Lip and oral mucosal lesions in 100 renal transplant recipients

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Background: Renal transplant recipients (RTRs) appear to be more susceptible to the development of oral mucosal disease and lip cancer as a result of graft-preserving immunosuppressive therapy. However, reports regarding these pathologies other than lip cancer are scarce and not studied in a detailed manner in this patient population.

Objective: The aim of this study was to determine the prevalence rates and clinical features of lip lesions and oral mucosal lesions (OMLs) in RTRs.

Methods: In all, 100 consecutive RTRs (21 female and 79 male) and 79 healthy age- and sex-matched control subjects (23 female and 56 male) were screened for all pathologic and pseudopathologic lip lesions and OMLs, with special interest on precancerous and cancerous lesions. Information about possible associated risk factors such as smoking and alcohol consumption was also obtained. Dermatologic investigation included clinical observation and direct microscopic examination, culture, and histopathological evaluation when indicated.

Results: One or more lip lesions, OMLs, or both were noted in every participant of both groups. Fordyce spots on the lips was the most common lesion in the patient group (73%), followed by diffuse gingival enlargement (39%), fissured tongue (35%), and oral candidiasis (26%). The last 3 disorders were significantly more common in RTRs, whereas the frequency of Fordyce spots in patients and control subjects was similar. No actinic cheilitis, lip cancer, or oral malignancy was observed.

Limitations: This was a relatively small sample size for evaluating precancerous and cancerous lip lesions and OMLs, as they are less frequently observed than benign lesions.

Conclusions: Some of the benign OMLs (oral candidiasis and diffuse gingival enlargement) are increased in RTRs mainly as a result of the immunosuppressive therapy or drug side effects. Precancerous or cancerous lesions were not observed on the lips or the oral mucosa of our RTRs. This finding is in direct contrast with those of previous studies, yet this can be related to the limited sample size of this study regarding these lesions. (J Am Acad Dermatol 2010;62:96-101.)

Key words: lip cancer; oral mucosal lesions; renal transplant recipients.

Renal transplant recipients (RTRs) are at an increased risk of developing oral mucosal disease and lip cancer.[1-9] Both conditions are mainly a result of the patients' immunosuppressive state,[2,5] and smoking,[5,10,11] alcohol consumption,[11] and human papillomavirus.[6,12] Cumulative unprotected sun exposure is also a well-known risk factor for lip cancer.[5] However, reports on lip lesions and

Abbreviations used:

CsA:	cyclosporine
DGE:	diffuse gingival enlargement
OMLs:	oral mucosal lesions
RTRs:	renal transplant recipients
SCC:	squamous cell carcinoma

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oral mucosal lesions (OMLs) in RTRs, other than diffuse gingival enlargement (DGE)[2-4] and lip carcinoma,[1,2,5-8] are infrequent, and not studied systematically. Furthermore, only two of the earlier investigations included a control group; yet one of them focused on mainly 4 intraoral lesions,[4] whereas the other examined solely dysplastic and malignant lip lesions in RTRs.[5]

This study was undertaken to determine the prevalence rates and clinical features of lip lesions and OMLs in RTRs at our hospital, and to identify the possible risk factors.

CAPSULE SUMMARY

- Renal transplant recipients are reported to be more susceptible to oral mucosal disease and lip cancer; however, studies regarding these pathologies other than lip cancer are scarce and most of them were performed by dental professionals.
- In this study, we determined the frequencies and clinical features of lip and oral mucosal lesions in renal transplant recipients.
- We did not observe any precancerous or cancerous lesions on the lips or the oral mucosa of renal transplant recipients; however, we thought that this could be related to limited sample size.

METHODS

Study population

The study included 100 consecutive RTRs (21 female and 79 male) who attended our dermatology department for routine semiannual dermatologic follow-up examinations between January and July 2005. This study was approved by the local ethics comittee. The mean age in the group was 35 ± 11 years (range, 18-61 years), and the mean time since transplantation was 59.7 ± 56.9 months (range, 6 months-24.9 years). Their underlying renal diseases were chronic glomerulonephritis (30%), diabetes mellitus (10%), pyelonephritis (4%), secondary amyloidosis (3%), polycystic renal disease (2%), Alport disease (2%), Fabry disease (1%), other causes (10%), and origin unknown (38%). Thirty (30%) patients were taking prednisolone, cyclosporine (CsA), and mycophenolate mofetil; 21 (21%) were taking prednisolone, tacrolimus, and mycophenolate mofetil; 10 (10%) were taking prednisolone, CsA, and azathioprine; 8 (8%) were taking prednisolone, tacrolimus, and azathioprine; and 7 (7%) were taking prednisolone, sirolimus, and mycophenolate mofetil. An additional 24 (24%) patients were taking other combinations of these 6 drugs.

In all, 79 age- and sex-matched immunocompetent individuals (23 female and 56 male) randomly selected from hospital personnel served as control subjects. The mean age in this group was 34 ± 10 years (range, 17-60 years).

Study procedure

The same dermatologist investigated each patient according to a set protocol. Both groups were screened for the presence of all pathologic and pseudopathologic[13] (variations of normal or minor developmental disorders, eg, linea alba, Fordyce spots, and sublingual varicosities) lip lesions and OMLs, with special interest on precancerous and cancerous lesions. At the time of examination, none of the patients was under specific prophylactic anti-infectious medical therapy, because all of them had completed the first 6-month period after their transplantation. Information about smoking (no, yes, ex-smoker), alcohol consumption (no, yes, ex-drinker), black tea drinking (no, yes, quantity/d), coffee drinking (no, yes, quantity/d), and exposure to solar radiation (history of severe sunburn, and average time spent outdoors) were obtained on structured questionnaires. All participants were examined with the oral cavity illuminated by an exploratory lamp, and with the aid of a dental mouth mirror and an exploratory probe. Dermatologic investigation included clinical observation along with potassium hydroxide examination, fungal/bacterial cultures, and histopathological evaluation when indicated. Photographic documentation of all the lesions was performed.

Statistical analysis

Intergroup comparisons of continuous variables were made using the Student *t* test, and *P* less than .05 was considered significant. Chi-square testing with continuity correction was used for intergroup comparison of discrete variables. Pearson correlation analysis was used to assess the effects of the following variables on the frequency of lip lesions and OMLs in RTRs: age, sex, duration of immunosuppression, and historical or current use of each immunosuppressive drug. Multiple regression analysis was performed to determine the independent risk factors that might influence prevalence rates. Software (SPSS, Version 11.0 statistical package for Microsoft Windows, SPSS Inc, Chicago, IL) was used throughout.

RESULTS

One or more lip lesions, OMLs, or both were noted in every participant of both the RTR and