SUMMARY AND CONCLUSION

The objective of this work was to screen the renal transplant patients in an attempt to describe the prevalence of fungal infection and to evaluate its relation to graft function, type of immunosuppression and the duration after kidney transplantation.

This study was carried out on one hundred renal allograft recipients (77 males and 23 females) ranged in age from 11 to 58 years (mean=32.1) and the post transplantation period ranged from 1 to 86 months (mean=32.6). All patients have been given immunosuppressive drugs; 49 patients with prednisolone and azathioprine; 14 patients with prednisolone and cyclosporin A and 37 patients with prednisolone, azathioprine and cyclosporin A.

A group of twenty apparently normal control cases (14 males and 6 females) ranged in age from 20-35 years (mean=27.4) were also included.

Urine, stool and sputum were collected and cultured for detection and identification of fungi, while, sera were collected for detection of fungal antibodies and determination of serum titer against *Candida and Aspergillus species*.

From a total of 402 patient samples, 182 fungal isolates were recovered; 159/182 were included into 8 single species and 23/182 were grouped as mixed species. From a total of 63 control samples; 12 fungal isolates were recovered, *Candida and Aspergillus species* could only be isolated.

Candida was found to be the most prevalent fungal isolate (115/194) in both the transplanted patients and the controls; *Candida tropicalis* was the most frequent species (86/115). No *Candida albicans* could be isolated from any sample. Urine was found positive in 23% of the cases and significantly more prevalent in females, but it was not significantly associated with any particular age group, kidney function, type of immunosuppression or post transplantation period.

Candida and other fungi isolated from both stool and sputum were found insignificantly associated with any particular age group, kidney function, type of immunosuppression or post transplantation period.

In regard to determination of serum titer of antibodies against *Candida and Aspergillus species* by indirect immunofluorescent antibody test, we have found that out of 100 studied cases in regard to less than 1/20 titer; 2% showed reaction to the *Candida* antigen and 13% showed reaction to *Aspergillus* antigen, while in regard to 1/20 titer; 60% showed reaction to both *Candida and Aspergillus* antigens.

The titer 1/40; 34% showed reaction to *Candida* antigen and 21% for *Aspergillus* antigen, while in regard to titer 1/80; 4% showed reaction to *Candida* antigen and 5% to *Aspergillus* antigen. The titer 1/160; 1% showed reaction to *Aspergillus* antigen only.

In conclusion:

Fungi were detected in almost all the studied transplant patients and the range of this fungal colonization depends largely on the type of sample studied. The most vulnerable site of colonization was the intestine and the most frequently isolated species was *Candida tropicalis*.

In general, fungi were more prominently found in males but in females, they were more detected in urinary tract.

Fungal colonization was found not statistically significant in regard to age group, kidney function, type of immunosuppression or post-transplantation period.

The absence of significant correlation between the results of determination of antibody titer and its corresponding cultures make it difficult to consider this indirect test as a dependable accurate procedure.