matter, and perfume.[1] It has been found that both the quaternary ammonium compounds and the amido-amines give positive results with tests for proteinuria using tetrabromophenolphthalein and tetrabromophenol blue (Albustix). Since our health visitors have advised the mothers to place the filter-paper in nappies not treated with fabric softeners the incidence of false positive tests has markedly fallen.

We are grateful for help from Dr. J. W. Richardson, of Lever Bros. Ltd., and Dr. A. T. Bowerman, of Proctor & Gamble Ltd.

—We are, etc.,

T. M. HAYES.
ANN LASHFORD.

Department of Metabolic Medicine, Royal Infirmary, Cardiff.

REFERENCE

1 Evans, W. P., *Chemistry and Industry*, 1969, p. 893.

Impotence in Farm Workers

SIR,—The report by Dr. M. L. E. Espir and others (14 February, p. 423) of four cases of impotence in farm workers who had been handling various pesticides and herbicides indicates once more the dangerous nature of these chemicals. It should stimulate the Government departments concerned to haul themselves out of complacency regarding the safety regulations relating to these chemicals.

Although Dr. Espir and his colleagues are at pains not to specify which chemical was responsible for the impotence, the facts they report suggest that the organophosphorus group was the most likely culprit. If it had not been for two frustrated wives one wonders what the eventual outcome would have been in at least two of the cases.

It seems extraordinary that in the latest edition of the leaflet *The Safe Use of Chemicals on the Farm*[1] issued by the Ministry of Agriculture, Fisheries and Food employers are not compelled to arrange for routine estimations of cholinesterase activity in their employees involved in the handling of organophosphorus chemicals. As it is, employers are only "strongly recommended" to arrange for their workers to be medically supervised.

For many years routine checks of cholinesterase activity have been advocated as an important factor in the prevention of organophosphorus poisoning. Gage[2] pointed out that it was important to have pre-exposure estimations of cholinesterase activity because this varied from person to person. Therefore, not only is it important to perform routine checks after the handling of these chemicals, but ideally a cholinesterase estimation should be made before the work begins. Edson[3] recommended that all workers involved in crop-spraying operations should have periodic estimations of cholinesterase activity, especially employees of crop-spraying contractors.

Few cases of organophosphorus poisoning have been reported in this country.[4 5] However, the cases reported by Dr. Espir and his colleagues suggest that the problem of poisoning by insecticides may be much greater than the number of previously reported cases indicates. It would be interesting to know how many unexplained accidents on farms have been due to insecticides, and, indeed, it would be interesting to know the incidence of frustrated wives among the employees of crop-spraying contractors and others frequeftly involved in the handling of these chemicals.—I am, etc.,

I. H. REDHEAD.

Norman Cross
Nr. Peterborough

REFERENCES

1 Ministry of Agriculture, Fisheries and Food. *The Safe Use of Poisonous Chemicals on the Farm.* Leaflet (APS/1). 1969.
2 Gage, J. C., *British Medical Journal*, 1955, **1**, 1370.
3 Edson, E. F., *British Medical Journal*, 1955, **1**, 841.
4 Rossiter, E. J. R., *Practitioner*, 1960, **184**, 769.
5 Redhead, I. H., *Lancet*, 1968, **1**, 686.

Cat Leukaemia

SIR,—According to a number of recent reports[1 2] there is much interest at the present time in a possible connexion between human and animal leukaemia. An epidemiological study aimed at establishing a connexion between human and feline leukaemia has been initiated at Bethesda, Maryland, by the U.S. National Cancer Institute. At the University of Missouri canine leukaemia is being surveyed epidemiologically by Dr. C. R. Dorn. In Glasgow, at the Animal Leukaemic Research Unit, the Jarrett brothers have shown that the feline leukaemia virus infects human cells in culture. However, Dr. T. E. O'Connor, of Bethesda, has stated that fewer than a quarter of leukaemia patients have cats.

