

## EFFECT OF VARYING INTRA-LUMINAL PRESSURES IN DIFFERENT VISCERAS ON BLOOD PRESSURE AND RESPIRATION IN DOG

Sir,

With reference to the above article published in your Journal (12 : 97 : 1968), I would like to add my observations on similar work tackled from a different angle by me on 50 mongrel dogs of both sexes under Sodium phenobarbitone.

The cut central end of the vagus-nerve below the thoracic diaphragm (i.e. abdominal vagus) was stimulated using 20 or 50 volts and 20 or 50 pulses per second. The pulse duration of the stimulating current was varied from 0.05 millisecond to 2 millisecond.

The stimulation of the vagus nerve in the abdomen gave three types of responses with varying stimuli, either a pressor response (rise in blood pressure) or a depressor response (fall in blood pressure) was obtained and a few cases showed biphasic response. Some of the afferents concerned in the mechanism of rise or fall in blood pressure caused by the distension of abdominal viscera also seem to pass through the vagus nerve.

The respiratory changes due to stimulation of vagus nerve in the abdomen were inconsistent (apnoea, tachypnoea or the respiration was slowed). According to Erlanger, the excitability of the nerve fibre is directly proportional to the diameter of the nerve fibre excited. In addition to the stretch receptors of the visceral wall, the baro-receptors and chemo-receptors of the viscera (Chernigovsky quoted by BYKOV Text book of Physiology 1960, 78, 166, 168) also seem to play some role in producing the effects on blood pressure and respiration. The role of visceral pain fibres can not be ignored.

V.S.C. RAO  
*Department of Physiology,  
Medical College, Jabalpur.*