The tumour was a glio-sarcoma of the caudate nucleus rapidly growing and projecting into the frontal lobe pressing on and infiltrating the bundles of fibres coming from the frontal lobe to the internal capsule. The posterior part of the tumour was pressing on the internal capsule and would thus account for the motor paresis. The greatly increased amount of cerebro-spinal fluid with the accompanying increase in intracranial pressure explained the gradually increasing stupor. The severed connections of the frontal lobe with other parts of the brain would assist in explaining the mental condition of our patient. Our reason for recording this case is to add another to the list of lesions of this region already reported where it has been possible to localise the site of the lesion before death.

PRIMARY CARCINOMA OF THE LIVER IN A BOY OF 19 YEARS.

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Jadav, a Hindoo boy, aged 19, an inhabitant of the district of Chapra, was admitted into the Medical College Hospital, Calcutta, on 12th July 1902. He was complaining of a painful swelling in the hepatic region. About three months before his admission, he first began to feel a lancinating pain of a somewhat constant character in the right hypochondrium, which was soon followed by a swelling which began to increase gradually. On inspection, the increased liver presented the appearance of a distinct abdominal tumour with several round irregular prominences, which moved up and down with respiration. The liver dulness extended from the lower border of the 4th rib to about ½ inch above the iliac crest. The superficial veins of the abdomen were somewhat distended, but there was no ascites. No distinct nodule could be detected round the umbilicus. He had no jaundice, but was markedly cachectic. On palpation, the liver was slightly tender and the tumour felt very hard to the touch. There was no adhesion between the liver and the abdominal wall, which was quite free from the nodular prominences. The urine gave slight reactions of bile, and on microscopical examination, crystals of leucine and tyrosine were found. Temperature was normal. There was slight impairment of resonance in both the lungs specially at the bases with an increase of vocal resonance in these parts. Expectoration was mucoid and somewhat yellowish in colour. One or two glands near the clavicle were somewhat enlarged. Nothing else abnormal was detected in any other part of the body.

From the extreme rarity of cancer at such a young age, it was suspected to be a case of primary sarcoma of the liver.

Four days after his admission into the hospital, the patient died on 16th July 1902 at about 11 A.M.

Post-mortem examination was made three hours after death by Dr. L. Rogers, Professor of Pathology, Medical College of Calcutta.

Rigor mortis was still present.

On opening the thorax, the pleuræ were found adherent to the bases and the posterior parts of both the lungs. Some yellowish hard nodules could be seen on the surface of the lungs, which on section showed yellowish masses. All other structures in the thorax were normal. On opening the abdomen, a large tumour was found displacing the right kidney downwards to a considerable extent. Running obliquely down in the lower part of the tumour was the transverse colon. The large tumour apparently consisted of the enlarged liver with many hard and irregular prominences on its surface. A mass of enlarged glands was found in the portal fissure. Many other secondary nodules were scattered in the liver substance, which on section showed yellowish masses, together with a few hæmorrhagic patches. The weight of the liver was 6 lbs. Gall-bladder contained the usual amount of dark-green bile. All other internal organs of the body were quite normal.

On a microscopical examination of these nodules, they were found to be distinctly carcinomatous in character, and the sections of the liver showed distinct columns of epithelial cells, with evidences of fatty degeneration in the yellowish masses. The secondary nodules in the lungs showed similar epithelial cells. It was therefore diagnosed by Dr. Rogers as a case of duct cancer of the liver.

Remarks.—The chief interest of the case is its extreme rarity. Dr. Hale White, in his article on Tumours of Liver in Albutt's System of Medicine, Vol. IV, writes after a careful examination of the records of Guy's Hospital: "During the years 1870—1893, both inclusive, 11 cases of primary carcinoma of liver has been seen in *post-mortem* room, and about 115,000 *post-mortem* examinations have been made." Among these 11 cases, in one instance recorded by Dr. Pye Smith, cancer occurred in a young boy, aged 12, whilst in the remaining 10 cases the oldest patient was 71 years old and youngest 23. Then of seven cases recorded in the Pathological Society's Transactions from 1871 to 1891, and not included in the 11 cases from Guy's Hospital, the oldest patient was 69 years and the youngest 33. We then see that it is a disease of adult life. But our present case is another rare instance where primary cancer of liver occurred in a young boy of 19 years of age.