

CUTANEOUS MANIFESTATION IN RENAL TRANSPLANT RECIPIENTS IN SOUTHERN IRAQ*

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Abstract

Forty-eight patients living in southern Iraq with renal transplantation were studied for dermatological lesions between Jan. 2001 and Feb. 2002, at Basrah renal transplantation follow-up center. All patients had skin problems of different kinds; Cushingoid features in 85.4%, hair and nail changes in 82%, infections in 20% and tumors in 28%. Among skin infections recalcitrant warts were the most frequent (17%). High incidence of skin cancer was recorded (4.2%) as compared to other Iraqi studies. Kaposi's sarcoma was not seen during the study period.

Introduction

Renal transplantation is frequently the most effective treatment of advanced chronic renal failure¹. In Iraq, renal transplantation started since the early 1970's. Great expansion in this field was achieved after 1990². Renal transplantation requires prolonged use of immunosuppressive agents that may result in various complications including skin involvement. In fact, previous studies that have dealt with this problem all recorded high frequency of dermatological lesions in renal transplant recipient. Benicini et al in 1983 described cutaneous manifestations among 105

patients; namely they noticed that 55% were iatrogenic, 74% infectious, 12% precancerous while 4% were miscellaneous¹. The latest Iraqi study in this field was conducted in 1998 on 80 renal transplant recipients and reported similar findings albeit with lower incidence of skin cancer¹.

The purpose of this study was to focus on the cutaneous complications of immunosuppressive therapy among renal transplant recipients who live in the southern part of Iraq and to compare the findings with other studies.

Patients and methods

Between January 2001 and February 2002, Forty-eight patients with renal transplantation on immunosuppressive therapy were included in the study. They

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all lived in the southern part of Iraq and were attending Basrah renal transplantation follow-up center regularly. The immunosuppressive regimen consisted of either double therapy (Azathioprine or Cyclosporine plus prednisolone) or triple therapy (Azathioprine 100-150mg/day and prednisolone 10-30mg/day). Detailed information regarding age, sex, duration of transplantation and type of immunosuppressive drugs were obtained for each patient. Relevant investigations such as complete blood picture, serum creatinine, and sometimes ultrasonic examination were done. Any suspicious skin lesion was biopsied and sent for histopathological examination.

During the study period, all patients had functioning renal grafts with no evidence of rejection. For the purpose of studying early and late effects of immunosuppressive therapy, the incidence of skin manifestations before and after 6 months following transplantation was calculated.

Results

Forty-eight patients with renal transplantation were seen with age range from 17-61 years (mean = 39.2 years), 36 (75%) were males and 12 (25%) were females. Twenty-five (52%) patients received their kidney grafts from live-related donors.

Type	No. (%)
Cushingoid features	41 (85.4)
Hair & nail changes	40 (82)
Infections	20 (41.7)
Tumors	28 (58.3)

Table I: types of cutaneous manifestations in renal transplant recipients

Clinically, all patients had different kinds of skin manifestations during the study period (Table I). There were Cushingoid features in 40 pts (85.4%),

hair and nail changes in 45 (82%), infection in 20 (41.7%) and tumors in 28 (58.3%). Among Cushingoid features, steroid-induced acne was the commonest of the early changes, while cutaneous atrophy appeared later (Table II).

Type	No	Duration after Transplantation	
		≤ 6 months	> 6 months
Skin atrophy	19	7	12
Buffalo hump	15	8	7
Acne	28	23	5
Striae	11	8	7
Telangiectasia	21	11	10
Purpura	9	3	6
Weight gain	28	16	13
Facial plethora	20	15	5

Table II: Cushingoid features in renal transplant recipients in relation to post-transplantation period.

Hair and nail changes were noticed in 40 pts (82%), hypertrichosis in 25, Hirsutism in 5 patients, hypertrichosis and hirsutism in 2 (all of them were on triple therapy) while no hair fall was recorded. Irresistible habit of nail biting was observed in 5 patients and pincer nail deformity in 3 (Table III).

Hair changes	No.(32)
Hypertrichosis	25
Hirsutism	5
Hypertrichosis + hirsutism	2
Nail changes	8
Nail biting	5
Pincer nail deformity	3

Table III: hair & nail changes in renal transplant recipients.

Different kinds of skin infections were noticed (table IV). There were warts in 8 pts (17%), herpes simplex in 7 (14%), tinea versicolor in 6 (12.5%) patients and bacterial infections in 2 (4.2%). Viral warts were the most frequent cutaneous infections. It appeared to be widespread and extensive in many patients.

Type	NO.(%)	Duration after transplantation	
		≤ 6 months	> 6 months
Viral warts	8(17)	1	7
Herpes simplex	7(14)	6	1
Tinea versicolor	6(12.5)	3	3
Bacterial	2(4.2)	2	0

Table IV: Types of skin infections in renal transplant recipients in relation to post-transplantation period.

The majority of warts occurred in the late post transplantation period. Extensive tinea versicolor was seen in 6 patients. Regarding skin tumors (table V), benign tumors were reported in 25 patients (52%). The majority of them appeared in the late post-transplantation period. Precancerous lesions (solar keratosis) were seen only in 1 patient (2%) while skin malignancy was seen in 2 patients (4.2%). Both cases were pigmented nodulo-ulcerative basal cell carcinomata.

Type	NO.(%)	Duration after transplantation	
		≤ 6 months	> 6 months
A. Benign	25(52)	5	20
Skin tags	15	5	10
Sebaceous	6	0	6
Hyperplasia			
Lentigens	2	0	2
Seborrhoeic warts	2	0	2
B. Premalignant			
Solar keratosis	1(2)	0	1
C. Malignant			
Basal cell	2(4.2)	0	2

Table V: Cutaneous neoplasm in renal transplant recipients in relation to post-transplantation period

Discussion

The present study clearly demonstrates that cutaneous lesions form a significant problem in renal transplant recipients as

all patients showed some kind of skin lesions during the observation period. Obviously, the iatrogenic Cushingoid features were the commonest cutaneous finding, especially in the early post-transplantation period, although there was individual variation in the type and extent of these changes. Previous studies showed that viral warts were the most frequent cutaneous infection^{4,5}. We have similarly reported that warts tended to be extensive and resistant to conventional treatment. In transplant patients, human papilloma virus infections may predispose to malignant transformation particularly at genital sites⁶, therefore it is essential to advise these patients for long-term follow-up and close observation to detect early malignant changes.

As demonstrated by other studies, high incidence of fungal infections were noticed (12.5%) owing to the increased colonization of the skin by yeast flora⁷.

It has been documented that renal allograft recipients are prone to develop cancer particularly skin malignancy. Such risk is increased as the duration following transplantation is lengthened⁸. However, recent Iraqi studies confirm that our population, including renal allograft recipients, is less predisposed to skin malignancy⁴. We have reported a higher incidence of cancer among renal transplant recipient residing in southern Iraq as compared to other studies^{4,11}. This may be attributed to the overall increase in the incidence of skin cancer in the population living in southern Iraq involving relatively younger age groups, particularly during the last decade¹⁰.

Although Kaposi's sarcoma was considered as the most common tumor after renal transplantation in neighboring countries^{12,13}, we didn't record this tumor in our patients during the study period. This may be explained partly by the rarity of Kaposi's sarcoma in Iraq. However, extension of the observation period with inclusion of larger number

of patients is required to clarify the actual incidence of Kaposi's sarcoma in renal transplant recipients. In conclusion, cutaneous complications of immunosuppressive therapy are frequent

in renal transplant recipients, and require close dermatological surveillance, especially in those who survive long with the renal graft.

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