

basophile granules and a large oval eccentrically situated nucleus, which is badly marked off from the surrounding protoplasm. They always occur discretely. Very characteristic are the rod-shaped or *Stäbchen* cells, which probably take their origin from the connective tissue cells of the adventitia. These are long cells with branching protoplasm, which frequently contains fat and pigment. The nucleus is often broken and shrunken. They lie attached to the outer surface of the adventitial wall of new blood vessels. They are occasionally seen in other diseases, particularly tertiary syphilis, when there is much new formation of vessels, but only in focal lesions. Even then they are short and atypical. In general paralysis they are exceedingly frequent and the distinguishing characteristics of the cell are evident to a degree never found in any other disease.

The anatomical picture, the outline of which I have here sketched, is perfectly distinctive of general paralysis, and by means of the post-mortem examination alone a trained observer can without hesitation decide whether a given patient had or had not suffered from this disease. The obvious importance of this fact both to theory and to practice need not be further insisted on.

We may next consider some of the pathological observations that may be made during the life of the patient. These are of great interest, not only as throwing much light on the pathogenesis of the disease, but also in that they enable us to make a certain diagnosis of its presence even in the earliest stages. Many of them, such as the hæmic leucocytosis which is so common, particularly after the seizures, are of no great diagnostic value, and I shall confine my remarks to the subject of the *cerebro-spinal fluid*. The technique of lumbar puncture is so well known that I will only offer a word or two concerning a few personal preferences which a considerable experience has dictated. The interval between the fourth and fifth lumbar spines is the most convenient one. The sitting posture is the most