compliance, and flow were calculated and related in time to the cineradiographic film. 4 infants showed tracheal collapse. All of the infants had normal lung compliance, and no evidence, therefore, of low static lung pressure. In contrast to the noncollapsing infants, 3 of the collapsing ones had high resistance. The remaining 1 had low resistance but high expiratory flow. The transmural pressure was estimated not to exceed 10 cm H2O in the infants with high resistance but was much lower in the other infant, indicating a soft tracheal wall. It was concluded that in the other cases the tracheal collapse was caused by an increased peripheral lung resistance of unknown nature, possibly in combination with a decreased stability of the tracheal wall.

**Spongiform changes in neonatal and infant brain.** D. I. Rushton. Maternity Hospital, Edgbaston, Birmingham 15.

**Embryonal carcinoma of vagina in infancy.** A. A. M. Gibson. Department of Pathology, Royal Hospital for Sick Children, Yorkhill, Glasgow C3

3 cases of this rare malignant tumour were reported. The clinical features are similar to sarcoma of the urogenital sinus (sarcoma botryoides). Embryonal carcinoma of the vagina almost always presents before the age of 2 years and tends to run a rapid course with early metastasis to the liver and lungs. The microscopical structure is quite different from that of sarcoma botryoides and it is indistinguishable from the 'endo-dermal sinus pattern' of Teilum seen in some gonadal tumours, such as orchioblastoma of the testis in infancy, and in certain extraglandal tumours. By analogy embryonal carcinoma of the vagina is regarded as arising from extraglandal germ cells rather than from remnants of the mesonephric duct.

**Light and electron microscopical changes in congenital nephrotic syndrome.** J. Rapola. Department of Pathology, The Children's Hospital, Stenbacksgaten 11, Helsinki, Finland.

**Intravascular coagulation in meningococcal septicaemia.** T. E. Parry. Department of Pathology, Llandough Hospital, Penarth, Glamorgan CF6 1XX.

**Protracted measles.** H. B. Marsden. Department of Pathology, Royal Manchester Children's Hospital, Pendlebury, Manchester M27 1HAO.

The patient was a male child of 13 months of age who died 9 months after an apparently typical attack of measles. The prominent features at necropsy were deep ulcers 1 cm in diameter in the terminal ileum and granulomata in the lungs and liver. Giant cells were seen in the bowel wall, lung, and all gut-dependent lymphoid areas. Giant cell transformation was also noted in the intestinal epithelium and thrombosis appeared to have played a significant part in the production of ulceration. A diagnosis of immune deficiency was made at necropsy on the findings of lymphocytic depletion, absence of follicle formation and plasma cells, and thymic dysplasia with macrophages in the thymus. Retrospective study of the immunoglobulins showed a low IgG, normal IgA, and the expected rise in IgM.

No evidence of virus infection could be detected in the thymus by histology, fluorescent microscopy, or electron microscopy.

The nature of the response to measles was considered and the giant cell pneumonia in leukaemia patients was discussed. Invasion of the thymus by the virus does not appear to be the significant feature.