Introduction

The discovery of the biological functions of nitric oxide was in 1980. Nitric oxide was named "Molecule of the Year" in 1992 by the journal Science.

The Nobel Prize in Medicine in 1998 was awarded to Ferid Murad, Robert F. Furchgott, and Louis Ignarro for the discovery of the signalling properties of nitric oxide.. ***(Cotton et al.,1999).***

Indeed, NO(nitric oxide) is involved in the health and disease of all organs and systems. ***(Stark, M. E., and J. H. Szurszewski.,1992).***Nitric oxide (NO) is a labile free radical gas that is widely acclaimed as one of the most important molecules in the biology. NO plays a critical role in many vital biological processes including the control of vascular tone ,neuromuscular transmission ,ventilation, hormone secretion ,inflammation and immunity.Moreover NO has been shown to influence fundamental cellular functions such as RNA synthesis, mitochondrial respiration, glycolysis, and iron metabolism ***(Kone BC. 1997).***

Nitric oxide was found to have an important role in the physiology of gastrointestinal tract and in its response to pathological conditions .Since NO synthase (NOS) is expressed by the enteric neurons ,NO is considered as a mediator of neurotransmission in the gut.Moreover coordination of peristalsis and sphincter action was thought to be mediated by the release of NO which acts as a neurotransmission of nonadrenergic noncholinergic enteric nervous system***.(Slzman et al., 1995 and Alcon S. et al ., 2001).***

The nNOS-deficient mice develop gastric dilation and stasis, the eNOS-deficient mice develop hypotension and lack vasodilatory

responses to injury, and iNOS-deficient mice are more susceptible to inflammatory damage but more resistant to septic shock***.(Mashimo and Raj K. Goyal 1999) .***

Aim of the work:

The present work was done to evaluate the effect of NO on the basal motility of different parts of small intestine in rabbits .