

SOME NEUROLOGICAL ASPECTS OF FEEBLE-MINDED LIBRARY

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Myerson (Am. J. Psychiat. XII:1205, May 1933) has suggested the following classification of the feeble-minded:

1. The cretins
2. Mongolians
3. Those who present signs of organic disease of the nervous system
4. The microcephalics (belong under 3)
5. Congenital syphilitics
6. Unclassified

Whether this classification is satisfying or not, it does point out the heterogeneity etiologically and pathologically of the feeble-minded as a group.

The present discussion will be limited to the types falling under the third heading in the classification. The remarks cannot be made in closely knit fashion because our factual knowledge is altogether too fragmentary and our ideas, thus, too poorly crystallized.

Good intellect implies good anatomy and good physiology in certain large areas of the brain (frontal and parietal), though brain surgeons have shown us that marked focal encroachments on these areas are possible without the production of gross defects in intellectual function.

Let us consider a few of the more or less well understood subgroups under the class showing signs of organic disease of the nervous system.

1. Little's disease (infantile spastic diplegia). The spastic paralysis, nystagmus, athetotic, choreiform, and myoclonic movements of these patients separate them easily into a large group by themselves. But really there is no etiologic unification even here for enough data have accumulated to show us that Little's disease includes such diverse conditions as birth trauma, cerebral degeneration from infection and injury acquired during the period of infancy and probably acquired or hereditary defects that have existed during intrauterine life. Only within very recent years have we been able to separate out from this group in early childhood the condition now spoken of as "Schilder's disease" (encephalitis periaxialis diffuse, diffuse cerebral or subcortical sclerosis, Pelizaeus-Wenzbacher disease). Alpers, Freedom and Somoza in Hamburg and Nixon in this country, have reported cases showing subnormal mentality, choreic and athetotic movements and epileptic convulsions, in which a diffuse degeneration of the gray matter (cortex, basal ganglia and pons) had undergone degeneration. The condition is spoken of as diffuse progressive degeneration of the gray matter (Friedreich's).

2. Amaurotic family idiocy (Tay-Sachs' disease). Occurs mainly in Jewish children, runs in families and is fatal in about two years on the average. It is characterized by intellectual enfeeblement and blindness and the typical cherry red spot in the macula. Pathologically ballooned, degenerating cells are found in the brain and spinal cord. The brain appears large and hard to touch.

3. Hydrocephalus is usually classified as congenital or acquired. Its development depends on obstruction to the flow or absorption of cerebro-spinal fluid. Known etiologic factors are brain tumors, meningitic processes of diverse location, severity, and bacteriologic causation. Enlargement or not of the head is conditioned by the absence or presence of fusion of sutures of the skull. It is seldom, if ever, directly hereditary.

Objection to the foregoing examples might be raised on the ground that they are too easily recognized and separated out from the general group of feeble-minded (heading 6 in Myerson's classification).

Let us therefore consider a condition or two which are much more subtle from a diagnostic point of view:

1. Tuberosc sclerosis. Epilepsy, feeble-mindedness, and adenoma sebaceum are the clinical characteristics. Extremely slowly progressive. Is apparently hereditary. Practically never diagnosed with any certainty during life. Pathologically there are found multiple areas of gliosis, producing bumpiness through the brain.

2. Postinfectious cerebral involvement. a. encephalitis secondary to such infections as measles, whooping cough, scarlet fever, meningitis of the various types may make up sequels which give lasting, profound and non-progressive intellectual defects both in adults and in children.

One may well subscribe to Myerson's point of view that we include the most diverse conditions under the general heading of feeble-mindedness. Until we can separate these groups into nosological entities we can scarcely take the pose that we are informed on this subject. At the same time we know enough of the role of heredity in some of the groups which we can separate out so that one need not go with him in his denial (at least by implication) of the importance of a genetic approach to the problem. There are at least two logical points of view on this subject. One, that an almost infinite amount of work is necessary to create a reasonable scientific understanding of the subject; the other, that expediency demands the use of every tool we can command for a practical solution of this social menace. While the two points of view may give rise to academic argumentation, there need be little open conflict between the two. The former should act merely as a check against ill advised radical procedures which might easily grow out of the latter.

J. Charnley McKinley, M.D.

Present: Dr. McKinley, Dr. Murdoch, Dr. Minick, Dr. Kuhlmann, Mr. Dow, Miss Inez Patterson, Miss Ann Patterson, Miss E. Ruth Smith, Mrs. Claggett, Mrs. Davis, Dr. Challman, Mrs. Mayberg, Mrs. Billman, Miss Jones, Mr. Hegstrom, Mr. Rorem, Mr. Per Larson, and Mrs. McDonald.

