Poor Uptake of Reproductive Health Screening Services by Female Renal Transplant Recipients

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Abstract
Women with functioning renal transplants are a high-risk group for de novo malignancies and other gynaecological health problems. The objective of this study was to assess patients awareness of gynaecological issues, and to assess uptake of cervical and breast cancer screening services. A structured questionnaire on family planning, menopausal issues and knowledge/use of cervical and breast cancer screening was administered to 64 female renal transplant recipients. 58 (91%) responded to the questionnaire. Mean age at first transplantation was 35 years (range 11 - 69). 84% were aware as to why they should have regular cervical smears. 15 (26%) had, however, never had a smear and only 9 (16%) were having yearly smears. 12 of 28 postmenopausal women entered the menopause under the age of 41 years, but only 5 of these had received Hormone Replacement Therapy. Breast self examination is practiced by 71%, but only 26% have had mammograms. These figures suggest that female renal transplant patients are not adequately screened for cervical and breast cancer. The results also indicate a need for further education regarding family planning issues and menopausal health concerns. We conclude that formal gynaecological review should be routinely available for women with renal transplants.

Introduction
Women with chronic renal disease or functional renal transplants are described as stoical in their attitude towards other health problems.[1] They rarely complain about gynaecological problems, which they may consider to be trivial in comparison with their renal disease.[2] Immunosuppressive therapy predisposes to the development of de novo malignancies. Cancers of the female genital tract are the most frequent nonskin cancers in some reports. The average time between transplantation and the appearance of anogenital malignancies is 114 months. The Cincinnati Transplant Tumour Registry recently reported that 11.6 % of transplant recipients with anogenital malignancies died as a result of their neoplasms.[3]

Previous research describes a high prevalence of cervical dysplasia in these women (17% ys 1.8% in non-recipients of transplants). This increase is seen after a short duration of immunosuppressive therapy.[4]

The European Dialysis and Transplant Association (2002) recommend that all female renal transplant recipients should have a yearly cervical (PAP) smear together with regular pelvic examination and regular mammography.[5]

Screening for cervical cancer commenced in Ireland on an opportunistic basis in the late 1960s and, to date, there is no national cervical screening programme in place. A systematic breast cancer screening programme is available only in some regions. The aim of this study was to assess patients awareness of their high-risk status, to describe the uptake of cervical and breast cancer screening and to identify gynaecological problems.

Methods
A structured postal questionnaire was addressed to all women over 18 years of age with a functioning renal transplant attending the Renal Transplant Follow-Up Clinic at the Department of Renal Medicine, Cork University Hospital. The questionnaire consisted of a section for demographic data that included current age, age at start of renal replacement therapy (RRT), age at first and subsequent renal transplant and current medication. Questions about pregnancy, use of birth control measures, menopause, breast-self examination and uptake of mammograms were included. Women were asked to identify the reasons why they should have cervical smears taken, about age at first smear and current smear frequency. Questionnaires were posted to their private residences with a reminder to those who did not respond. All questionnaires were treated confidentially and could not be traced back to the medical records.

The answers were used for an anonymised computerized database and results are mainly reported as descriptive values.

Results
Sixty-four women over 18 years of age with a functional renal transplant were contacted. Fifty eight (91%) returned the questionnaire. Ages ranged from 22 to 81 years, with mean age 46 years. Mean age starting RRT was 31 years (range 2 to 65 years). Mean age at first transplantation was 35 years (range 11 to 69 years). At the time of this study, mean duration after first transplantation was 11 years (range 0.5 to 26 years). Time at risk will have varied, as 11 women had more than one transplant with a period on dialysis in between transplants (Figure 1). All women were taking immunosuppressive drugs.

Figure 1: Patients age and duration since first transplantation

Forty-three women (74%) had had cervical smears taken, but 15 (26%) had never done so. These had been between 1 and 24 years after first transplantation (Figure 2). The younger women in this group were nearly all sexually active. Although 49 (84%) knew the reason why regular smears were recommended, only nine (16%) actually had had annual smears.

Figure 2: Patients age and duration since first transplantation who never had a smear

Fifty-six women answered the question about breast cancer screening. Only four women do not know what breast-self-examination means and 41 (73%) women (mean age 47 years) say they practise breast self-examination. The 14 women who do not practise breast self examination are slightly younger (mean 45 years). Only 15 (27%) women had had a mammogram, at a median age of 49 years (range 30 - 81 years). 41 women with no history of mammograms were of mean age 44 years (range (22 - 72 years).

Thirty-six (62%) women were currently sexually active; three postmenopausal women gave no answer. Postmenopausal women were less likely to be sexually active than premenopausal women (14 non active/26 vs 5 non active/29; $p < 0.05$).

Twenty-nine women in this study were premenopausal. Excluding five women not currently sexually active, one woman who had had a hysterectomy and one currently pregnant, some 22 women had the potential to become pregnant. Of these 22 women, eight (36%) were taking the oral contraceptive pill, five (23%) were using barrier methods, two had an intrauterine contraceptive device and one was sterilised. Six (27%) women were using no form of birth control.

Twenty-eight of the 58 women were postmenopausal, one woman gave no answer, but is likely to be postmenopausal based on her current age. Twenty-five of these 28 women could remember age at menopause (mean 44 years, range 14 - 54 years). Twelve had stopped menstruating under the age of 41 years (median 38 years), but only 6 women were receiving Hormone Replacement Therapy (HRT).

Discussion
After transplantation the necessary immunosuppressive therapy predisposes to the development of de novo cancers and the history of chronic kidney disease (CKD) predisposes to gynaecological problems.[1,6] This study illustrates the ongoing potential for under diagnosed and overlooked gynaecological problems in a high-risk group. Previous research describes that the stoical nature of renal patients contributes to underdiagnosis[1] but it may also reflect the suboptimal provision of gynaecological services and management of gynaecological issues in these women.

91% of the 64 women contacted, responded to the questionnaire. Although 31% needed a reminder the high percentage response proves the positive interest levels in these issues.

These women are between three and 17 times more likely to develop cervical cancer than the general population.[7,8] Only nine women (16%) had annual smears, as recommended. This leaves 49 (84%) women, who were on immunosuppression for up to 26 years, sub optimally screened for cervical cancer.

A total of 15 women (26%) had had mammograms performed. However, of 19 women aged 50 years or over, only six had had a mammogram. These results do not represent a lack of knowledge in these women. Most women knew why they should have regular smears and breast checks. The question as to why the women were not screened as recommended could not be answered by this study.

It is usually assumed that if successful transplantation restores normal renal function, then endocrine disorders will also be resolved. In this study, 29 women were identified as postmenopausal, of who 12 entered the menopause under the age of 41 years. The average age at menopause was 44 years, compared with 51 years in an unselected population.[9] Only five of these 12 early menopausal women were on HRT. The cumulative effect of premature menopause, long term steroid therapy and CKD puts these women at serious risk of osteoporosis. Some studies advocate that every postmenopausal woman with renal transplant or CKD should take HRT to alleviate climacteric symptoms and, possibly, bone disease.[1,2,10]

These findings confirm earlier studies and suggest that more physician attention needs to be given to routine preventive health maintenance for women with renal transplants and on dialysis.

Female renal transplant patients are not adequately screened for cervical and breast cancer. Family planning issues and menopausal health concerns are frequently overlooked and need to be addressed. The standard operating protocol for the Renal Transplant Follow-Up Clinic will be altered to take account of these findings.

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