

*Blood Cultures.*—Osler reported the first case in which the meningococcus was isolated from the blood during life, and subsequently several have confirmed this finding.

This seems to be only exceptionally the case, and limited to that class of cases characterized as acute meningococcus septicæmia, unless our methods of culture are still faulty.

*Urine.*—The most evident fact apparent after glancing over the examination of urine of 38 cases of this series is the great frequency of retention. This occurred in no less than 12 cases (31.6 per cent.). It may occur as early as the first day of disease, hence the caution necessary in these cases. The retention usually gives place to incontinence. This was present in 15 cases (39.4 per cent.), and is especially frequent in those cases which become rapidly comatose.

The urine is of high specific gravity, 17 cases (44.7 per cent.) showed a trace of albumin; six cases (16 per cent.) showed sufficient sugar to reduce Fehling's solution, and one case as much as 1.54 per cent.

Blood was present in two cases and pus in three. One of the cases in which blood was present in the urine was conspicuous in having petechiæ and large purpuric spots on the trunk and extremities, evidence of a hæmorrhagic tendency.

*Lumbar Puncture.*—Quinke, who proposed the operation of lumbar puncture, did more to clear up the origin and diagnosis of this disease than any other. The examination of cerebro-spinal fluid chemically, bacteriologically and microscopically has afforded us much positive data for diagnosis; until at the present day no diagnosis of this disease with its protean manifestations can be accepted as absolutely positive during life, without lumbar puncture being performed.

The objects to be obtained from lumbar puncture are:—

- (1) To establish a diagnosis of meningitis.
- (2) To determine the nature of the meningitis present.
- (3) To relieve pressure caused by an excessive quantity of cerebro-spinal fluid.

In this series of 46 cases lumbar puncture was performed in 42 cases. In 36 (85.7 per cent.) the diplococcus meningitis intracellularis was found, sometimes in pure culture.

The fluid was always more or less turbid, in some cases being very purulent, and was usually under considerable pressure. Apart from the question of diagnosis, lumbar puncture is believed by many clinicians to be of undoubted value in the treatment of the disease in the early stages.

The case reports of this series were carefully examined with the object of finding out whether definite improvement did or did not