PREVALENCE DISTRIBUTION OF CUTANEOUS AND MUCOSAL LESIONS IN RENAL TRANSPLANT PATIENTS

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Abstract: Renal transplantation is regarded as the treatment of choice for patients with renal failure. Our objective in this study was to determine the prevalence and the clinical spectrum of skin diseases in renal transplant patients. One hundred and seventeen renal transplantation patients were examined at the Renal Transplantation Center in Noor and Ali Asghar Hospital, Isfahan University of Medical Sciences, Isfahan, Iran. A complete examination of the skin was performed in each patient by a dermatologist. Biopsies were performed from all suspected malignant and premalignant lesions or lesions without definite clinical diagnosis. Hypertrichosis was the most often complication and was observed in 73% of the patients. Other cutaneous lesions included acne, folliculitis, gingival hyperplasia, wart and herpes simplex. Basal cell carcinoma (BCC) and Kaposi sarcoma were found in 3 and 1 patients respectively. The prevalence of cutaneous lesions except tumors was similar to the other studies that highlights the importance of periodical examinations in these patients. The lower incidence of tumors is possibly due to shorter period of follow up in the current study.

Key words: Renal transplantation, Skin complication

INTRODUCTION

Renal transplantation is regarded as the treatment of choice for patients with renal failure [1]. These patients undergo long-term graft-preserving immunosuppressive therapies that predispose them to a variety of cutaneous complications [2,3], which include infections that tend to be widespread and features of unusual clinical presentations.

All these present therapeutic problems. In addition, both premalignant and malignant lesions have been reported to increase with time after transplantation [4]. Our objective in this study was to determine the prevalence and the clinical spectrum of skin diseases in renal transplant patients.

MATERIALS AND METHODS

One hundred and seventeen renal transplantation patients were examined at the Renal Transplantation Center in Noor and Ali Asghar Hospital, Isfahan University of Medical Sciences, Isfahan, Iran. Graft rejections and death or migration of patients were regarded as exclusion criteria for this study.

All patients were under treatment with cyclosporine (6 mg/kg bw), prednisolone (1 mg/kg bw) and azathioprine (2 mg/kg bw) during transplantation that was tapered gradually. Azathioprine was gradually tapered and discontinued in 24 patients and was abruptly discontinued in 4 patients because of intolerance, sensitivity or leucopenia. Prednisolone...
was also gradually discontinued in 24 patients. So at the time of examination, the patients were under treatment with cyclosporine only.

Data such as age, gender, date and time after transplantation, regimen of immunosuppressive therapy used and type of mucosal or cutaneous lesions were recorded. Also patients were requested to complete a questionnaire about the onset and duration of cutaneous lesions, other medical conditions, and previous medications.

A complete examination of the skin was performed in each patient by a dermatologist. Biopsies were taken from all suspected malignant and premalignant lesions or lesions without definite clinical diagnosis and cultures were taken from all suspected infectious lesions. Skin lesions were treated if clinically justified.

Among 117 patients recruited in this study 82 (70 %) were males and 35 (30 %) were females. Further nine patients were less than 20 years old, 54 patients (48 %) were between 21- 40 years old, 41 patients (35 %) were between 41-60 years old and 10 patients (9 %) were older than 60 years.

RESULTS

A summary of cutaneous and mucosal lesions is shown in table 1. Hypertrichosis was the most common abnormal finding that most commonly involved face, trunk and upper extremity. 3 patients had basal cell carcinoma (BCC) on their face, neck and scalp. The diagnosis of BCC was confirmed using pathologic evaluation. Out of these 3 patients, 2 patients had history of scalp radiotherapy and third patient reported its presence before transplantation but became larger after RT.

One patient developed purplish nodules on the upper and lower extremities and the trunk 16 months after RT. Pathologic examination confirmed the diagnosis of Kaposi sarcoma for these lesions. A 23- yrs old woman developed scrofuloderma 2 years after RT. Cervical and submandibular lymph nodes were enlarged gradually and one of them drained to skin surface. The size of this lymph node was 8 x 8 centimeters. Biopsy of this lymph node showed caseous necrosis, granulomatous inflammation with epithelioid histiocytes, giant cells and lymphocytes that were suggestive of diagnosis of lymph node tuberculosis. Needle aspiration also showed acid-fast bacilli. Antituberculosis treatment was started for him.

A 41 year old female who had been transplanted five years ago, developed diffuse psoriasis plaques two years after RT despite receiving cyclosporine, azathioprine and prednisolon.

DISCUSSION

Evaluation of cutaneous lesions is an important feature in the follow up of patients with renal transplantation [5,6] and cutaneous tumors are recognized as the most common tumors in these patients. Environmental factors such as weather are known as important factors in the clinical presentation of these patients [7]. SCC is also known as the most common tumor in patients with Renal transplantation [8]. No cases of SCC were observed in our patients and only 2 cases of actinic keratosis was observed. This difference may be explained by relatively short duration of follow up [9,10] or other factors such as skin color and amount of exposure to UV rays.

Interestingly, one patient had Kaposi sarcoma. Amin et al [11] reported one case of primary pulmonary Kaposi after RT in a patient. The most common lesions were hypertrichosis, acne, gingival hyperplasia, tinea versicolor and wart. These lesions can be attributed to the use of cyclosporine. Hypertrichosis could be induced both by cyclosporine and corticosteroids [12]. Gingival hyperplasia could be induced by stimulation of fibroblasts by cyclosporine [13]. Acne is another side effect of systemic corticosteroids that may be caused by cornification of pilosebaceous ducts or by stimulation of androgen receptors [14-16].

<table>
<thead>
<tr>
<th>Type of Lesion</th>
<th>Patients Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertrichosis</td>
<td>86</td>
<td>73%</td>
</tr>
<tr>
<td>Acne</td>
<td>39</td>
<td>33%</td>
</tr>
<tr>
<td>Gingival hyperplasia</td>
<td>22</td>
<td>19%</td>
</tr>
<tr>
<td>Tinea Versicolor</td>
<td>22</td>
<td>19%</td>
</tr>
<tr>
<td>Common Wart</td>
<td>21</td>
<td>18%</td>
</tr>
<tr>
<td>Candidiasis</td>
<td>15</td>
<td>13%</td>
</tr>
<tr>
<td>Lentigo</td>
<td>8</td>
<td>7%</td>
</tr>
<tr>
<td>Onychomycosis</td>
<td>8</td>
<td>7%</td>
</tr>
<tr>
<td>Epidermal Cyst</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>Seborrheic Keratosis</td>
<td>5</td>
<td>4%</td>
</tr>
<tr>
<td>Sebaceous Hyperplasia</td>
<td>5</td>
<td>4%</td>
</tr>
<tr>
<td>Molloscum Contagiosum</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Herpes Simplex</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Actinic Keratosis</td>
<td>2</td>
<td>2%</td>
</tr>
</tbody>
</table>
Some of the patients, in addition to immunosuppressive drugs, were using other drugs including Co-trimoxazole that may have effect on the prevalence of acne and candidiasis. Also, gingival hyperplasia may be the side effect of treatment with Nifedipine. Regarding higher prevalence of tuberculosis in the RT patients and the fact that the transplanted kidney may be source of tuberculosis [5], extra caution must be taken to prevent this infection in the recipients of RT. Also caution should be taken for rapid diagnosis of infections, cutaneous manifestations of diseases and other systemic disorders. In addition, information about different methods of sun protection should be given to all the patients.

REFERENCES