

seventy-nine years old. In the overwhelming majority of cases the incubation period was from four to seven days. A tendency to ataxia or spasticity should always suggest possible oncoming poliomyelitis. Sometimes this did not attract attention until another case of frank poliomyelitis developed in the family. He warns that every case of diarrhea, sore throat and bronchitis should be regarded with suspicion when poliomyelitis is prevailing. Pains in the legs and even swelling of joints may be encountered with early poliomyelitis. Polyneuritis generally develops symmetrically, and has a longer course, without acute fever. Meningeal symptoms may accompany the poliomyelitis, but there is no opisthotonus, and poliomyelitis is a summer disease in comparison to epidemic meningitis, which occurs usually in winter. The lumbar puncture fluid is clear with poliomyelitis. In one of the cases the symptoms were mistaken for appendicitis and an operation was done; a few days later the characteristic paralysis of legs and bladder developed. In another case an emergency tracheotomy was done for supposed diphtheria. There were 1,239 deaths among the 6,700 cases. The mortality ranged from 10.3 to 21.4 per cent. in children under ten, jumped to twice this in older children; three times as much in adults under thirty, and four times at fifty to sixty. In treatment, he emphasizes the necessity for personal supervision and extremely careful nursing of the patient even during the stage of repair. The spread of the disease along the routes of traffic is shown by the maps. The fact that the poliomyelitis virus can continue to live in the rabbit organism suggests that it may be transmitted by animals besides direct contact from man.

REFLEXES IN POLIOMYELITIS. Regan. (*Am. Jl. Dis. Ch.*, Nov., 1917.)

The author points out that most common symptom of poliomyelitis is an alteration in the reflexes accompanying or following a short febrile period. The patellar reflex is most frequently affected owing to the common involvement of that region of the spinal cord which innervates the quadriceps extensor group of muscles. It was altered in various ways in 81 per cent. of 818 cases. Hyperactivity of the knee jerks is usually, if not invariably, the first change to occur in the preparalytic stage. Hyperactivity of the patellar reflex is most frequent in the meningitic and ataxic cases, and in the combined types of the disease in which meningitic symptoms were prominent. Absent or normal response is the rule in purely bulbar cases, except in the very early stages. An exaggerated reflex may be encountered in an atrophied and obviously paralyzed leg. Absence of the knee jerk is most frequently encountered in the myelitic and bulbar types of the malady.

The patellar reflex may remain normal throughout the entire paralytic phase, especially in bulbar and ataxic cases. It is also common in myelitic cases when the paralysis is limited to the upper extremities and trunk. It is scarcely ever encountered where the hydrocephalus is at all marked. The plantar reflexes are exaggerated in the preparalytic stage. The reflex was altered in 41 per cent. of 643 cases specified in the paralytic stage. An exaggerated response may persist into the paralytic stage, more especially in the meningitic and ataxic classes of cases. A diminished reaction was found most common in the ataxic, the myelitic meningitic, and the purely myelitic forms of the disease. The reflex was absent most frequently in the purely bulbar and in the combined bulbar and myelitic cases. A normal reaction was encountered most often in the ataxic, bulbar myelitic and bulbar meningitic forms of the malady. Often the first sign of improvement in cases with marked paralytic involvement is the gradual reappearance of the reflex. The Babinski phenomenon is relatively rare in poliomyelitis, but it occasionally occurs in the meningitic form of the disease. Its presence in a

case in which the diagnosis was doubtful would always be decidedly in favor of tuberculous, and, to a less extent, cerebrospinal meningitis. A true ankle clonus is likewise very rare in contradistinction to the other forms of meningitis. The pupillary reflex is but little altered.

MYASTHENIA GRAVIS. W. A. Jones. (Journal A. M. A., Nov. 4, 1916.)

Jones reports a case of myasthenia gravis, with necropsy, in which a thymoma was found in the thymic region just above the heart and immediately behind the sternum, imbedded in loose connective tissue and not adherent to the sternum or to any of the thoracic viscera. In commenting on the case he says the literature on the thymus gland is neither convincing nor satisfying. It seems to be generally recognized that the thymus and the thyroid are interrelated and it seems reasonably safe to assume that the thymus is in some way responsible, like the thyroid, for disturbances of bodily metabolism. It is also probable that it has some other relation with ductless glands, but their dependence on each other is not definitely determined. The presence of the thymus in a person of middle life, particularly when associated with an exophthalmic goiter, is a very strong index, he says, that the thymus is the main disturbing element, and the operator who removes the thyroid gland without recognizing a thymus hyperplasia produces a change in the circulation of the thymus which not infrequently is followed by sudden death. The relation between thymic disease and the central nervous system has never been determined. The majority of thymic deaths in young people and children are probably due to pressure effects, but this does not eliminate the probability of toxins in the blood stream also.

DO ANIMALS FEEL PAIN? Van Rijnberk. (Nederlandsch Tijdschrift voor Geneeskunde, Amsterdam, August 25, II, No. 8, pp. 671-750.)

The author here cites further examples, such as that if the tail or part of the body of a honey-sucking bee or male copulating shrimp or frog is cut off, the creature continues undisturbed to suck honey and the male does not release the female from his embrace. The twitching of the skin of a horse is a reflex action which occurs the same if the communication with the brain is shut off. He says further that veterinarians report that quite a considerable operation can be done on the large, herbivorous domestic animals while they are feeding and they may continue feeding without interruption. Dogs, cats and rabbits after severe operations in the laboratories are as lively and frolicsome as before so soon as the effect of the general anesthesia has passed off. He adds that dogs cannot be trained by the eyesight alone; there must always be some pleasurable or disagreeable experience connected with the act in which it is being trained. Even in man, he continues, the sensation of pain seems to be restricted to the outlying parts of the body. It is still a question whether sound organs in the thoracic and abdominal cavities are sensitive to pain. "In short," he concludes, "the attempt to answer the question 'Do animals feel pain?'—which the layman answers glibly in the affirmative—is to step on a treacherous trapdoor which drops one into a hornets' nest of philosophy, psychology and biology."

WOOD ALCOHOL POISONING. A. O. Gettler and A. V. St. George. (Journal A. M. A., Jan. 19, 1918.)

These writers say that national prohibition will undoubtedly lead to much "moonshining," adulteration and dilution of liquor. This is evident from the recent increase of cases of wood alcohol poisoning, six of them fatal. Such cases, the writers believe, will become still more frequent in the