

- 353 Progress in Tetanus Prophylaxis: The Advent of Human Antitoxin. B. J. F. Percy.
Can. Med. Assn. J. 94, 437-441 (Feb. 26, 1966).

Injections of tetanus antitoxin of animal origin frequently cause serious disability and some times death. Despite worldwide knowledge of these effects, millions of prophylactic injections of equine tetanus antitoxin are given annually, and it is continually proposed that the dosage be increased in order to obtain "higher protective" levels in the serum, a procedure which would increase the incidence and severity of reactions. Furthermore, equine antitoxin frequently fails to prevent tetanus. Tetanus antitoxin of human origin is available which carries no risk of complications and confers a higher degree of immunity more quickly than equine antitoxin. The cost of treating reactions to horse serum, together with the financial loss incurred by work absence, far outweighs the cost of human antitoxin. In the author's opinion, the use in this country, (Canada) of antitoxin of animal origin is no longer medically acceptable and may well prove legally indefensible. There are 77 references.

-- Author's abstr.

- 354 Prevention of Allergic Immunization Reactions. J. Kawchak. J. Occ. Med. 8, 21-23 (Jan. 1966)

The procedure of administering oral chlorpheniramine permitted the author to immunize a large number of travelers to foreign countries who had histories of allergy to substances in vaccines. On follow-up, none of these individuals demonstrated any evidence of allergic reaction. The 8mg. repeat-action tablet is easily administered just prior to immunization, and for most patients the antihistaminic activity of this one tablet last long enough so that no other administration is required. A review of 95 cases of patients with a history of sensitivity to allergenic substances showed that, with the aid of the prophylactic measure described, all were able to receive recommended immunizations without untoward reactions either to the allergen in the vaccine or to the antihistamine.

-- Author's conclusions

- 355 The Effects of Nitroglycerin and Amyl Nitrite on Arteriolar and Venous Tone in the Human Forearm. D. T. Mason and E. Braunwald. Circulation 32, 755 (1965).

In spite of the widespread use of nitroglycerin and amyl nitrite for relieving the pain of angina pectoris, considerable controversy still surrounds the mechanism of action of these two drugs. It has been proposed that they improve the relationship between coronary blood flow and the oxygen requirements of the heart by a direct dilating action on the coronary arteries, or that they diminish the oxygen requirements of the myocardium by diminishing the external work of the heart. Much of the confusion concerning the actions of these drugs has arisen from the assumption that nitroglycerin and amyl nitrite have similar effects. In order to determine whether the peripheral circulatory actions of nitroglycerin and amyl nitrite might play a role in their therapeutic effects, the actions of these drugs on both the resistance and capacitance vessels of the forearm of normal human subjects were determined, and the results of these studies are described in this report. The authors emphasize that, since amyl nitrite and nitroglycerin have directionally opposite effects on the venous bed, the efficacy of both of these drugs in angina pectoris can obviously not be explained by their effects on veins alone. Inhaled amyl nitrite results in a sudden and marked arteriolar dilatation, and it is probable that the coronary vessels participate in this response. As a consequence of this arteriolar dilatation, systemic pressure declines markedly, thus also reducing myocardial oxygen requirements. It seems likely that the salutary clinical effects of this drug result from a combination of these two actions.

-- Cond. from Can. Med. Assn. J. Abstrs.

- 356 Hemodynamic Effects of Nitroglycerin in Patients With Coronary Heart Disease. B. Christensson, T. Karlfors, and H. Westling. Brit. Heart J. 27, 511 (1965).

The hemodynamic effects of 0.5mg. nitroglycerin sublingually were determined at rest and during exercise on a bicycle ergometer with the patient supine or sitting on the bicycle. Arterial blood pressure, cardiac output and oxygen consumption were measured. At rest the cardiac output and stroke volume decreased after nitroglycerin. A moderate tachycardia and a slight decrease in mean arterial pressure occurred. After nitroglycerin, exercise in the supine position was performed with a lowered cardiac output and stroke volume and a higher calculated arteriovenous oxygen difference. These effects were more pronounced in the sitting position. In the opinion of the authors, the results obtained give strong support to the view that nitroglycerin may relieve angina pectoris by reducing the work of the heart. Some subjects studied were thus able to perform an exercise which normally caused severe anginal pain, with a cardiac output that was not much different from that at rest when they were free from pain. The reduction of cardiac output must mean that the exercise during nitroglycerin was performed with a high arteriovenous oxygen difference. Nitroglycerin might thus be regarded as a drug that makes the circulatory system more economical as regards flow and pressures.

-- Can. Med. Assn. J. Abstrs.