

and the monitoring unit may harbour the virus if the components are contaminated by infected blood, and usually several patients are maintained by one machine regardless of the type of dialyser used. The argument that disposable dialysers would reduce the incidence of infection has not been borne out in fact. One of the largest outbreaks with over 80 cases occurred in Stockholm when disposable dialysers were in use.<sup>2</sup> More recently, a higher incidence of antigen-positive patients has been reported from a unit using disposable dialysers compared with a unit using Kiil dialysers.<sup>13</sup> Nevertheless, when the Kiil dialyser is used each patient should have his own dialyser.

Until effective immunization can be given to staff—which implies the isolation of the virus and the production of a vaccine—the high incidence of morbidity and mortality among staff working in renal units justifies serious consideration for industrial compensation awards to all those who have contracted hepatitis while working in dialysis units. Moreover, the introduction of “danger money” for staff working in them should also be considered.

## Back to Smoke Pollution

An enormous administrative miscalculation is behind the announcement made last week that Britain is to import charcoal briquettes from France to keep the home fires burning this winter. Mr. Eldon Griffiths, Under Secretary at the new Department of Environment, stated when he announced this plan that three plants to produce gas coke were also to be kept open though scheduled for closure. The whole muddle is giving an opportunity for political exchanges on which this is not the place to comment, but the result of it is that one of Britain's main contributions to European Conservation Year is to pour more smoke into an already polluted atmosphere than it did before. Nor will this backward step in hygiene be limited to the present year: Mr. Griffiths could have no more than “every hope” that the shortage will no longer exist in two years time.

The introduction of North Sea gas has led to the closure of plants where gas is produced from coal, with the result that much less coke is now available from them. Since the high cost of gas puts it beyond the reach of many families, and since their houses are in any case equipped to burn only solid fuel, they must go back to using coal or an expensive smokeless substitute. The result is that the Government has had to suspend the smoke-control areas in many parts of the country to enable people to keep warm. All this was foreseen long before North Sea gas entered British homes. Back in 1964 complaints about local shortages of coke were widespread, and the fact that “in future coke will become scarcer owing to the greater use by gas boards of oil refinery gas and

natural gas” was stated in these columns.<sup>1</sup> A thorough inquiry ought to be made into the fiasco that now seems likely to increase the amount and severity of respiratory disease in the coming winters.

Evidence that air containing the products of combustion, especially from domestic fires, does cause serious harm to health was overwhelming in the London smog of December 1952, which resulted in the death of some 4,000 people. The Beaver report<sup>2</sup> and the legislation for cleaner air that stemmed from it were a direct consequence of that disaster. Since then many investigations have confirmed and added to previous studies linking polluted air with respiratory disease,<sup>3-8</sup> even among children.<sup>9</sup> But, though cities are cleaner and people probably healthier when heavy smoke from bituminous coal ceases to fill the air in the neighbourhood of houses, the precise substances in the atmosphere that statistical studies have shown to be harmful to health need further elucidation. Another question is whether the burning of smokeless fuels removes from the air heavy smoke that brings down noxious substances in cities but enhances their dispersal over a wider area. If that is so, the smoke control orders, which should be reimposed as soon as is practicable, are only a step towards providing a pure atmosphere.

Direct measurement of some products of combustion in the atmosphere by sampling gauges, mostly near urban and industrial areas, has in recent years been supplemented by study of the biological effects of polluted air. Much the most sensitive organisms appear to be the lichens, and the lethal effects of atmospheric pollution on them are well documented in Britain and other countries. Recently D. L. Hawksworth and F. Rose<sup>10</sup> have carried the study a stage further by introducing a scale of air pollution based on the communities of lichens growing on tree trunks. Further work is needed to confirm their correlation between pollution and lichen communities and to show what general biological significance it may have, but it has the merit of not being restricted to the problems of “black” smoke or to the few areas where expensive sampling equipment can be installed. Obtaining an atmosphere free of toxic compounds as well as carbon particles is the real goal, and the international network being set up by the World Health Organization with that among its aims is welcome.<sup>11</sup> Meanwhile many people's health would dramatically improve if they kept the atmosphere in their lungs free of tobacco smoke.

## Genital Herpes and Cervical Cancer

Evidence has been growing that sexual intercourse bears some relationship to carcinoma-in-situ and invasive carcinoma of the cervix. A correlation has been reported for both diseases with age at first marriage, age at first pregnancy, and number of pregnancies.<sup>1</sup> Study of a “micro-epidemic” in a single housing estate in the U.S.A. showed that each of the 10 patients had had several different sexual partners.<sup>2</sup>

A suspicion that the venereal factor might be a herpesvirus arose when W. R. Dowdle and colleagues<sup>3</sup> found that *Herpesvirus hominis* isolates from a variety of sites in the body could be divided into two distinct antigenic types—type 1 (HSV-1) from sites other than genital and type 2 (HSV-2) only from the adult genital tract. HSV-2 could be derived

<sup>1</sup> *British Medical Journal*, 1964, 1, 324.

<sup>2</sup> Committee on Air Pollution, *Report*. London, H.M.S.O., 1954.

<sup>3</sup> Pemberton, J., and Goldberg, C., *British Medical Journal*, 1954, 2, 567.

<sup>4</sup> Pattle, R. E., and Cullumbine, H., *British Medical Journal*, 1956, 2, 913.

<sup>5</sup> Fairbairn, A. S., and Reid, D. D., *British Journal of Preventive and Social Medicine*, 1958, 12, 94.

<sup>6</sup> Stocks, P., *British Medical Journal*, 1959, 1, 14.

<sup>7</sup> Lawther, P. J., Martin, A. E., and Wilkins, E. T., *Epidemiology of Air Pollution*. World Health Organization, Geneva, 1962.

<sup>8</sup> Committee of the Royal College of Physicians of London, *Air Pollution and Health*. London, Pitman, 1970.

<sup>9</sup> Colley, J. R. T., and Reid, D. D., *British Medical Journal*, 1970, 2, 213.

<sup>10</sup> Hawksworth, D. L., and Rose, F., *Nature*, 1970, 227, 145.

<sup>11</sup> *British Medical Journal*, 1970, 3, 533.