

posterior lobe, the reaction was negative. Furthermore, the injection of 0.2 c.c. of the hormone of the anterior lobe of the pituitary body, when injected into the skin of a pregnant woman, produces no reaction, whereas, when injected in the same way in the non-pregnant woman a distinct red circle is produced in a few hours, which persists from twenty-four to thirty-six hours.

The accumulated evidence, therefore, goes to show that the hormone responsible for the Zondek-Arshem reaction is derived from the anterior lobe of the pituitary body; that the reaction is positive quite early in pregnancy, at a time when such positive evidence is most needed; and that the reliability of the test is very high.

It is regrettable that from its nature the

test cannot be made generally available. It requires the assistance of a laboratory where a large stock of young female mice is constantly at hand, and where there are trained observers. The test, as a consequence, is expensive. It may prove, however, that the skin test referred to may overcome the difficulty. Recently, Drs. Otto Pollatschek and R. Porges, of Vienna, have made some valuable observations on this phase of the subject, and report that in their hands the skin test has proved to be reliable, except in one patient who had a hypophyseal tumour. Should these observations be confirmed we shall have at last a simple and reliable method of determining the existence of early pregnancy.

PLAINTIFF'S EXHIBIT

MET-421

ASBESTOSIS

ASBESTOS is a mineral of interest to Canadian physicians, particularly to physicians practising in the Province of Quebec, for a very considerable part of the world's supply of asbestos is mined in the Black Lake District between Quebec City and Sherbrooke. If work with asbestos presented a hazard to the worker it would be reasonable to suppose that cases of disease would be reported from time to time, but so far as can be determined no cases of specific disease have been reported among asbestos workers in the Province of Quebec. This does not mean, however, that a hazard does not exist; it merely means that no hazard has been recognized.

Mortality and morbidity records of asbestos workers are not available. In fact, information as to the effect of such work on the worker is extremely limited. The death of an asbestos worker which occurred in 1900 was reported by Dr. Murray in England to the Department on Industrial Diseases, and the evidence suggested that the death was due to an occupational disease. This case was not reported in the medical literature. No further reports appeared until 1924, when Dr. W. E. Cooke, of the Wigan Infirmary, published the history of a case of pulmonary asbestosis. Since then a number of isolated cases have been reported, mostly in the manufacture of asbestos, and mostly

in England, but four cases in Southern Rhodesia were reported by R. W. Simson in 1928. The latest publication on the subject is by W. E. Cooke, in the *British Medical Journal* for September 28th, 1929. This article is in the nature of a review.

Asbestos occurs in nature as a fibrous form of serpentine. Its analysis varies somewhat in different parts of the world, but it is essentially a magnesium silicate. There may or may not be iron present, and some forms contain aluminum. The Canadian asbestos is said to contain about 41 per cent of silica and 2.5 per cent of iron oxide.

Clinically, asbestos affects two tissues. First, it may produce small warty growths in the skin,—the so-called "asbestos corns." Secondly, it may give rise to a fibrosis of the lungs, somewhat similar to that produced by silica. Investigation of the "asbestos corns" indicates that they are granulomatous in nature and have for their core a tiny spicule of asbestos fibre. Evidently asbestos is mildly irritating to the body tissues. The manner of the formation of the pulmonary lesion is of great interest to students of pneumoconiosis, for there is a widespread impression that silica is necessary to the formation of pulmonary fibrosis. Nor can it be said at present that this view is definitely disproved by the occurrence of pulmonary asbestosis, since asbestos in itself

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is a silicate. To our knowledge no analyses of pulmonary tissue for silica have been made in cases of asbestosis.

It might be thought that the lesion in this condition was essentially the same as that of ordinary silicosis, if it were not for the fact that certain very characteristic bodies are reported unlike those seen in any other pathological picture. We refer to the so-called "curious bodies." Microscopic sections of lungs of asbestos workers show large elongated bodies varying in length from 10 to 100 microns. They may have single clubbed ends or may appear as elongated dumb-bells, and sometimes single coccid or streptococcal forms are seen. These bodies do not stain with the ordinary aniline dyes, but are themselves pale yellow or yellowish brown. The "curious bodies" may be isolated from lung tissue by digesting portions of the lung with trypsin. They may then be teased out, and in this

way some idea of their structure may be obtained. Apparently they are composed of a central core, which is probably an asbestos spicule, upon which colloidal aggregates of blood proteins have been adsorbed. These "curious bodies" have been reported in different places in England and South Africa; in fact every published report of pulmonary asbestosis has described them. It is the opinion of Dr. Cooke that the "curious bodies" are diagnostic of pulmonary asbestosis.

Since the reported cases of this disease have occurred largely among weavers and spinners it is possible that the mining and crushing of asbestos does not present a hazard. The failure to recognize the disease in Canada, however, is no evidence of this, for in other occupations experience has shown that large groups of men may suffer serious occupational effects, which go unrecognized for years. FRANK G. PEDLET.

Editorial Comments

LE MAL DES CRÊCHES

The problem of the crèche or foundling hospital is how to lessen the relatively high rate of mortality that so often exists among the children cared for in these institutions. The death rate, formerly nothing less than appalling, has been of late much improved through a fuller appreciation of the value of pasteurization of milk and of the decisive part played by vitamins, but it is still too high. The outstanding features of the affection that carries off so many infants, as is well known, are athrepsia and diarrhoea. This affection can hardly be termed a disease, as it is not a single entity and the causes are multiple. Yet many names have been applied to it—i.e. mal des crèches, summer diarrhoea, infantile cholera, milk injury (Czermy), disturbance of equilibrium (Finkelstein), and some others. Actually, what is called by these various names is a symptomatic condition with a varied etiology.

Drs. Longpré and Panneton, in a helpful article that appears in the present issue of the *Journal*, have done good service in emphasizing one important cause at least, namely, infection in the nose, throat, and ear, an infection, moreover, which may be diphtherial and, as such, unsuspected. These authors point out that the problem involved, in many cases at least, is one of infection rather than alimentation. Careful examination, of the nose, throat, and ears, both clinical and bacteriological, should be carried

out in all infants that are not thriving, for lesions of these organs may be overlooked or, on account of their relative benignity, may be passed over as of little account.

Drs. Longpré and Panneton give some striking figures as a result of their investigations in a crèche with which they are connected, though they do not claim that their findings are necessarily applicable to other similar institutions. In sixty autopsies conducted on children dying with the "mal des crèches" only two infants were found to have intestinal lesions. The outstanding conditions found were otitis and mastoiditis, which were present in fifty cases. Without eliminating completely frank gastro-enteritis, their experience leads them to think that the signs manifested in the digestive tract in cases of athrepsia are not primary but secondary to a septicæmia, usually due to infection in the ear. Furthermore, the authors have examined, in 151 cases, the secretions from the nose and throat in patients manifesting no local symptoms, and the pus in cases of otitis, and were surprised to obtain *b. diphtheriæ* in 85, or 56.3 per cent. Of course, the discovery of *b. diphtheriæ* in noses and throats that do not manifest the typical signs of diphtheria, or, indeed, any signs at all, is not new, but Drs. Longpré and Panneton have performed a useful service in pointing out an important cause of trouble in hospitals for children, where the diets prescribed are proper, and the care is otherwise beyond reproach.

A.G.N.