same treatment given her during the first attack, and she rapidly regained flesh and strength. On November 1 her weight was again up to 124 pounds, all fever was gone, the cough and expectoration had almost disappeared. Tubercle bacilli were not to be found since the last week in October. The consolidation had become greatly reduced, but was still present, when a few days later she was again sent to the mountains.

Noteworthy points in this case are: the sudden onset, something like general miliary tuberculosis; the large number of bacilli; the rapid recovery, all the more remarkable with a pronounced tubercular family history; the complete disappearance of consolidation and bacilli; the acute re-appearance after two years, of the whole train of symptoms, with signs in the base of the left lung directly following an attack of pneumonia located in that vulnerable part; the large number of bacilli and their early complete disappearance in the second attack; the abatement of the consolidating process, and the rapid recovery of the general health after the second attack; the absence from the treatment of all cough medication and antiseptics, and the large doses of strychnine nitrate and the double chloride of gold and sodium, with which the system was kept literally saturated.—Wm. Pepper, M.D., LL.D., in *Univ. Med. Mag.*

THE KNEE-JERK IN DIAGNOSIS.

Primarily, the knee-jerk depends on the integrity of the reflex arc, situated in the third or fourth lumbar segment. The ordinary and customary method of testing the knee-jerk, while the person's legs are crossed, may suffice when it is quite active; but the utmost care is necessary when there is any doubt as to the character of the reaction. It is never safe to say that the knee-jerk is absent, unless repeated and varied tests have been made with the clothing removed. The exaggeration or absence of the knee-jerk, *per se*, is not pathognomonic of any special type of disease; corroborative signs must be present. The absence of the knee-jerk is of more positive value than its exaggeration. A lesion which involves the posterior roots or the posterior columns in the region of the second, third, or fourth lumbar segments, such as tabes or transverse myelitis, causes the abolishment of the knee-jerks, and these are the only lesions in the sensory tract that are known to cause such a loss. A lesion involving the motor portion of the reflex arc, such as acute or chronic anterior poliomyelitis, or multiple or isolated peripheral neuritis, affecting the anterior or crural nerves, will also abolish the knee-jerk. The knee-jerk is present in children over three years of age.

1. Loss of knee-jerk associated with severe paroxysmal pains in the lower extremities, with incontinence of urine or slowness in emptying the bladder, with preservation of muscular resistance, with or without incoördination, with or without objective sensory symptoms, is indicative of organic changes in the lumbar segment of the cord, such as tabetic degeneration or a lesion of the posterior nerve roots.

2. Loss of knee-jerk associated with diminished muscular resistance or evident paralysis of the lower extremities, pain in the course of the nerve trunks with tenderness on pressure, some atrophy and quantitative decrease in faradic irritability, with or without objective sensory disturbances and the absence of bladder symptoms, is a clinical picture of multiple neuritis.

3. Loss of knee-jerk with flaccid paralysis, atrophy, and loss of faradic reaction in the quadriceps, and the absence of all sensory symptoms, indicates a poliomyelitis in the lumbar portion of the cord on the same side.

As a general rule the knee-jerk does not disappear so long as there exist in the reflex paths a certain number of healthy muscle and nerve elements. On the other hand, in all lesions which affect the nerves in their totality, the knee-jerk is abolished. In all cases of transverse myelitis, spinal cord hæmorrhage, and traumatisms of the cord, if we observe the abolition of the knee-jerks, an unfavorable prognosis should be given. In all cases of chronic, organic intracranial disease, in which indications of the position of the lesion are absent, the occurrence of this symptom suggests a cerebellar process. Changes in the unilateral reflex permit of the diagnosis of a one-sided lesion with great certainty, while an involvement of the reflexes on both sides, excluding polyneuritis, always indicates an affection of the central nervous system in its totality. The knee-jerk is occasionally absent in the early stages of meningitis; it is also absent when there is a supervenosity of the blood, in asphyxia from coal-gas, and in the acute stages of some cases of apoplexy. In distinguishing a genuine epileptic convulsion from simulation, we must consider the absence of knee-jerks and the absence of light reflex with dilated pupils as crucial tests in excluding simulation. The knee-jerk is absent in cases of diabetes only when there is peripheral nerve degeneration. Any obstructive or destructive process involving the upper or cerebro spinal segment of the motor tract is likely to occasion an exaggeration of the knee-jerk. Should the lesion be situated above the crossing of the motor tract, the exaggeration occurs upon the opposite side of the body, while a lesion below would manifest its symptoms on the same side. This exaggeration may be demonstrated after the administra-