

shown only under full mydriasis, the patient was unable to use her eyes at any near work, such as reading, sewing, etc., and at all times suffers from extreme intolerance of light. Ophthalmoscopic examination negative.

Muscular tests: The first examination showed an esophoria of  $9^{\circ}$ , which, under the use of partially correcting prisms worn for ten days, developed into settled fault of  $20^{\circ}$  of esophoria and  $28^{\circ}$  esophoria in accommodation.

Tenotomy of the left internus relieved all the muscular fault except  $1^{\circ}$ , which I have allowed to remain. The relief of all symptoms was immediate and complete. The headache, the pain in the eyes, the intolerance of light, the drowsiness and double vision have all vanished. She is now able (without the aid of glasses) to read and sew as well as anyone, and threading a needle, which previous to the operation was almost an impossibility for her, is now done with facility. The general health and spirits have improved to a remarkable extent. Perhaps no change in her condition is more marked than of her tone of voice, which from being high-pitched, nervous, almost wailing in character, has been moderated, mellowed, and vastly improved.

As additional illustration of what may be accomplished, I may mention the following case of Dr. Stevens:

J. H. W., thoroughly healthy boy, without any nervous symptoms whatever, has been under my oversight since infancy. Except for a chronic tarsal ophthalmia there was nothing to call attention to the eyes. Very slight hypermetropia, for which I had prescribed glasses several years ago. On examination three months ago there were  $11^{\circ}$  of esophoria manifest, for which an operation was performed, removing  $7^{\circ}$  of the fault. Two weeks later  $4^{\circ}$  additional were manifested; a week later the total manifest esophoria was  $9^{\circ}$ , when a second operation was performed, which resulted in the removal of  $8^{\circ}$  of the 9 then existing. A recent examination shows a manifest esophoria of  $3^{\circ}$ , being a let-out of  $2^{\circ}$  since the last operation.

From the first operation a marked change took place in his facial expression; his eyes, which had previously been almost closed, opened widely, the tarsal ophthalmia showed prompt improvement, and he expressed himself free from a constant struggle to keep the eyes from closing, which he had not noticed as dependent upon any condition of his eyes until after it had been relieved.

I present the patient this evening for the purpose of demonstrating the amount of set-back given to the tendon, which, though invisible under ordinary circumstances, may be readily seen, upon causing either eye to be rolled outward, as a vertical line in each eye, about 2 millimetres wide in one and a little less in the other, where the sclerotic is plainly visible through the conjunctiva.

Whether the claim made that the neuropathic predisposition is more frequently due to eye-strain than to other conditions is fully justified by the facts or not, it is unnecessary at present to determine, seeing that enough is known to make it certain that eye-

strain from muscular fault is the cause of grave and varied reflex neuroses, and that in these cases carefully graduated tenotomy promises relief; besides, there is in such cases often sufficient justification for the sake of the eyes and sight—apart from the nervous condition—for the correction of the fault.

My own experience covers many of these operations, performed for the relief of a variety of conditions and, notwithstanding serious difficulties at times encountered, I have a steadily increasing confidence in the legitimacy and value of the method.

## SENILE HYDROCEPHALUS.

*Read before the District of Columbia Medical Society, December 7, 1887.*

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I show this specimen to illustrate the atrophy of the brain that sometimes takes place in old age, as well as the compensatory dilatation of the ventricles that takes place at the same time, made necessary by the fact that the brain is in a hard case. The woman was old, said to be 82 years, and had been somewhat demented for an indefinite time, explained doubtless by the progressive atrophy. November 24 she was seized with left hemiplegia and died six days afterwards, the 30th. The post-mortem examination illustrated well the abundance of pathological material which is sometimes found in an old person. The brain was atrophied and its ventricles dilated; the ventricular fluid, as well as the subdural and subarachnoidal, was increased in quantity, but transparent and clear as water. There was some congestion of the dura mater. The arteries were markedly atheromatous, and there were clots in several of them. The spinal cord, as low down as it could be examined from the brain cavity, was atrophied. The thyroid cartilage was brittle, with chalky deposit, and broke with ordinary handling. There was a mucopurulent accumulation in the pharynx and larynx. The lungs showed small chalky and pigmented nodules in upper lobes; probably from the cure of incipient tuberculosis. The lower lobe of the right lung showed sufficient recent pleurisy and pneumonia to prove in a weak person a sufficient cause of death.

The heart and pericardium were everywhere closely attached to each other by old adhesions. The substance of the heart itself was fatty; the aortic and mitral valves, as well as the aorta, were atheromatous. There were old adhesions of the liver to the diaphragm. The liver itself was small, atrophied, but the gall bladder was as much distended with bile as I ever saw it, projecting several inches forwards from the anterior border of the liver; apparently she had had no use for bile for some days, and it had greatly accumulated. The spleen was much atrophied; the intestines were not opened. The kidneys both showed contraction and small cysts, as well as some adhesion of capsule, suggesting chronic nephritis. The uterus was atrophied; but contained at the fun-

dus and projecting into the cavity a polypus the size and shape of an almond; the uterine mucous membrane was covered with dark blood, so that we might say that the polypus was *still active*. The ovaries were atrophied; the Fallopian tubes dilated.

## MEDICAL PROGRESS.

STATISTICS OF SURGICAL TUBERCULOSIS.—SCHMALFUSS bearing in mind Volkmann's remark that tuberculosis in children and adults varies in regard to its curability and danger to life with the localization of the tuberculous foci in the different organs, regions of the body and tissues, has collated the operations for the past 10 years in Maas's clinic in Würzburg. The list does not include the polyclinic cases.

