

is caused by the ketone bodies, the result of the starvation and the inability of the inflamed bowel to utilize carbohydrate,—this is seen mainly in the so-called infection cases.  $\text{CO}_2$  in these cases may be quite low, but seldom below 22 or 25 mm. There is another condition, however, not infectious but fermental, characterized by a profuse watery diarrhoea with marked desiccation, where much more severe grades of acidosis are seen, with  $\text{CO}_2$  tension as low as 15 or 20 mm., needing soda intravenously, and often very fatal. This is frankly not due to ketone bodies formation, for they will be found in the urine only in very small amounts, and there will be no acetone odour to the breath. This type of acidosis is due to the fact that owing to an excessive loss of fluid by the bowel, the kidneys attempt to conserve this by diminished excretion with the result that the acid products of metabolism are retained. It is more severe and more deadly in our experience than the other type. Frequently the diarrhoeal condition becomes a secondary consideration for the time being, the necessity of neutralizing the diminished alkalinity of the blood being so very urgent. We have therefore found the estimation of the  $\text{CO}_2$  tension of inestimable value, and easily and quickly carried out at the bedside even on the youngest infant."

The exact details of the seven specimens, which are mounted and put on exhibition by Mr. Judah here, are as follows:

1. *Congenital syphilis of lungs of infant with multiple gummata and so-called white (syphilitic) pneumonia. Spirochaetes in tissues by Levaditi method. Tubercle bacilli absent.*

The right lung is somewhat larger than the left and is diffusely mottled with dark red areas scattered over a surface of paler fleshy tint, the whole diffusely consolidated except in a small portion along its upper border, which is airless. Its central part is occupied by one large and several smaller caseous gummata, the largest of which presents a central cavity surrounded by a thick caseating wall and extends from the upper into the middle lobe through the pleural surfaces of the two lobes which are firmly adherent to each other at this point by extension of the gummatous inflammatory tissues.

The left lung presents one large gumma with central cavitation in its upper lobe and is air-containing in about two-thirds of its extent. Its lower lobe is of a fleshy feel and pale pinkish colour and is quite airless and solid, presenting the gross appearance of the young granulation tissue characteristic of syphilitic pneumonia.

From a male infant aged six weeks, a typical congenital luetic