

Materials and Methods

Study Design and Objectives

A single-centre, cross-sectional study was conducted in the setting of a prospective cohort of renal transplant recipients (RTRs) attending our Dermatology Unit with a request for an annual dermatological visit from the kidney transplantation ambulatory clinic of the nephrology unit of our university/hospital. The study was conducted between January 2015 and March 2016. All participants answered a questionnaire and underwent a total body skin examination.

The main aims of the study were (1) to assess the degree of awareness among RTRs of their risk of skin cancer occurrence as well as their sun-protective attitude and practices and (2) to assess the impact of case history and several demographic and clinical factors on both the aforesaid issues.

Study Patients

All the outpatient RTRs who, at the time of inclusion, were over 18 and consecutively attending our Dermatology Unit for control visits were enrolled in the study. RTRs were eligible regardless of the time elapsed since transplantation and previous dermatological visits specifically required after renal transplantation. Patients were not subjected to any clinical selection. Refusal or inability to answer the questionnaire were the only exclusion criteria.

Study Procedures and Assessment

Information was collected by using a standardized data collection form and included the following: (a) demographic data; (b) Fitzpatrick skin phototype; (c) presence of actinic lentigo; (d) educational level (illiterate, primary school, intermediate school, high school, university degree); (e) time elapsed since transplantation; (f) immunosuppressive treatment at the moment of the visit; (g) previous documented dermatological visits specifically required by the Nephrology Unit; (h)

patient awareness of the reason for the dermatological visit. Patient awareness was assessed using the following question: “Do you know why the nephrologist sent you to the dermatologist for annual skin controls?”. We considered “aware” those patients who explicitly referred to their increased risk of skin cancers (any skin cancer) due to the immunosuppressive treatment. Patients who did not refer to a causal relationship between immunosuppressive drugs taken for the transplantation and increased risk of developing skin cancers were considered “unaware”; (i) use of sunscreen. We divided the patients into groups: (1) regular users, i.e., patients referring to the use of sunscreen on a regular basis at least during the entire sunny season; (2) occasional users, those who referred to applying sunscreen only in particular situations, i.e., sunbathing; and (3) non-users, namely, patients who did not use sunscreen at all; (j) previous documented non-melanoma skin cancers, which occurred after transplantation; and (k) non-melanoma skin cancers found at clinical examination during the study visit and then histologically confirmed. Actinic keratoses were not considered as in many cases histological confirmation was lacking.

Statistical Analysis

Descriptive statistics are reported as mean and standard deviations for numerical variables, and as frequencies and percentages for categorical ones. Binary data were analysed with χ^2 or Fisher exact test according to conditions. Quantitative data were analysed by t test on means, in the case of normality and homoscedasticity or, alternatively, by the Mann-Whitney U test. Significant variables were then included in the logistic regression analysis. Statistical significance was defined as $p < 0.05$. Data were analysed using the R 3.1.2 statistical program.