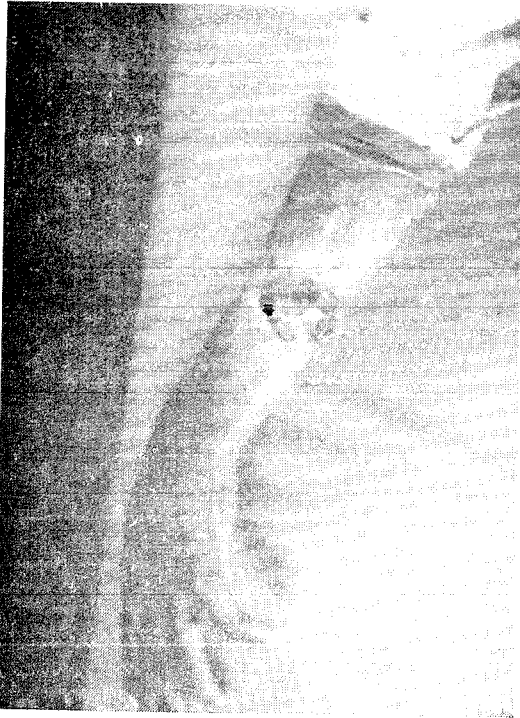


Fig. 1 Photograph showing Marjolin's ulcer over the dorsal aspect of the forearm.

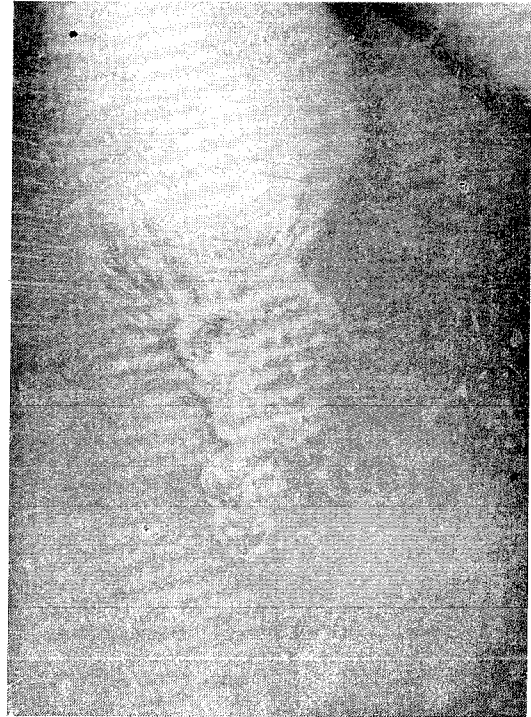


Fig. 2 Photograph showing Marjolin's ulcer over the posterior aspect of thigh.



Fig. 3 Photograph showing Marjolin's ulcer over ankle.

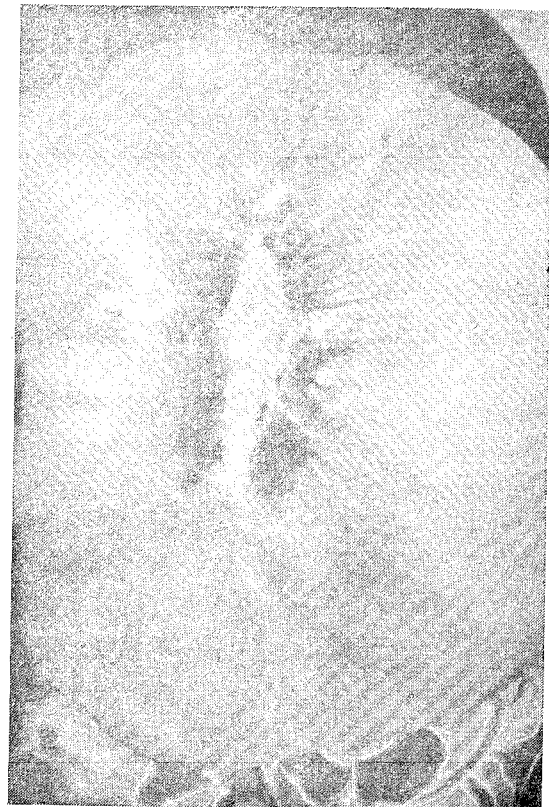


Fig. 4 Photograph showing Marjolin's ulcer over the back.

