

When the bladder involvement is more or less superficial it shows a strong tendency to heal without further aid than the removal of the kidney focus. The more persistent conditions call for heroic treatment, as they are many times the cause of more anxiety to both patient and physician than the original focus of the disease. After having discontinued the use of carbolic acid because of the pain incident to its application, I have resumed its employment with modifications. Instead of using 50 c.c. of the aqueous solution of carbolic acid, as advised by Rovsing, I find that the pain and collapse will not be encountered if smaller amounts are at first used, allowed to remain in the bladder but a few seconds, and the excess that may have clung to the walls washed out with a 30 per cent. alcohol solution. In this way a tolerance will be secured and the full amount may be employed later.

The positive diagnosis of renal tuberculosis is dependent on competent bacteriologic and chemical examination, and necessitates laboratory facilities and a knowledge of cystoscopic technic. In the most expert hands tubercle bacilli can be demonstrated in 75 to 80 per cent. of the cases. The sample of urine sent to a laboratory should not be less than three ounces. It should be drawn through a sterile catheter into a sterile bottle after having carefully cleaned the external parts. After several failures to find the organisms by the staining methods in vogue, resort must be had to the inoculation of guinea-pigs. While bacteriuria without a kidney lesion is not common, it is a possibility, rendering the demonstration of the bacilli in the absence of pus of little diagnostic significance. Tuberculin may be employed as a diagnostic aid, but as a matter of fact it has little value when compared with the laboratory methods. During the delays incident to the laboratory investigation and the return of reports, the bladder should receive daily irrigations to aid in the removal of inflammatory products constantly being poured into it from above, thus aiding materially in the localization of what might become an interstitial inflammation in the mucous membrane of the bladder.

With few exceptions it may be stated that a unilateral renal tuberculosis with the opposite kidney showing sufficient function calls for nephrectomy, but many of the patients entering the hospital are far removed from the early stages of the malady, and nephrotomy, or the opening of a perinephritic abscess, is many times a measure which must be resorted to for the saving of life. Many times these are examples of our sins of omission and a strong plea for the early recognition of the disease and the removal of morbid processes.

However, I cannot agree with the more or less widespread opinion that in the early stages and under the conditions above cited the kidney must inevitably be removed. Post-mortem examinations many times disclose healed tubercles of the kidney as well as of other organs. Complete cures are at times shown in cases where the existence of the disease was easily demonstrable. I have recently had the opportunity to follow a case that very aptly illustrates my point.

History.—A female patient, 22 years of age, consulted me in July, 1909, for frequent and burning micturition. She was very emphatic in her statement that it had been of only two weeks' duration, and that she had never experienced the trouble before the present attack. A bacteriologic examination of the urine from the bladder contained tubercle bacilli, and the subsequent samples obtained by ureteral catheterization revealed a right unilateral infection with the opposite kidney normal. The sediment of the urine from the right side also contained pus-cells, but no other organisms. Because of

the short duration of her trouble, coupled with the fact that the patient had financial support sufficient to procure for her the most favorable environment, I did not advise operative procedure, but sent her to a cool climate for the summer, where she lived out of doors both night and day. She also had a sufficient and well regulated diet and received daily bladder washings, with the injection of a 2 per cent. solution of iodoform in sweet oil twice a week. She returned to me in October having gained twenty-one pounds in weight, her cystitis was cured and her urine showed an absence of both bacteria and the products of inflammation.

While I am well aware that the kidney in her case may harbor a latent infectious process, I think no one could at the present time advise its removal, more especially as the patient is a member of a family of more than average intelligence and has been advised of the possibility of a recurrence and the consequent necessity of surgical measures. Such methods are only applicable in selected cases, in which the most favorable conditions are obtainable; nor should the expectant treatment be persisted in if beneficial results are not immediate. As the means for earlier diagnosis in renal tuberculosis become more common there will be more cures without operation reported, and more rapid results will be obtained by local application of remedies to the kidney pelvis.

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A STUDY OF THE EYE IN MENTAL DEFECTIVES *

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It is difficult to understand why the fundus examination in idiocy has been so little emphasized. Probably the examination of the fundus in such cases, being so extremely difficult, may account in part for the lack. Possibly the negative findings of Moss¹ have also deterred some from the study. He examined 116 feeble-minded children in Berlin. The study showed but 2 cases with alteration in the fundus. His cases, however, were not drawn from the low-grade idiots.

The much more careful work of Gelfe² on 578 cases throws more light on our subject. His cases comprised (1) 192 mentally backward boys and 192 girls of the same class; (2) 25 boys and 21 girls who were weak-minded (feeble-minded of our designation) and 47 boys and 30 girls who were unteachable imbeciles (imbeciles of our classification), and, finally, 42 boys and 28 girls of the low-grade idiots. All the cases were examined in the institute for mental defectives at Berlin. But 27.5 per cent. of all Gelfe's cases showed normal eyes. These results are quite in accord with our findings. Gelfe's idiots showed a percentage of 43 for normal idiot fundi as compared with 56 for weak-minded and 83 for simply backward children.

Many writers concern themselves with functional imperfections only in examining for visual defects in the mentally deficient child, which accounts for the apparent discrepancy of data. It may be said in passing that there seems to be unanimity of opinion that eye

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1. Legrange and Valude: *L'Encyclopedie française d'ophtalmologie*, 1905, iv, 34.

2. Gelfe, T.: *Relationship between Visual Organ and Feeble-mindedness (Karlsruhe)*, *Samml. a. d. Gebiete d. Augenh.* Halle a. S., 1904.

defects are much more frequent in mentally defective children, and that these defects react in further crippling the child's mental development.

