

An Experimental Study of the Effects of Serpina in Salt-induced Hypertension in the Chick

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Dr. K.N. Gour, M.D., F.R.C.P.E., F.R.F.P.S.G., D.C.H. (Eng.), D.P.H., Professor of Medicine, Medical College, Agra and Dr. R.K. Mital studied three groups of three 8-week-old chicks each for a period of 24 weeks. The chicks were kept on a diet of cereal supplemented with multivitamin drops. One group served as controls and received tap water to drink. In the second group 0.9% saline replaced the tap water, while the third group, in addition to sodium chloride solution, received Serpina in a dose of 7 mg per pound of body weight. The general condition of the chicks was noted. The blood pressure was recorded at 6, 12, 17 and 24 weeks. Other investigations repeated every six weeks included total plasma cholesterol (C) and total plasma lipid phosphorus (P) levels and the C:P ratio. Autopsy was performed at the end of the period of observation and the condition of the heart, brachiocephalic trunk, thoracic aorta, and abdominal aorta was studied.

The normal range of blood pressure in the control group varied between 112 and 136 mmHg systolic and 92 and 116 mmHg diastolic. The total plasma cholesterol level in this group ranged between 102 and 118 mg% and the plasma lipid phosphorus level between 7.3 and 8.4 mg %. The C:P ratio was between 13.2 and 14.7. In the second group fed with salt water hypertension was induced, affecting both the systolic and diastolic readings. The maximum level of blood pressure was 168 mmHg systolic and 140 mmHg diastolic. The rest of the values were unaltered, and no atherosclerotic changes were noticed. In the third group administration of Serpina along with salt water prevented the occurrence of hypertension. Other values were also unaffected.