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Is Ramadan Fasting Safe for Kidney Transplant Patients with Normal Renal Function? 5 Case Reports.

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Abstract:

Background: Ramadan fasting is prescribed for every healthy Muslim in Islamic countries. Although fasting is not mandatory for kidney transplant patients in these countries, some of them are willing to fast and ask their physicians whether it would affect their renal function.

Case Reports: We have five kidney transplant patients, two men and three women, with normal allograft function and or mild allograft dysfunction that they fast during the month of Ramadan. The ages of our patients were between 25 to 40 years and any one of them had diabetes mellitus. All of five recipients underwent transplantation at least 1 year prior to the month of Ramadan, and had stable allograft function for at least 6 months prior to the fasting.

Their plasma creatinine levels were between 0.9 to 1.4 mg/dl before Ramadan and there were no significant changes after that. They also have any clinical problem during the month of Ramadan.

Conclusion: In conclusion, it seems that fasting during the month of Ramadan does not associated with any significant adverse effects in kidney transplant recipients who had normal as well as mild impaired but stable renal function prior to fasting.

Keywords: Ramadan fasting, Kidney Transplantation, Allograft function

Background:

Ramadan fasting is prescribed for every healthy Muslim in Islamic countries. In normal persons, there is no evidence that Ramadan fasting has any adverse effect on kidney functions. A variety of changes in urine volume, urine osmolality, serum sodium and potassium may be seen after Ramadan fasting, however it does not induce significant changes in serum urea and creatinine.^(1,2,3)

Although fasting in this month is not mandatory for kidney transplant patients as well as non-healthy people in these countries, some of them are willing to fast but are concerned about adverse effects and ask their physicians and nephrologists whether it would affect their renal function

There are few studies and some case report about of Ramadan fasting in kidney transplant patients with normal allograft function and or mild allograft dysfunction, but still the lack of data exists for answering this question.

Case Reports:

We have five kidney transplant patients, two men and three women, with normal allograft function and or mild allograft dysfunction that who voluntarily fasted during the month of Ramadan. The ages of our patients were 25, 26, 35, 37 and 40 years.

The causes of ESRD were glomerulonephritis in 2 and unknown in 3 patients and any one of them had diabetes mellitus. All of five recipients underwent transplantation at least 1 year prior to the month of Ramadan. The ranges of systolic and diastolic blood pressure were between 105-135 and 75-90 mmhg.

All the patients had serum creatinine values below 1.5 mg/dL and had stable allograft function for at least 6 months prior to the fasting. Their plasma creatinine and blood urea nitrogen levels were 0.9 and 17, 0.8 and 15, 1.2 and 25, 1.3 and 20, 1.4 and 27 mg/dl respectively before Ramadan and there were no significant changes after that. There also was no significant changes in blood pressure after completion of 30 days of Ramadan fasting.

Discussion:

The major concern of nephrologists and kidney transplant patients for Ramadan fasting is its effect on allograft function. Can fasting during the month of Ramadan induce reversible or irreversible renal impairment and or facilitate episodes of acute rejection?.

According to present study, it seems that fasting during the month of Ramadan is not harmful to stable renal transplant patients with a 12-hour fasting pattern and dose not cause impairment of allograft function.

Unfortunately there are only few investigations and case reports about this issue in kidney transplant patients. However, most of them concluded safety of fasting Ramadan in recipients with normal and or mild allograft dysfunction.^(4,5,6)

Einollahi et al for example studied 19 kidney transplant recipients with serum creatinine values less than 1.5 mg/dL who voluntarily fasted during Ramadan. There was not significant change in serum creatinine concentrations before and after Ramadan and therefore the author concluded that Ramadan fasting dose not cause impairment of allograft function in

patients with normal allograft function before fasting⁽⁴⁾

Argani et al also performed an investigation on 24 renal transplant recipients about this issue and found no significant adverse effects of Ramadan fasting on transplant patients or allograft.

In this study, blood pressure, blood urea nitrogen, 24-hour urine volume, urine protein to urine creatinine ratio did not change significantly after completion of 30 days of Ramadan fasting.⁽⁵⁾

Abdualla et al studied 23 kidney transplant recipients who fasted during Ramadan, 17 patients with normal renal function and 6 with mild but stable allograft dysfunction. In this study, there also was no significant changes before, during, and after Ramadan and the author concluded that Ramadan fasting is safe for kidney transplant recipients with normal allograft function.⁽⁶⁾

Conclusion:

Although, there are only few investigation about Ramadan fasting in kidney transplant patients and they are not enough to have a final conclusion, it appears that fasting during the month of

Ramadan does not associated with any significant adverse effects in kidney transplant recipients who had normal as well as mild impaired but stable renal function prior to fasting

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