

successive stages in the progress of the disease, also by the rapidity with which they have followed one another. The disease began with the usual weakness and pains, followed shortly by the muscular atrophy due to destruction of the multipolar cells of the anterior cornua. This was followed by a typical condition of amyotrophic lateral sclerosis, due to sclerosis of the cerebral segment of the fibres of the antero-lateral descending tracts of the cord, and latterly the development of bulbar phenomena indicates the involvement of the cells of the medulla. This patient has not been under observation now for some two months, having gone to California for the winter.

CASE 2.—Notes, February 24th, 1899. Mr. McL., farmer, aged 55. Family history: Nothing of importance in this. Personal history: Pioneer farmer; hard worker; always temperate. No history of specific trouble of any kind. Present illness began about six months ago. Complains only of weakness; no pains; fatigued by least exertion, and much by walking; weakness felt most in knees and muscles of the thighs; coldness of hands, and feet very troublesome; cannot perform delicate manipulations with hands; first noticed this on lacing his shoes, in being unable to tie his shoe-lacings. Present condition: Atrophy of muscles of upper and lower extremities, most marked on the thumbs of the upper extremity and in the muscles below the knees on the lower extremities; knee-jerk slightly exaggerated; slight hesitation in speech; patient has noticed that it has been hard for him to get started to speak for some time; "tongue feels thick;" sensation good; no inco-ordination; sphincters intact; appetite good; bowels regular; no headache; dizziness; pupils active. In this case the destruction of the multipolar cells has taken place to a great extent, and sclerosis of the nerve fibre has begun. Treatment: strychnia and massage.

## TWINS, EACH WITH SYRINGO-MYELOCELE.

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The following case may prove of interest, mainly on account of its rarity. L. Emmett Holt states that "I once saw two successive children in the same family with spina-bifida."

On the 18th June, 1898, I was called to attend Mrs. B., a very healthy woman, in her sixth confinement. Her four children all healthy, one child stillborn at term, all labors easy. Labor in this case was rapid and easy. The twins both breech presentations and having separate membranes and placenta. Both male and each spina-bifida in almost identically same