From CB: Mr. Hall, Miss Thomson, Miss Maturen, Miss J. Johnson, Miss Hauser and Miss Wesoloske.

Miss Thomson: I think that in spite of Dr. McKinley's vision into the long, long future, there will probably be some questions as to what we might learn of the problem during the probable life time of some of us here. Dr. Murdoch.

Dr. Murdoch: I thought Dr. McKinley's paper very instructive, possibly rather scientific for most of us, but he did bring out many points of interest to us. In my discussion with you last week in regard to the classification of mental deficiency I didn't mean that that was a medical classification. According to the mental level a person might be hydrocephalic or microcephalic or he might be in the imbecile group. The hydrocephalic and microcephalic fall into the lower groups. We do have some cases of Little's Disease and I think the majority are result of birth injury, although that is not always the case. Evidently there has been something that has destroyed or limited the growth of the cerebral structures. We never had a great many of the cases come under the classification given by Dr. McKinley. I think of the amaurotic type we have possibly about 5 of this special classification, but the classification given by Dr. McKinley would not account for more than 10 or 15% of those in our institution. We have a tremendous amount of pathological material in our institution and there may be some unusual conditions that we have been unable to recognize -- but we do have a classification as to microcephalic and hydrocephalic. Of course, the microcephalic are easily classified as they are the small head individuals and the hydrocephalic are the large head individuals. There is a tremendous amount of material in our institution that would be worth more scientific study and I hope we will have more opportunity to go into the scientific and pathological conditions. As Dr. McKinley says in the years to come it is only by knowledge, by getting definite knowledge and information that we can hope to surmount the condition.

Miss Thomson: Dr. McKinley I think most of us from the social worker's standpoint are sorry that you did not say more about the post-encephalitic. That is the group that causes more trouble.

Dr. McKinley: I do not know whether my experience gibes with that of others. Most of them as we have seen them have not presented the condition of very marked intelligence enfeeblement, extreme behavior problems, etc. Few of them strictly are medical problems. This last week we have had a young man of 29 on our service who had an encephalitis who suffered a light attack some 14 years ago. The lad now can barely move his arms, he can hardly raise his foot, he swallows with the greatest of difficulty and yet as far as you can make out he is not a person with any mental defect either in the emotional or in the intellectual field. I have seen very few cases with encephalitis who have shown very marked mental enfeeblement. They show very erratic and unstable behavior, are emotional, thieves, perverts, everything you can imagine along that line.

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Mr. Hall Is there much that can be done for their cure?

Dr. McKinley: There is no cure. There is a curious clinical situation in regard to encephalitis. In those cases that came to the attention some years ago there was an extremely high instance of degeneration in those groups. There has not been so much encephalitis since that. One and a half years ago there was a severe epidemic in St. Louis. These later cases if they don't die they become entirely well. I have seen no bad sequence out of those later cases.

Mr. Hall: Is that due to treatment?

Dr. McKinley: No, treatment in encephalitis is purely symptomatic. In the first place, we do not know the organism satisfactorily, which is present. There is some evidence that it produces an immune action of individuals that are infected. We really have not gotten any place.

Dr. Challman: I would like to ask Dr. McKinley what in his opinion accounts for the fact that we do not know more about the structure of the brain of the feeble-minded. Perhaps I might imply in that question the opinion that there is a structural deficiency in the brain structure.

Dr. McKinley: The first detail work that I know was in 1880 by a German man named Himl. He tried to make cell counts of the brain. He counted thousands of these cells and when he finished he had three or four cases completed. In the first place the thing is tremendously complicated. It costs about \$3,000.00 to work up one brain, that is, get the slides ready. Our technique is altogether too crude to give any answer to your problem. If you stop to think the cortical cells alone run into the millions and then stop to think what must be done to sample the condition of these cells and estimate their number, we haven't done anything--we have just begun to study the problem.

Miss Thomson: Are there any further questions? I think Dr. McKinley has certainly emphasized that there are so many aspects and so many points of view to this question that when you first look at it, it is simple, but there is lots and lots for us to know.

Dr. Vold of the University will speak next time on the Relation of the Definition to Criminology.

The question is then just what will be the next thing. Have we gotten anywhere? Do you feel that we can go on with something more interesting?