phosphoric compounds change in the plant or in the animal into new, often unidentifiable, substances of the greatest toxicity. In these cases absence of the original insecticide on analysis does not prove the absence of the most toxic unidentified substances derived from it.

Another problem is presented by the highly toxic chlorinated-hydrocarbons (aldrin, dieldrin, lindane, etc.), which are widely used without any particular knowledge about the mechanism of their toxicity, as Dr. Campbell emphasized. It is known that most of us harbour a considerable, not specified, amount of them in our body fat without any obvious ill-effect. We do not know what are their effects when, owing to severe or prolonged illness, the stores of the body fat are suddenly mobilized and large quantities of the stored chlorinated-hydrocarbons are liberated into the system.

When an overt polyneuropathy develops there is usually time available to go into further details about the history of the case. There might be however other, less striking, manifestations of chronic toxicity due to these insecticides. As their primary toxic action consists in the destruction of enzymes like cholinesterase, trypsin, liver- and other esterases, the partial replacement of which is within the capability of the damaged organism in cases of relatively low degree poisoning, we might also encounter in the future different degrees of disturbances of the protein and amino-acid metabolism not yet explored. We have at present little possibility to trace or to elucidate these conditions.

With the continuous increase of the marketing of new insecticides (without which, incidentally, our agricultural progress would be greatly impeded), it is absolutely essential that the authorities issue stricter regulations and provide control for the protection of the workers administering them, and also for the protection of the public. Doubtful cases should immediately be referred to centres which should establish suitable methods and gain the necessary experience to investigate them, the more so as many of the delayed toxic effects might develop insidiously.—I am, etc.,

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Vaginal Bleeding in Chorionepithelioma

SIR,—Vaginal bleeding is a common event in chorionepithelioma. Frequently it originates from the uterus, but sometimes intensely vascular vaginal metastases are responsible. The differentiation of these two sources is important for two reasons: (1) hysterectomy may be performed for alleged uterine bleeding, and only when haemorrhage does not cease following this procedure is it realized that vaginal metastases are responsible; (2) uterine haemorrhage usually ceases within two to three days of commencing chemotherapy, whereas vaginal metastases may give rise to quite severe bleeding during the first two to three weeks of treatment. Surgical measures to control haemorrhage are therefore rarely required in uterine bleeding, whereas they are frequently necessary in bleeding from vaginal metastases.

There are three main methods of controlling haemorrhage from vaginal metastases:

(a) *Packing the vagina*.—We have found this procedure unsatisfactory in these cases.

The bleeding is often arterial and ill-controlled by packing. If there is torrential haemorrhage digital pressure directly over the bleeding nodule may control blood loss until the patient is moved to theatre for suture.

(b) *Excision of the metastases*.—This is sometimes attempted, but, as the accompanying arteriogram shows (see Figure), the large vessels associated with these metastases may extend into deep structures. The visible part of the metastasis is often analogous to the iceberg, so that it may be continuous with a uterine or an extrauterine mass of tumour. Adequate excision would leave a very large deficit of tissue.

(c) *Suture*.—This we have found uniformly successful. The metastasis is gently rubbed with a dry swab until all loose necrotic tissue has been wiped away, leaving the appearance of an ulcer with sharply demarcated edges. This ulcer is then underlaid with interrupted stitches of strong catgut (e.g., chromic 1 or 2) which extend 1 cm. into firm tissue on either side of the ulcer. When the sutures are tied the haemorrhage is controlled. This control lasts long enough for the metastases to be brought under the influence of chemotherapy.

Now that chorionepithelioma, with or without metastases, is regularly curable with drugs,¹ the effective control of haemorrhage without causing mutilation assumes greater importance. Uterine haemorrhage rarely requires surgical intervention. Suture appears to be the method of choice in haemorrhage from vaginal metastases.—We are, etc.,

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REFERENCES

- ¹ Bagshawe, K. D., *Brit. med. J.*, 1963, 2, 1303

"Epidemic Collapse"

SIR,—Over the past eight months I have seen a number of patients, of all ages, who have suffered identical symptoms to those suffered by the schoolchildren described by Drs. G. T. Pollock and T. M. Clayton (26 December, p. 1625). The illness often is very short-lived, or it occurs in a mild form; in such cases the general practitioners may not

be contacted. At other times it is diagnosed variously as "a touch of food poisoning," or "a touch of influenza," or as "gastric 'flu'."

Apart from sporadic cases, this condition has occurred in waves on estates (as in Northfleet, Kent) and in Graylingwell Hospital, among staff and patients. It was usually acute and short-lived, but was definitely not associated with hysteria, except in a very few cases. Unfortunately, some patients tend to relapse or remain mildly unwell for days or weeks.

Although I have not studied most of these patients in any detail, I have studied several with residual headaches which followed episodes of this kind. These headaches tend to be "deep" or "behind the eyes" or "since waking up," and are neither migrainous nor muscle contraction headaches. They appear to fall in the American Medical Association headache classification under Category 6a or 6b, although they tend to be persistent and unaccompanied by pyrexia. Additional symptoms in this residual phase include vague malaise, weakness, unaccustomed faintness, nausea, and occasional vertigo. These symptoms were present in previously tough, healthy, active people, as well as in neurotic or hysterical patients.

In view of the references to "mass hysteria" occurring in the headlines of the popular press, I feel it important to point out that in the cases I have seen there has been absolutely no positive evidence of hysterical or neurotic mechanisms as a primary cause of the symptoms, and the label "mass hysteria" appears to have stuck because no other cause, such as virus infection, has been found so far.—I am, etc.,

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SIR,—Some of the features of the Coventry outbreak are reminiscent of a disease—thought to be a virus infection, though this has never been proved—which is endemic in the Lowestoft area. Two possible explanations for the "collapse" in these patients—with frontal headache, "fainting," vomiting, pains, diarrhoea, and so on—were given last year.¹ It is of interest that one of these explanations involves the Valsalva manoeuvre mentioned by Dr. A. Frame (9 January, p. 127).

The incubation period of about two or sometimes three days, indicated in the case-incidence chart of Drs. Pollock and Clayton, is the same as that often seen in the East Anglian endemic cases; and relapses, noted in 24% of Coventry cases, are also noted here. Diarrhoea, however, seems commoner here. Perhaps there is a large group of infections—due to various E.C.H.O. viruses, maybe—where the spectrum of symptoms and signs is much the same; though certain clinical features may be more prominent in some epidemics than in others. Perhaps the fact that the Coventry outbreak was a sudden one, affecting perhaps a susceptible population in schools, whilst the disease here is endemic, and not properly speaking an epidemic at all, may account for some of the differences in the clinical pictures.—I am, etc.,

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REFERENCE

- ¹ Carter, M. P., *Lancet*, 1964, 1, 554.