AIMS AND OBJECTIVES
Kidney diseases are emerging as a global threat to human disease (Xue et al., 2001). During the last decade, the dialysis population has been grown at an average of 7% per year. There are now approximately 1.1 million people worldwide on renal replacement therapy (RRT) and, according to reliable estimates, the number of patients on maintenance dialysis will double in 10 years. The total cumulative cost for RRT in the next decade will exceed US $1 trillion (Lysaght, 2002). Despite the high clinical incidence of renal failure, nephrologists have not been able to make major therapeutic inroads in the treatment or prevention of renal failure. Although, clinical risk factors for renal failure are well recognized, it has been difficult to translate this information to a successful therapeutic armamentarium. Thus, identification of any pharmacological intervention that would be effective in the treatment of established renal failure will represent a significant breakthrough.

Thus by employing various pharmacological agents with nitric oxide donating property or with nitric oxide synthase upregulating property, the study was designed to meet the following objectives:

1. To elucidate the contribution of nitric oxide in ischemic, myoglobinuric and cyclosporine A-induced ARF.

2. To establish the role of NO/NOS in 5/6th nephrectomized, chronic nitric oxide inhibition-induced hypertension and renal alterations in rats.

3. To establish the phenomenon of endogenous renoprotection by renal ischemic preconditioning and to study the role of nitric oxide in mediating this effect.