TABLE I.
Results of Injections of Egg-White in Monkeys.

No.	Preliminary Treatment	Subsequent No. Injections E.W. i.c.	Subsequent No. Injections E.W. i.v.	Final Reaction
3	Agar c E.W. i.c.	0	4	Collapse*
4	" " " "	4	1	Death
5	" " " "	5	2	"
6	" " " "	3	2	"
7	E.W. i.c.	2	3	"
8	" "	2	2	"
9	" "	2	2	"
11	" "	0	2	"
16	E.W. i.v.	0	2	"
24	" "	0	3	"
13	E.W. i.m.	0	2	"
15	E.W. i.v.	1	1	"

*1 cc. adrenalin injected concomitantly.
i.c.—intracerebral.
i.v.—intravenous.
i.m.—intramuscular.

eral weakness resulting, nevertheless). The order of injections, elapsed time, etc. have been omitted for the sake of brevity but will be included in a more extended report.

From the data summarized in Table 1 it appears that monkeys may be rendered anaphylactic by the administration of an antigen (egg-white) in at least 2 doses given at suitable intervals, so that a final shocking dose produces death regularly. In 3 others death followed a *single* preparatory dose.

In 4 monkeys (Nos. 4, 5, 6, and 15) previously given at least 2 injections of antigen (egg-white) a series of intracerebral injections of the same antigen into the motor areas at 2-day intervals produced marked local swelling at the site of injection and in 2 instances, death. At necropsy, definite aseptic necrosis of the brain was found in the area of injection.

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Toe Lesions Following Tobacco Injections in Rats.

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During the past 5 years we have attempted to produce gangrenous lesions of the extremities in rabbits and cats by the injections of tobacco or nicotine. We hoped in this way to study the possible

rôle played by tobacco in the etiology of thrombo-angiitis obliterans. The results have been consistently disappointing. Stimulated by the work or Rothlin[1] and McGrath[2] who produced gangrenous lesions in the rat's tail by the use of ergotamine, we decided to employ albino rats for our experiments with tobacco. This preliminary report deals with the findings in a series of 48 male and 12 female rats subjected to injections of tobacco extract. In addition, a group of animals was subjected to inhalation of tobacco smoke and another group was given injections of the pure alkaloid nicotine tartrate.

A Ringer's solution extract was prepared from a commercially denicotinized tobacco from which about 60% of the nicotine had been removed. The injections were given intraperitoneally once every day. The amount first injected was equivalent to one sublethal mouse unit. This was gradually increased so that by the end of the fourth week approximately 3 sublethal mouse units were administered daily.

Of 48 male rats treated with injections of denicotinized tobacco, 33 developed gangrene of the toes within 5 to 12 weeks. None of the 12 female rats treated for 5 to 18 weeks developed this lesion. In 10 control male animals, living under identical conditions, no gangrene developed.

The characteristic lesion begins with a blanching of the toe which is followed by intense redness and swelling. Within 24 to 48 hours of the onset of the blanching the terminal portion of the toe becomes gangrenous and sloughs away leaving an open ulcer. This heals with loss of tissue. Most of the animals showed involvement of one or 2 toes. In several of them all the toes of one or two feet were successively involved.

Preliminary microscopic studies showed an inflammatory process involving the vessels. Detailed studies are being carried on.

Of 6 rats subjected daily to inhalation of tobacco smoke, over a period of 5 months, one male animal developed lesions exactly like those produced by injections of the extract.

One male animal of a group of 10 treated with daily intraperitoneal injections of alkaloid nicotine tartrate also developed a characteristic lesion in one foot.

The fact that a gangrenous process could be produced only in the male is interesting in connection with the almost exclusive occurrence of thrombo-angiitis obliterans in men.

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[1] Rothlin, E., *J. Pharm. and Exp. Therap.*, 1929, **36**, 657.

[2] McGrath, Edward J. G., *Arch. Int. Med.*, 1935, **55**, 942.