During the last ten years from which the statistics are taken Maas treated 1287 cases of tuberculosis, or 14.5 per cent. of the whole number of patients; 748 were males and 539 females; 58 had multiple tuberculosis.

### I. Tuberculosis of Bones and Joints.—978 cases.

1. *Knee-joint*, 227 cases=18 per cent. of the whole number, and 23 per cent. of cases of bone tuberculosis. 33 per cent. in children under 16 years of age. Cured and improved 69 per cent.; died 14 per cent., of which 5 per cent. were children. Resection was performed in 27 cases, amputation in 49, 6 of these after previous resection.

2. *Ankle joint and foot-bones* 187 cases=14.5 per cent. of all cases of tuberculosis, and 19 per cent. of cases of bone tuberculosis. Of children under 16 years old there were 38 per cent. Cured and improved 79 per cent.; died 5 per cent. Resection in 46 cases, amputation in 16, 6 of which were after previous resection.

3. *Hip-joint* 160 cases=12 per cent. of all tuberculous cases, and 16 per cent. of cases of bone-tuberculosis; under 16 years old 68 per cent.; Cured and improved 60 per cent.; died 19.4 per cent. Of the cases in children 24 were resected; in 1 exarticulation was performed.

4. *Elbow-joint* 86 cases=7 per cent. of all tuberculous cases, and 9 per cent. of cases of bone-tuberculosis; children under 16 years 36 per cent. Cured and improved 62 per cent.; died 11 per cent. In 8 cases the arm was amputated, and resection done in 28 cases.

5. *Bones of the hand* 76 cases=6 per cent. of cases, and 8 per cent. of cases of bone-tuberculosis; 26 per cent. in childhood, the cases of spina ventosa being eliminated. Cured and improved 68 per cent.; died 11 per cent. Resection was done in 11 cases, and amputation in 10.

6. *Vertebral column* 74 cases=5.7 per cent. of all cases, and 7.5 per cent. of cases of bone-tuberculosis; 43 per cent. in childhood. Cured and improved 58 per cent.; died 17.6 per cent.

7. *Tibia* 44 cases=3 per cent. of cases, and 4 per cent. of cases of bone-tuberculosis; 43 per cent. in childhood. Cured and improved 79.5 per cent.; died 4.5 per cent.

8. *Skull and bones of face* 40 cases=3 per cent. of cases, and 4 per cent. of cases of bone-tuberculosis; 37.5 per cent. in childhood. Cured and improved 80 per cent.; died 5 per cent.

9. *Pelvic bones and sacrum* 35 cases=2.7 per cent. of all cases, and 3.6 per cent. of bone-tuberculosis; 11 per cent. in children. Cured and improved 23 per cent.; died 46 per cent.

10. *Sternum and ribs* 35 cases=2.7 per cent. of all cases, and 3.6 per cent. of cases of bone-tuberculosis; 12.5 per cent. in children. Cured and improved 63 per cent.; died 11 per cent.

There was no case of caries of the clavicle.

11. *Femur* 19 cases=1.6 per cent. of all cases, and 1.9 of cases of bone-tuberculosis; 37 per cent. of the cases in children. Cured and improved 74 per cent.; died 5 per cent. Amputation in one case.

12. *Shoulder-joint* 15 cases=1 per cent. of all cases, and 1.5 per cent. of tuberculosis of bone; 22 per cent. of cases in children. Cured and improved 87 per cent.

13. *Ulna* 14 cases=1 per cent. of all tuberculous cases, and 1.4 per cent. of cases of bone-tuberculosis; 29 per cent. of the cases in children. Cured and improved 100 per cent.

14. *Humerus* 12 cases=almost 1 per cent. of all and of the cases of bone-tuberculosis; 17 per cent. in children. All cured.

15. *Radius* 7 cases=0.5 per cent. of all cases, and 0.7 per cent. of cases of bone tuberculosis; 1 per cent. in children. Cured and improved 86 per cent.; died 14 per cent.

16. *Fibula* 5 cases=0.4 per cent. of all, and 0.5 per cent. of cases of bone-tuberculosis; all in adults. Cured and improved 60 per cent.

17. *Patella* 1 case=0.08 per cent. of all cases, and 0.1 per cent. of cases of bone-tuberculosis. Cured.

II. *Tuberculosis of lymph glands*.—In all 196 cases=15 per cent. of all cases of tuberculosis; 31 per cent. in children. Cured and improved 79.5 per cent.; died 4 per cent.

III. *Tuberculosis of the skin and cellular tissue*.—In all 77 cases=6 per cent. of all cases; 34 per cent. in children. Cured and improved 74 per cent.; died 3 per cent. Contrary to Volkmann's experience, in the clinic at Würzburg tuberculosis of the skin was more frequent in adults than in children.

IV. *Tuberculosis of accessible mucous membranes*. In all 10 cases=0.8 per cent. of all cases; only 1 in childhood. Cured and improved 70 per cent.; died 20 per cent. There were two cases of tuberculosis of the tongue, 4 of tuberculous fistula ani, 1 tuberculous bursitis, 1 of tuberculous enteritis, and 1 of tuberculosis of the pharynx.

V. *Urogenital apparatus*.—In all 20 cases in males; 25 per cent. of these in boys. Cured and improved 65 per cent.; died 10 per cent. There were 18 cases of tuberculosis of the testicle, and 2 of tuberculosis of the kidney. Of the 18 with tuberculosis of the testicle 12 were castrated, 2 on both sides; of these 5 were children. The outcome of these cases is directly contrary to Volkmann's dictum that castration is of no use in children.—*Centralbl. für Chirurgie*, No. 8, 1888.