series was 16 years and oldest was 73 years of age. Thermal burn scar has been the commonest cause of Marjolin's ulcer (32 years), other causes have been chronic unstable scars of traumatic origin in 7 cases and chronic osteomyelitis scar in one case. Various presenting features of these patients are shown in the Table II. Ulcer and bleeding from the ulcer was present in all the 40 cases. Metastatic lymphadenopathy at the time of first presentation was seen only in 3 cases. No patient had evidence of any distant metastasis in the body. Upper limb was involved in 17 cases (Fig. 1) lower limb in 20 cases (Fig. 2 and 3) and the trunk in 3 cases (Fig. 4). Ulcers are mostly seen around the joints. The average lag period between the onset of scar and development of

malignant ulcer was 17 years. Twenty eight presented after 6 months of the onset of malignant ulcer, 10 between 3 to 6 months and only 2 patients presented within 3 months of the onset of the disease. Different methods of treatment employed in these patients is shown in the Table III. Wide excision and repair of the defect was done in 30 patients and this was combined with therapeutic node dissection in 3 cases, who presented with metastatic lymphadenopathy at the time of first admission. In 4 patients amputation of the limb was performed because of the involvement of the underlying bone. One patient was treated by radiotherapy and 2 patients refused any form of treatment and left the hospital against advice. Before starting the treatment biopsy was done in all the cases and histopathology report was squamous cell carcinoma in all. We did not have any patient with other histological type of Marjolin's ulcer.

Table I
Age distribution of Marjolin's ulcer

Age	No. of cases
Less than 20 years	8
20 to 30 years	8
30 to 40 years	6
40 to 50 years	7
50 to 60 years	7
60 to 70 years	3
More than 70 years	1
Youngest patient	16 years old
Oldest patient	73 years old

Table II
Presenting features of patients with Marjolin's ulcer (40 cases)

Malignant ulcer	40
Bleeding	40
Purulent discharge	31
Dry scab	9
Involvement of Bone	4
Metastatic lymphadenopathy	3
Distant metastasis	Nil

Table III
Methods of treatment employed in patients with Marjolin's ulcer (40 cases)

Method	No. of cases
Excision + repair	30
Excision + repair + node dissection (therapeutic)	3
Amputation	4
Radiotherapy	1
Patient refused treatment	2
Total	40

Discussion

An increased incidence of carcinoma in skin subjected to trauma has long been recognised. The full thickness wounds allowed to heal by second intention in areas prone to repeated trauma are candidates for Marjolin's ulcer. In present series the youngest patient

was 16 years old and the oldest 73 years. In the series of Novick et al. (1977) also, the age range was from 18 to 84 years, the average age being 58 years. In the series of Bowers and Young (1960), Byrd et al. (1961) and Kayabali and Duman (1970) also the average age was beyond 45 years. Though the disease is seen in both sexes, somehow it is more common in males because of males being more prone to trauma over the scar. Similar observations have been made by Novick et al. (1977), Arons et al. (1965), Byrd et al. (1961) and Kayabali and Duman (1970) also. Though the burns scar is the commonest cause of Marjolin's ulcer, traumatic and osteomyelitis scars are also some of the other causes of this diseases. In the series of Bowers and Young (1960), trauma has also been the cause of this disease. In present series the limbs especially around the joints are the commonest site of the Marjolin's ulcer because of constant strain in that area leading to scar becoming unstable. In present series there was no case of Marjolin's ulcer of head and neck region in contrast to the observations of Arons et al. (1965) and Novick et al. (1977). The scar due to burn over these areas is quite common. Metastatic lymphadenopathy at the time of first examination was present in 7.5 percent of cases of the present series though Kayabali and Duman (1970) and Arons et al. (1965) have described

more than 30 percent of patients with metastatic lymphadenopathy. Visceral metastasis is not seen in any of the patients though Treves and Pack (1930) observed one patient out of 28 with pulmonary metastasis. The average lag period in the present series was 17 years whereas other workers (Giblin, 1955; Lawrence, 1952; Arons et al., 1965 and Novick et al. 1977) have observed the lag period beyond 30 years. In present series there was no case with Acute Marjolin's ulcer as observed by Aron's et al. (1965) and Byrd et al. (1961). Histologically all the tumours of the present series were squamous cell carcinoma in contrast to other workers like Arons et al. (1965) and Novick et al. (1977), who also observed a few cases with basal cell carcinoma. In present series all the tumours developed over the unstable scars of full thickness burn or trauma which was not primarily skin grafted and probably this is the cause of all patients developing squamous cell carcinoma. Our policy of treatment had been excision of the primary tumour (amputation of the limbs where bone was involved) and reconstruction of the defect without prophylactic block dissection of the lymph nodes. Only one patient was subjected to radiotherapy because of the advanced lesion over chest wall infiltrating deeply and patient was not suitable for surgery.

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