Sex Differences in Hypertension and Renal Function in Unilateral Renal Artery Stenosis: Effects of Ovariectomy

Tyler Brookshire, Emily Pemberton, Annie Bell, Weijian Shao, and L. Gabriel Navar
Tulane University School of Medicine, Department of Physiology, New Orleans, LA 70112, USA

INTRODUCTION

- Incidence of hypertension is greater in men than women of reproductive age; yet, hypertension occurs more frequently in postmenopausal women than men of the same age.
- Despite mounting evidence of sex differences in the development and progression of hypertension there are currently no guidelines that differentiate hypertensive treatment for men and women.
- Previous laboratory studies on male and female 2-Kidney 1-Clip (2K1C) hypertensive rats demonstrated greater systolic blood pressure and lower renal function in clipped male compared to females.
- Estrogen is thought to play a protective role against the development of ANG II hypertension.
- Accordingly studies were performed in ovariectomized (OVX) 2K1C rats.

OBJECTIVE

- The aim of this study is to characterize the effect of ovariectomy on systolic blood pressure and renal function in response to unilateral renal artery stenosis and compare results in intact female rats.

EXPERIMENTAL DESIGN

- The aim of this study is to characterize the effect of ovariectomy on systolic blood pressure and renal function in response to unilateral renal artery stenosis and compare results in intact female rats.

SYSTOLIC BLOOD PRESSURE

- Systolic Blood Pressure
- Male 2K1C
- OVX 2K1C
- Female 2K1C
- Female Control

KIDNEY WEIGHT AND URINE FLOW

- Kidney Weight
- Urine Flow per Gram Kidney Weight

RENAL FUNCTION STUDIES

- Renal Blood Flow
- Renal Plasma Flow
- Glomerular Filtration Rate

REFERENCES


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