Our study of the eye in the mentally defective child was undertaken with a twofold purpose:

1. From studies made in 1907 by Clark and Tyson³ into the nature of the eye changes found in dementia præcox it was shown that a fairly constant eye syndrome was present in that mental disorder, embracing, among other signs, a mild grade of optic nerve degeneration, which was thought to be of autotoxic origin. In the numerous discussions of the paper held before various societies on the occurrence of the optic nerve changes in dementia præcox, it was thought that the syndrome was due more to a strong tendency to neural degeneration in the precocious demented than to a particular autotoxin, and that careful examinations into the allied states of mental degeneracy so ideally presented by such conditions as imbecility or idiocy ought to throw light on this phase of the subject. And, indeed, it has. Fully three-fourths of all cases of idiocy of our present study show varying degrees of a retrobulbar neuritis of a degenerative character.

2. The second object of inquiry was to note the presence or absence of pathognomonic structural defects in the eyes of feeble-minded and idiots comparable with the other grosser mental and physical defects so well known. The negative findings on this second part of our study have been disappointing. It would seem that the eye defects in idiocy do not usually extend beyond those of mere functional incompetence of vision. Moreover, the defective central innervation may explain the lack of visual acuteness, in defect of attention, as well as defect in perception of color, etc.

Our study was made in our Randall's Island service, which gives a range of more than 1,000 cases to select from. Although 150 cases were selected, but 129 patients could be examined carefully. Fifty cases, each, of feeble-mindedness, imbecility and idiocy were chosen. The patients of the feeble-minded class were of the highest teachable grade. Those of the imbecile class were of the non-teachable grade, but able to care for themselves and do simple tasks about the wards, while those of the idiot class were the lowest types of helpless cases in the entire service. Only idiopathic cases were studied.

Changes in external examination of the eyes were found in but few patients; unilateral ptosis was noticed in two feeble-minded children and in one idiot. Strabismus was found in one feeble-minded child. The pupillary reflexes to light, accommodation, etc., were present in all, but sluggish in the idiots. There was rigidity of the pupils in one idiot. The acuity of vision, the fields of vision and the refractive errors could not be determined, owing to lack of accurate cooperation because of mental defect. By means of retinoscopy there were found 4 cases of myopia of high degree, 3 of hypermetropia and 15 of astigmatism of various types.

The ophthalmoscopic examination was made by Dr. Cohen by means of the indirect method, with a candle as the source of light; complete mydriasis was obtained by the use of atropin sulphate solution. In only 106 of the 129 could the fundi be properly examined.

Feeble-Minded.—But 9 of the 29 examined showed normal fundal appearances. Pallor of the temporal half and edema of the nasal half of the disc were present in seven cases. Two patients showed slight indistinctness of the disc and one well-marked neuritis. Evidence of

an early stage of atrophy (as shown by pallor of disc) was found in 6 cases. In none was there advanced atrophy present. Dilatation of veins was seen in four patients.

Imbeciles.—Of the 24 examined there were 15 in whom the eyegrounds were normal in appearance. Only 4 patients of this group showed pallor of the temporal half and edema of the nasal half of the disc. Slight indistinctness of the disc was present in one patient. Pallor of the disc was seen in these cases. One patient showed well-marked atrophy.

Idiots.—Normal fundal appearance was present in but 2 of the 53 cases of this group. Temporal pallor and nasal edema were seen in 13 cases. One showed general congestion of the entire disc, 8 presented a generalized pallor of the discs. Optic atrophy was present in 3 cases; the veins were dilated in one. One patient, each, showed choked disc, thrombosis of the central vein, retinal congestion, retinal hemorrhage.

No specific cause can fully account for the degenerative changes which we have noted in the optic discs of idiots. It is not necessary or desirable to review in detail the considerable literature of pathogenesis of idiocy. It is doubtless likewise unnecessary to say that, after all possible causes of idiocy have been considered, a very large number of idiots remain unaccounted for. We are content at this time to call attention to the fact that in the majority of the cases idiocy is attended by fairly constant and definite changes in the optic nerve.

In conclusion, it may be said that our study shows there is probably a well-marked tendency to neural as well as psychic degeneration in the great majority of all grades of idiots. The research is submitted as a contribution to the clinico-pathologic study of idiocy and degeneration.

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CONGENITAL SACROCOCYGEAL CYST OF EPENDYMAL ORIGIN

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Although it is the primary purpose of this paper to report a case of congenital cystic tumor occurring in the sacrococcygeal region, a few words regarding the general subject of tumors situated in this locality will help to make clear the pathogenesis of this case. Therefore, after considering the general classification of sacrococcygeal tumors and reviewing the cystic type in some detail, the embryology of the caudal end of the human embryo will be considered before taking up my case.

The congenital dorsal-sacral hernia containing bowel and bladder must be considered in connection with tumors of this region. Lotzbeck¹ gathered from the literature 6 such cases, which he divided into simple and combined cases. Under the heading of simple he cites three cases: two were hernias of a part of the bowel with a normal sacrum, reported by Bezold² and Schreger,³ respectively, and one case of hernia of a part of the bladder with a normal sacrum, reported also by Schreger. Under the heading of combined cases he cites also 3 cases: one a dorsal hernia combined with a

1. Lotzbeck, C.: Die angeborenen Geschwülste der hinteren Kreuzbeingegegend, Munich, 1858.

2. Bezold, von: Sammlung seltener chirurgischen Beobachtungen und Erfahrungen, Arnstadt, 1812.

3. Schreger: Chirurgische Versuche, ii, 164, etc.

3. Tyson, H. H., and Clark, L. Pierce: The Eye Syndrome of Dementia Præcox, THE JOURNAL A. M. A., May 2, 1908, i, 1415.