

In one case at the hospital the mother told me that whilst her little girl was eating an orange she saw one of the arms suddenly drop to the side, and from that moment it remained paralysed. The mother at first stated that the child was perfectly well at the time, but afterwards admitted she gave her the orange because she was feverish and thirsty. This is important; because, I think it will generally be found that some feverish condition usually precedes the paralytic seizure, and this may explain the acute congestion, if not inflammatory exudation, which takes place in the grey matter of the spinal cord.

I have seen cases in which a child has suddenly lost the use of one of its legs whilst going upstairs, or walking on the pavement; and in all such cases the paralysis is erroneously attributed to a fall.

I mention this case in illustration both of the suddenness of the seizure, and the completeness of recovery.

*Pathology.*—With regard to the seat and nature of the structural changes upon which this remarkable form of paralysis depends, some authors consider that it has not yet been determined whether the cases of paralysis with flaccid muscles really depend upon any central nervous lesion, either of the brain or spinal cord. By some authorities the paralysis is thought to be of peripheral rather than central origin, the term "myogenic paralysis" being applied to it.

As this form of paralysis is seldom, if ever, a fatal disease, opportunities for making post-mortem examinations, in recent cases, must be extremely rare, and in those cases in which such examinations have been made at a late period, death having resulted from some other affection, when some atrophic changes have been observed in the portions of the spinal cord corresponding to the upper and lower extremities, these have been thought to be of a secondary character, and consequent upon, rather than producing the paralysis.

Under the head of lesions of motor nerve cells, Charcot observes: "*Infantile spinal paralysis* is, up to the present, the most perfect type of the affections which compose this category. The numerous researches made recently

in France, in reference to the spinal lesions on which they depend, concur to indicate, as an essential fact, the profound alteration of a large number of motor-cells, in those regions of the cord whence the nerves emanate which supply the paralysed muscles. In the vicinity of the atrophied cells, the connective network almost always offers manifest traces of an inflammatory process. Judging from the general aspect of the phenomena, we are induced to admit, as a highly probable hypothesis, that, in infantile spinal paralysis, a super-acute irritative action suddenly seizes on a large number of nerve-cells and makes them promptly lose their motor functions. Some cells which have been but slightly attacked will recover their functions some day, and this phase corresponds to the amelioration of symptoms which always supervenes at a certain period of the disease. Others, however, have been more severely involved, and the irritation of which they were the seat is transmitted along the nerves to the paralysed muscles which, in consequence, suffer trophic lesions of a more or less serious character.\* However it be, it is known that diminution, or even loss of faradaic contractility may be observed in certain muscles, barely five or six days after the abrupt invasion of the first symptoms. The emaciation of the muscular mass makes rapid progress besides, and soon becomes evident. The alterations which, on histological examination, are found in the affected muscles are these: firstly, simple atrophy of the primitive fasciculi with the transverse striæ preserved; and secondly, the marks of a more or less active proliferation of sarcolemma-nuclei on some isolated fasciculi. The accumulation of fat sometimes seen in old cases, seems to be a purely adventitious phenomenon.†

In concluding these observations on the clinical history of cases with rigid, and those with flaccid muscles, I will briefly refer to the chief points of difference between the two classes of cases; and also the points in which they are generally found to agree.

*Period and Mode of Seizure.*—1st. Cases of infantile paralysis with flaccid muscles never occur at, or immediately after, the period of

\* Charcot et Jeffroy, loc. cit.

† Charcot et Jeffroy, loc. cit. Vulpian, loc. cit.