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phosphorylase-A was also significantly increased in the lithium-treated rats.

If changes in carbohydrate metabolism similar to those found in the acute rat experiments also occur in patients during chronic lithium treatment, the weight-gain may be the result of glucagon stimulation, combined with the insulin-like effect on extrahepatic tissues. However, until further experiments have been completed this remains conjectural.

Our thanks are due to Dr. Hans Grønlund, Århus Kommune-hospital, for determining the glucagon concentrations.

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VIRUSES IN A MALIGNANT LYMPHOMA

SIR,—Your interesting leader on E.B. virus (Oct. 25, p. 887) prompts us to report our electron-microscope findings in a case of malignant lymphoma of the tonsil.

The patient was a woman of 43, who had been born in Guyana. She was referred to this hospital with the pathological diagnosis of lymphoma of the tonsil, and was examined by Mr. K. Rotter on Aug. 21, 1969. At this time there were hard matted glands on the left side of the neck, and the left tonsil was greatly enlarged, with a central necrotic area. Her first symptom had been 2½ months before, when she had had an attack of tonsillitis which had failed to settle. At the same time she had noticed enlargement of the left cervical nodes and of the left tonsil. After her admission to this hospital, the cervical nodes and both tonsils continued to increase in size, and several enlarged lymph-nodes appeared on the right side of the neck. Biopsy confirmed the diagnosis of malignant lymphoma-reticulosarcoma.

A small piece of tissue was fixed in 3% buffered (pH 7.2) glutaraldehyde and embedded in araldite. The electron-microscopy findings are as follows: the cytoplasm of the neoplastic cells contains multiple intracellular vacuoles or inclusion-bodies; these contain large numbers of viruses, 60–70 mμ in diameter (fig. 1). The virus particles have a double membrane and are surrounded by a corona of

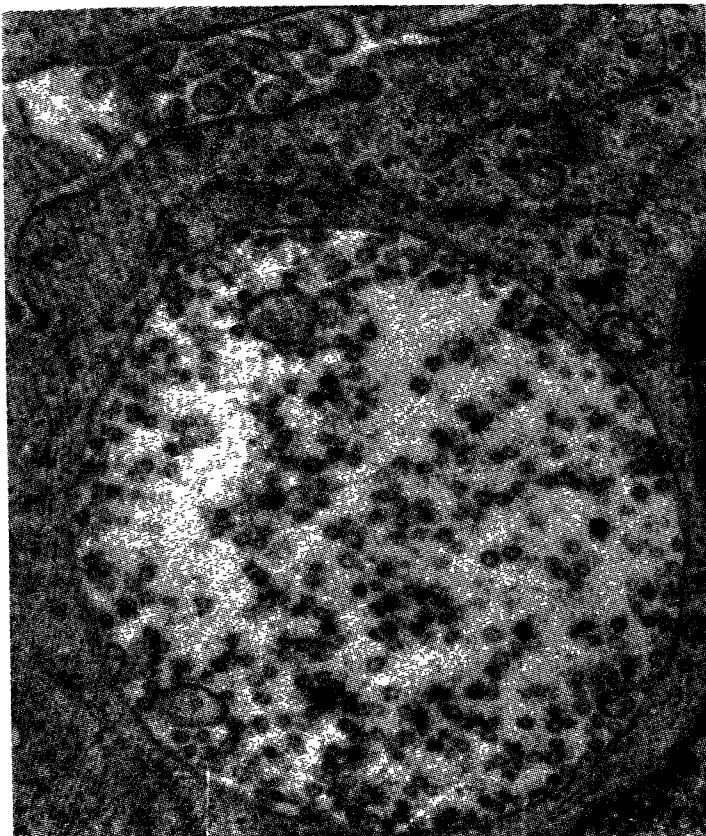


Fig. 1—Electron-micrograph of part of nucleus of cell from malignant-lymphoma tonsil.

Large cytoplasmic inclusion cyst contains viruses. Nuclear membrane can be seen at top-left. ($\times 28,000$.)

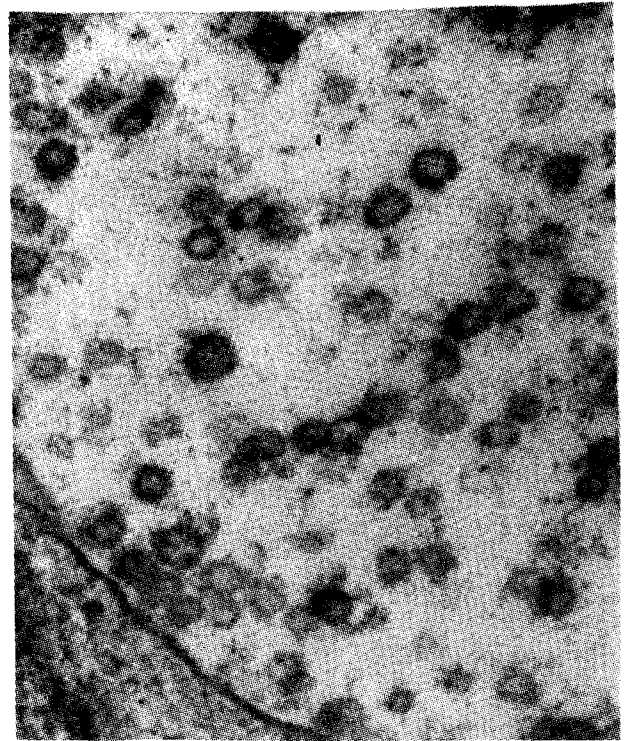


Fig. 2—Detail of inclusion cyst, showing surface pattern of virus particles.
($\times 70,000$.)

smaller units (fig. 2). (We are indebted to Mrs. June Almeida and Prof. A. P. Waterson for suggesting that the viruses might belong to the corona-virus group.^{1,2})

Serological tests have not been completed, but the titre to the E.B. virus was 1/320. It is perhaps worth mentioning that the electron micrographs show nuclear changes not unlike those described in the cells of Burkitt's lymphoma. There are also, apparently, intermediate stages of development of the inclusion cysts and of their contents, and these are under investigation.

A similar virus has been found on re-examination of electron-microscope specimens from another patient with lymphosarcoma of the tonsil. Both patients responded promptly to radiotherapy.

We are grateful for the help of Mr. K. G. Rotter, consultant surgeon, the Royal National Throat, Nose & Ear Hospital, and of Dr. E. D. Jones, radiotherapy department, Royal Marsden Hospital.

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VETERINARY ASEPSIS

SIR,—Dr. Eirian Williams states at the conclusion of his interesting article (Oct. 4, p. 737) that "until brucellosis is eradicated . . . veterinary schools should emphasise more the teaching of asepsis, principals should encourage their younger colleagues in the practice of asepsis, and industry should be asked to produce a supple and more durable veterinary glove". He makes this statement after mentioning that a survey in South-West Wales showed that 57 out of 63 veterinary surgeons carried out obstetric procedures without wearing gloves. In the defence of our profession I think it should be stated that thousands of disposable gloves are used daily by veterinary surgeons in practice and the various artificial insemination services, throughout the country. But for obvious reasons it is impossible to use rubber gloves when dealing with severe dystocia in the ruminant, and we have to rely entirely on disinfectants, barrier creams, and scrubbing-up. Dr. Williams' phrase, "until brucellosis is eradicated", is difficult to understand.

1. *Br. med. J.* 1969 **i**, 658.
2. *Nature, Lond.* 1968, **220**, 650.