In my modest experience I have found that the households of eight out of 21 children who died recently of leukaemia had kept cats and that six others had kept dogs. In several instances the animals were known to be sick. If two cases of Hodgkin's disease and five of lymphosarcoma were added, altogether 11 cats and 10 dogs were found in the 28 different households; furthermore five families kept budgerigars. An equal number of normal paired control households kept five cats, seven dogs, and one budgerigar. These families all lived in an urban area and the pets were kept at close quarters with the children. When considering other childhood cancers very little difference was found between cases and controls.

This type of inquiry is not accurate enough to allow any definite conclusion to be drawn, but the results suggest that it might possibly be a good thing to set up a planned investigation of a similar type in Britain.—I am, etc.,

MARGARET PENROSE.

London N.W.11.

REFERENCES

1 *Science News* (*Washington*), 1970, **97**, 23.
2 *World Medicine*, 1969, 5, No. 4, p. 17.

Cost of Anaesthetic Agents

SIR,—Dr. C. E. Briscoe's observations on the price of oxygen in hospital (21 February, p. 488) made me look at the cost to the N.H.S. of the same gas when prescribed on E.C. 10 for patients at home.

According to the Drug Tariff (1970 Edition) 48 cu. ft. of oxygen in the standard cylinder costs a basic 27s. The Pricing Bureau tells me that to this is added 10½% on cost, 7s. 6d. dispensing fee, and 2d. container allowance—total 37s. 6d. In addition a delivery fee is payable, varying according to number of cylinders and time of day or night. The cost to the N.H.S. is therefore 9·4d. per cubic foot if the patient collects—more if the chemist delivers. No doubt part of the basic 27s. pays for depreciation of cylinders, but so presumably does part of the charge to the hospitals. According to Dr. Briscoe's figures, the cost per cu. ft. to the N.H.S. is 4·12d. from a 24 cu. ft. cylinder, 0·99d. from a 240 cu. ft. cylinder, and 0·37d. when coming from a piped supply.

Considering the difficulties of handling and storing cylinders, I do not think the chemist is overpaid. Supplying oxygen to patients at home must remain a relatively expensive exercise—until one looks at the hospital beds that are thereby being freed.

But that a whiff of the same gas should cost the N.H.S. twenty-five times as much at home as it does in an up-to-date hospital seems odd. Can someone explain?—I am, etc.,

JOHN S. PATTERSON.

Edinburgh.

SIR,—We were very interested to read Dr. C. E. Briscoe's article on halving the cost of anaesthetic agents (21 February, p. 488). We have long felt that anaesthetists are far too lax in their use of exceedingly costly drugs, and that we can give a lead to the profession in economy measures. We have taught that gallamine is not only cheaper than D-tubocurarine, but also saves dollars when used in its stead. It has the further advantage that when exhibited together with halothane it does not lower blood pressure. This also applies to the newer pancuronium.

Since the publication of the use of low-flow gases together with halothane during spontaneous ventilation[1] we have used this method as the one of choice when not instructing students, and have been impressed not only with its considerable economy as compared with high gas flows, but also with the ease of administration and the smoothness of the anaesthetic. Economy is achieved by using only a 2-litre mixed gas flow, thus evaporating a very small amount of halothane.

The question now arises as to whether the Magill circuit is ever really indicated in modern anaesthesia, except for the administration of trichloroethylene. The high gas flow implicit in its use is a certain barrier to economy, and its advantages over an absorber system are tenuous, to say the least.—We are, etc.,

J. A. THORNTON.
C. J. LEVY.

Department of Anaesthetics, University of Sheffield, Yorks.

REFERENCE

1 Mushin, W. W., and Galloon, S., *British Journal of Anaesthesia*, 1960, **32**, 324.

Idoxuridine and Motor Neurone Disease

SIR,—Prolonged clinical acquaintance with cases of motor neurone disease in any of its forms induces an irresistible desire to grasp at any therapeutic straws which may offer a chance to counter the inexorable downward course of this malady. Our neurological department encounters 20 to 25 new cases of this condition each year, and it has been our practice to follow up all our cases at