biopsy specimens, examined with the electron microscope, have indeed revealed the presence of viral formations of 800-1600 Å, resembling myxovirus-coronavirus structures (Fig.). It may help to recall that coronaviruses were only recently recognized as an independent viral unit distinct from myxoviruses in the light of serological findings.[4]

Our own observations, and the contributions of Drs. Spencer and Andersen, suggest that the myxovirus-coronavirus organisms that we have detected may be involved in the genesis of hepatitis, with azathioprine acting as an activator and revealer of viruses already present in the liver. Further evidence in favour of a relationship between myxovirus-coronavirus organisms and hepatitis is provided by Dr. A. J. Zuckerman and others (31 January, p. 262), who found a coronavirus in the serum of a chronic hepatitis patient, and by Holmes *et al.*,[5] who found one in the serum of two acute hepatitis patients reacting positively for Australia antigen.—I am, etc.,

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Coal Workers' Pneumoconiosis

SIR,—In their recent study of coal miners (29 August, p. 481) Dr. R. Ryder and his colleagues observed that impairment of ventilation did not correlate with radiological category "until the development of progressive massive fibrosis category B," but they did not comment upon the severe impairment of ventilation among miners whose radiographs they classified as normal (category O). The mean value for F.E.V.$_1$ in category O was similar to the mean value in category B but lower than in the intermediate categories 1, 2, 3, and A (their Fig. 2). Moreover, F.E.V.$_1$ values of less than 1·4 l. were recorded in half the miners with category O and B radiographs but in only about one third of the miners in each of the intermediate categories (Table VI). These differences may or may not be significant statistically, but they are in keeping with an observation which has repeatedly been made in earlier studies: that miners with the radiological changes of simple pneumoconiosis tend to have a better ventilatory capacity than those with normal radiographs.[1-5]

It has been suggested that disability in the presence of an apparently normal radiograph might be due to focal emphysema masking the shadows cast by coal dust.[5,6] This theory is supported by Dr. Ryder and his colleagues' discovery that emphysema at necropsy is more often associated with punctiform opacities in the radiograph than with coarser nodulation. They point out that punctiform opacities are less striking than the nodular ones and that this contrast may be emphasized by emphysema in the surrounding lung.

Dr. Ryder and his colleagues have also demonstrated that emphysema is much more common among miners than non-miners, and that it is clearly related to impairment of F.E.V.$_1$ during life but not to radiological category. Unfortunately, they do not indicate the emphysema count for the individual radiological categories but it would presumably be high in miners with normal radiographs (category O) since their mean F.E.V.$_1$ is lower than in most of the other categories.

It would seem, therefore, no longer justifiable to base compensation upon radiological category and to exclude from consideration disabled miners with apparently normal radiographs. These men should surely be referred for more comprehensive physiological studies and, when these reveal a pattern of dysfunction distinct from that found in non-industrial lung disease,[5] disability could reasonably be attributed to their occupation.—I am, etc.,

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SIR,—We were very interested in the paper by Dr. R. Ryder and others on emphysema in coal workers' pneumoconiosis (29 August, p. 481).

The overall prevalence of pneumoconiosis in working coalminers in Great Britain is 10·7%.[1] The findings of Dr. Ryder and his colleagues were therefore derived from the study of a selected minority group of coal-workers.

The fundamental question raised by Fletcher,[2] and referred to in the introduction of the paper by Dr. Ryder and others, is whether there is more emphysema in the mining community than in the general population. It seems doubtful whether much light is shed on this question by Dr. Ryder and his colleagues as the 90% (approximately) of miners without pneumoconiosis in the United Kingdom are so poorly represented in the material they examined. Dr. Ryder and others, as the title of their paper implies, carefully refer their findings to men with pneumoconiosis. We hope they will agree that the only way to answer the question raised by Fletcher is to compare data from samples representative of the mining population as a whole with data from samples representative of the general population as a whole.—We are, etc.,

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Twin Survival in Therapeutic Abortion

SIR,—In November 1969 a patient was accepted for termination of pregnancy (paras. 2 and 3, form H.S.A.1., Abortion Act 1967). She was 28 years old, and was pregnant for the third time, having conceived while taking a purely progestational contraceptive compound. The last withdrawal bleed was on 10 September 1969.

Termination was performed by the Kerslake method of intrauterine aspiration after the administration of 0·5 mg. ergometrine intravenously and the injection of 0·5% lignocaine, 10 ml. on each side of the cervix. After aspiration, when fetal parts had been identified, blunt curettage produced little debris, and no intrauterine irregularity was felt. The postoperative course was uneventful, uterine bleeding persisted for a few hours only, and the patient was discharged in 48 hours.

She returned to the clinic in February 1970 with a uterine mass compatible with 22-weeks gestation. Ultrasonic scanning confirmed the presence of a single fetus; hysterotomy was offered but refused by the patient and antenatal care was accepted. The expected date of delivery was considered to be 17 June 1970 and at 39 weeks pre-eclampsia developed. This was rapidly progressive and induction of labour was attempted. On vaginal examination the cervix, well taken up, would only admit one finger and the membranes were so thick that rupture proved impossible. The indication for delivery was demanding and the patient had requested tubal ligation, and so, in preference to difficult surgical amniotomy, elective caesarean section was performed.

At caesarean section through the lower uterine segment, a live term infant weighing 6 lb. 7 ozs. (2·9 kg.) was delivered. The placenta was implanted in the fundus and it was removed with its membranes easily. There was then found, densely adherent to the lower segment, a portion of membrane about 5 mm. thick occluding the internal os; this appeared to represent part of the membranes of the aborted twin. It was necessary to incise this with a knife to ensure lochial drainage. The puerperium was uneventful. The female child thrived and in the view of the paediatrician was normal for her age.

The symmetrical placental implantation on the fundus together with the smoothness of the membranes camouflaged the continuing presence in the uterus of a twin to an aborted fetus. No apparent damage had resulted from the use of ergometrine prior to aspirations, perhaps because the membranes remained intact. It seems unlikely that many such cases will eventuate because the placenta is most commonly eccentrically implanted and its edge is accessible to the curette.—I am, etc.,

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Reasons for Abortion

SIR,—Your leading article (15 August, p. 362) states that "According to the inquiry held recently by the Royal College of Obstetricians and Gynaecologists the great majority of consultants in that specialty con-