



CASE SERIES

Muco-Cutaneous Manifestations in 144 Renal Transplant Recipients: A Single Center Analysis

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Keywords

Renal transplant, Dermatological lesions, Skin cancers

Introduction

Renal transplantation is the best treatment for the replacement of renal function. The majority of dermatological complications related to renal failure regress after transplantation. Nevertheless, the chronic and powerful systemic immunosuppression, gave rise to a series of mucocutaneous manifestations, hence the need for a systematic and regular follow-up in dermatology [1]. The aim of our work was to evaluate the frequency and the clinical spectrum of dermatological complications observed in renal transplant patients followed at the Ibn Sina University Hospital in Rabat and to compare them with the data in the literature.

Materials and Methods

All renal transplant recipients (RTRs) attending the renal transplant outpatient clinic between October 2001 and October 2021 (19 years) were included in this study.

They answered a standardized questionnaire to register their age, gender, duration of dialysis pretransplantation, time since transplantation, type and duration of immunosuppressive treatment, cause of renal disease, type of donor, and associated diseases.

A dermatologic physical examination was performed, paying special attention to skin lesions suggestive of infections, to effects of immunosuppressive treatment,

and to premalignant and malignant manifestations. Lesions that were suspicious for malignancy were biopsied for histopathological studies.

Results

144 patients were enrolled. The mean age at transplantation was 41.93 years (range 14-82 years). Male predominance (sex ratio M/F 1.21). 54% of our patients had phototype IV, 30% had phototype III, 12% had phototype II, 2 patients had phototype V. 141 of our patients were under polychemotherapy and 3 patients were under mono-chemotherapy. The first transplant was performed in France in 1981 and it was only in 1998 that renal transplantation was started at the Ibn Sina University Hospital. 67% were transplanted in Rabat.

On physical examination, 72% of patients had presented cutaneous-mucosal manifestations with a median delay of 12 months (1 week - 148 months); 55% of the patients displayed a skin infection. Fungal (38%), viral (30%), and bacterial infections (12%). Cutaneous side effects of immunosuppressive drugs were observed in 37% of patients. The most common being hypertrichosis (23%), and gingival hypertrophy (20%). Other less frequent manifestations were acne (24%), Premalignant or malignant lesions were present in 5 patients (7.2%). During the study period 5 skin cancers were identified in 5 patients. Bowen's disease was observed in 1 patient. We noted 1 patient with squamous cell carcinoma and another with basal cell carcinoma, 1 patient developed a CD30+ anaplastic large cell lymphoma and 1 patient with kaposi sarcoma.



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Discussion

When chronic renal failure (CRF) leads to a kidney transplantation, some of the reversible skin pathology, tends to ameliorate, but a high tendency to develop malignancies becomes prominent. Cutaneous infections caused by fungi, bacteria, viruses and parasites are common in renal transplant recipients [2].

Fungal organisms are the most common cause of infection in renal transplant recipients, occurring in 7-75%. Cyclosporine treatment and azathioprine therapy were identified as independent risk factors for superficial fungal disease. Pityriasis versicolor has been shown to be the most common fungal infection and occurs in 18-48% of renal transplant recipients, which is a higher rate than that found in the general population. Dermatophytes can cause several skin lesions in renal transplant recipients including *Tinea corporis*, *Tinea pedis*, scalp infections and nail infections. Fingernail infections and involvement of multiple nails have been seen more commonly in immune compromised patients [3,4]. Herpes simplex virus (HSV) and Varicella zoster viruses (VZV) affecting skin are important in renal transplant patients. Primary infection with HSV is rare in transplant patients, reactivation is frequent. The prevalence of warts in renal transplant recipients varies in different series. The development of warts correlates with the duration of immunosuppression. They are predominant on sun-exposed areas of the skin [5]. Scabies is the most common infestation, although it has been reported rarely. However, we have not observed scabies in our transplant patients. The increased prevalence of this infection in our patients maybe the result of both immunosuppression and specific climatic conditions of our living are iatrogenic skin lesions. Dermatologic disorders associated with renal transplantation are a function of the immunosuppressive medications prescribed, as well as the immunosuppressed condition produced. Gingival hyperplasia, hypertrichosis, acne, and cushingoid changes are all medication-related disorders [6].

Skin carcinomas are the most frequent tumors observed in transplant recipients. Many factors play a role in their pathogenesis such as: Genetic, environmental, and iatrogenic. Squamous cell carcinoma (SCC) and basal cell carcinoma (BCC) account for more than 90% of all skin cancers. The incidence of Kaposi's sarcoma is 400-500 times higher in RTRs

than in the healthy population. While BCC is 10 times more common. Melanoma prevalence is also higher in renal transplant recipients [7,8]. However, the overall prevalence of skin premalignancy and malignancy in our study was extremely low.

Conclusion

Renal transplant recipients show a heightened risk of cutaneous illnesses compared with the general population, and this study has been conducted to highlight the spectrum of dermatological lesions seen in RTR in our center. At the end of this work, we insist on the necessity of sensitizing transplant patients to consult dermatology in order to detect precancerous lesions and treat them at an early stage. The evaluation of the different manifestations after a longer period of time would allow us to trace the exact profile of these dermatoses.

Conflicts of Interests

The authors declare no conflicts of interests.

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