Ray (J. M.)

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OBSERVATIONS UPON EYE DISEASES AND BLINDNESS IN THE COLORED RACE.*

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THE negro we must have with us, therefore a study of his proneness to disease and the peculiar characteristics of certain forms when affecting this race is a legitimate field for discussion. The interest centred upon them in a social and political relationship with the whites demands that they shall have their history established and recorded. The medical men of the localities where they are most abundant should carefully study their demologic peculiarities, basing their investigations as near as possible on incontrovertible facts and scientific data.

Most practitioners of experience are acquainted with certain pathological and ætiological peculiarities presented by negroes. In a general way their tendency to thoracic diseases, tuberculosis in all its manifestations, the acquired and inherited results of syphilis, and

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their lessened powers of resistance to diseases of the colder latitudes, is familiar to every physician.

The surgeon is aware of the frequency of fibroid tumors, and the tendency to keloid development in the race. On the other hand, family practitioners know the power of resistance this race presents to the forms of miasmatic diseases prevalent in the warmer climates, and many surgeons of large experience have never seen a case of epithelioma in a negro. Billings, in a statistical study of the influence of race on disease, states that the colored race is shorter lived, has a higher infantile mortality, is especially liable to tuberculosis and pneumonia, and less liable to malaria, yellow fever, scarlet fever, and cancer. It is well proved that, subjected to the same environments, the adult negro is less resistant to disease than the adult white. Miserable homes (from a sanitary standpoint), combined with poverty and ignorance of the laws of hygiene and personal care, should furnish a fertile field for the propagation of diseases of a bacterial nature.

Most eye diseases are of such a character as can be looked upon directly, and the different phases of many forms of inflammatory action noted. Thus a study of eye diseases in this race presents many interesting features. While aware of a number of these characteristics, my attention was first drawn to the subject by an interesting comparative study by Dr. Swan M. Burnett, of Washington. Since his paper appeared, I have constantly kept a record of observations with the hope of eventually drawing some comparisons from them. This I have attempted in a preliminary manner in the material offered at this time.

The negro as we find him in this locality is not the

negro found in the cotton fields and sugar plantations of the extreme South; rarely do we observe one that does not show the infusion of Caucasian blood. Notwithstanding this attenuation, he presents certain peculiarities in the study of eye inflammations that are not the result of accident or environment.

At my request, Dr. