G4 A Collaborative Study between the Scottish Renal Registry and the Scottish Cancer Registry

Introduction

There is conflicting evidence regarding the risk of malignancy in dialysis patients. Transplantation has been associated with an increased incidence of malignancy.

Aim

We aimed to assess the risk of malignancy after starting renal replacement therapy (RRT) in the Scottish population.

Methods

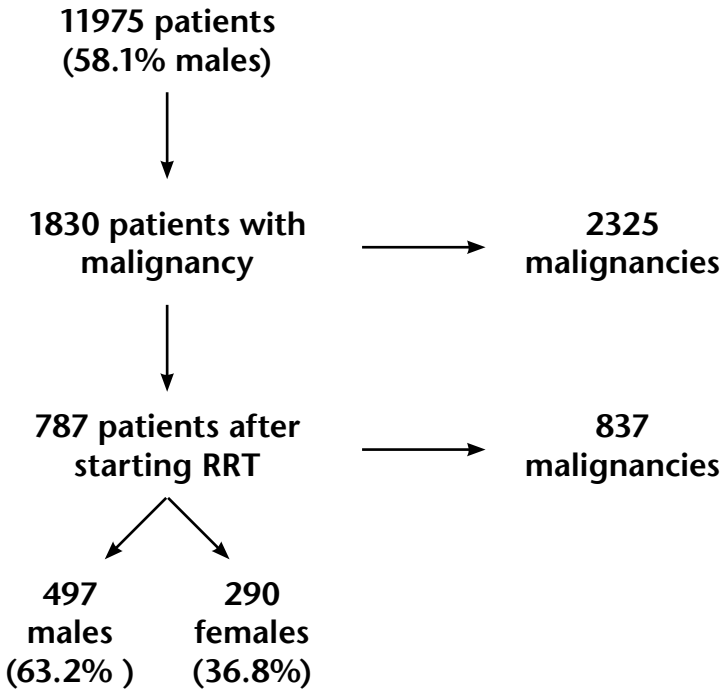
The Scottish Renal Registry was linked with the Scottish Cancer Registry, which is over 95% complete. Record linkage was based on 4 identifiers – date of birth, name, address and CHI number. We included incident patients in the Scottish Renal Registry starting renal replacement therapy for established renal failure between 01 January 1960 and 31 December 2006.

Malignancies were coded using ICD 9 and 10, and divided into groups based on malignancy site. The first malignancy in each group was then recorded. Malignancies identified pre-RRT, benign tumours, non-melanoma skin malignancies and ill-defined or secondary malignancies were excluded. Data were then obtained regarding transplant status, date of death and primary renal diagnosis. If the patient's malignancy occurred at any date after transplantation they were allocated to the transplant group. Permission for this work was granted by the patient privacy advisory committee of the Information Services Division of NHSScotland.

Results

The cohort consisted of 11975 patients (58.1% male, 41.9% female). There were 2325 malignancies in 1830 patients, 837 of these malignancies occurred in 787 patients after starting RRT. Overall 6.6% of patients developed at least one tumour after starting RRT.

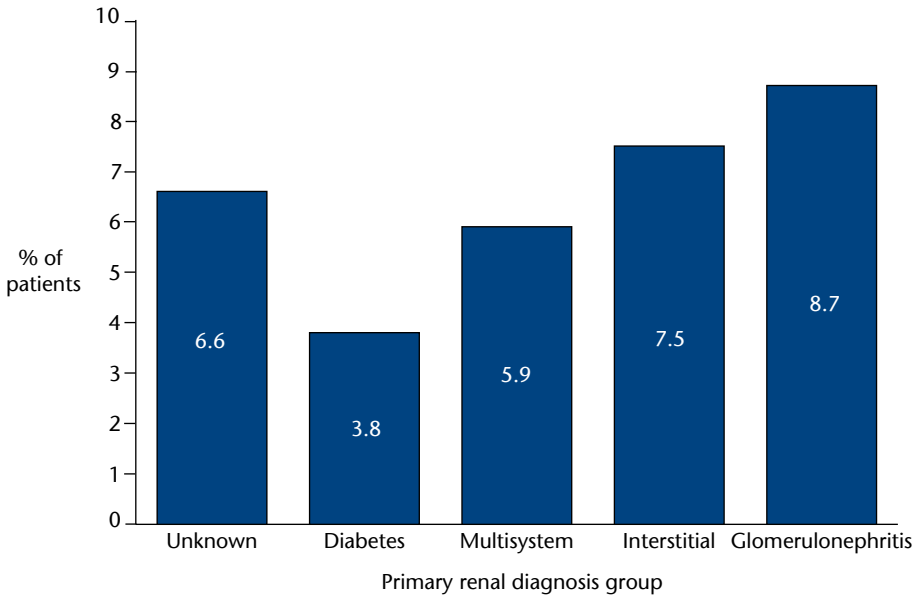
G4.1 Numbers of patients developing malignancy



8.7% of patients with a transplant developed a malignancy versus 5.4% in those not transplanted ($p<0.0001$).

7.1% of males and 5.8% of females developed malignancy ($p=0.003$).

G4.2 Proportions of patients developing malignancy according to diagnosis group



There was a difference in frequency of malignancy according to primary renal disease (Figure G4.2).

The commonest sites for malignancies were gastrointestinal, respiratory, urinary tract and haematological. Median time from starting RRT to developing malignancy was 7.2 (IQR 6.2-10.1) years.

Conclusions

Malignancy occurs frequently in the renal replacement population in Scotland. It is more common in transplanted patients, males and those with primary glomerulopathies and interstitial nephritis. The number of malignancies is less in those with diabetes, possibly because survival is shorter. Malignancies in patients on RRT are common and are typically diagnosed after a long period on RRT.