

the femoral artery via a mercury manometer. Change in intratracheal pressure was monitored by means of a piston recorder attached to the tracheal cannula. Movements of the left and right lower eyelids were simultaneously recorded with light isotonic levers. The cervical vago-sympathetic trunk was dissected and cut on one of the sides. Drugs were given into the cannulated femoral vein.

The anticholinesterase insecticide dichlorvos (DDVP; dichlorovinyl dimethyl phosphate) 2-4 mg/kg evoked a sustained contraction on the innervated but not on the decentralized lower eyelid (Fig. 1). Mevinphos [(carbomethoxypropen-2-yl)-dimethyl phosphate], another organophosphorus insecticide, exerted a similar effect in a dose of 200 to 400 $\mu\text{g}/\text{kg}$. Contractions after the administration of physostigmine salicylate, 200 to 400 $\mu\text{g}/\text{kg}$, were much less pronounced, although the blood pressure rise was marked.

It is obvious that this type of action, requiring intact cervical preganglionic sympathetic nerve, is of central origin. The anticholinesterases used did not affect the decentralized lower eyelid, while drugs acting peripherally proved to be effective on both the sides (Fig. 1). The increase of intratracheal pressure seen in Fig. 1 was absent in several cases. This reaction had no causal connection with the evoked eyelid contractions because blocking the development of bronchoconstriction by a quaternary tropine derivative did not prevent the anticholinesterase-induced contraction of the innervated lower eyelid. Thus, the centrally mediated sympathetic reaction elicited by the anticholinesterases cannot be attributed to consecutive hypoxia due to cholinergic bronchoconstriction. This agrees with the conclusion of Varagić & Beleslin (1962) concerning the hypertensive effect of physostigmine.

The method presented here does not require special laboratory equipment and has the advantage that the decentralized lower eyelid can also serve as control.

*Department of Applied Toxicology,
State Institute of Occupational Health,
Budapest 9, POB 22, Hungary.*

J. SZEBERÉNYI
A. VARGA
M. F. PONGRÁCZ
J. MOLNÁR

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A modified silver clip used in the induction of renal hypertension in the rat

Renal hypertension induced by renal artery stenosis plus nephrectomy of the contralateral kidney in the rat is a well characterized model of experimental hypertension. The method most commonly used is to separate the renal artery and to compress it by means of a U-shaped clip of annealed silver ribbon (Wilson & Byrom, 1939) using a compressing device similar to that described by Schaffenberg (1959). This device allows a pre-set value to be given to the internal lumen of the clip, thus controlling the degree of compression of the artery.

Table 1. Comparison of the internal diameters of clips taken from hypertensive rats.

		Sex	Internal diameter Thousandths of an inch (Mean \pm s.e.)
Wilson & Byrom	Male n = 13	12.7 \pm 1.482
	Female n = 11	13.75 \pm 3.459
Proposed	Male n = 16	10.7062 \pm 0.290
	Female n = 11	12.100 \pm 0.427

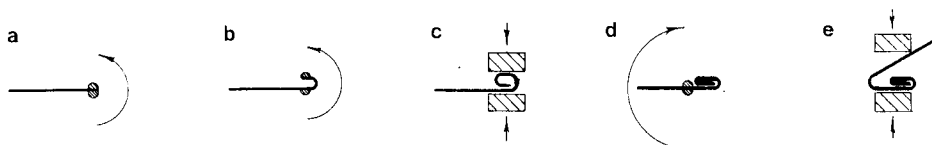


FIG. 1. Method of manufacture of proposed clip.

An examination of the clips taken from animals rendered hypertensive by the above method was made by dissecting the clips and removing adhering tissue by boiling in KOH solution (40%). As can be seen from Table 1, there is wide variation in the internal diameters (measured by a travelling microscope) of the Wilson & Byrom clips. In an attempt to reduce this variation we describe a simple clip which can be accurately set to a variety of internal diameters conditioned by the change of the thickness of the silver ribbon.

For an internal diameter of 0.2 mm (7.87 thou.) we used silver ribbon 0.1 mm (3.935 thou.) thick and 2 mm wide. The method is shown in Fig. 1.

The end of a suitable length of silver ribbon is grasped by a pair of straight ended fine pointed forceps and bent in the direction shown to achieve the first position (a). Placing the forceps on either side of this first "curl" the process is repeated to give the position (b). Using a pair of blunt nosed pliers this double "curl" is compressed flat in the manner shown to give position (c). The fine forceps are now placed as shown in (d) and the tail of ribbon is bent over in the manner shown. The complete clip is shown in (e). As can be seen, the internal diameter is set by the combined thickness of the two folded strips of silver.

These clips, with practice, can be made very quickly and continuously from the same roll of silver, obviating the need for preliminary division into discrete lengths.

The clip is applied in a similar fashion to the Wilson & Byrom clip. When the artery has been exposed the clip is slipped around it so that the artery lies in the space created by the bend and compressed area. Using again a pair of blunt nosed pliers the clip is completely compressed.

As can be seen from Table 1, there is a reduction in the variation in the diameter produced by the proposed clip compared to that produced in the Wilson & Byrom clip.

Smith & Nephew Research Ltd.,
Gilston Park,
Harlow, Essex, U.K.

J. BURNS
B. G. ROBBINS

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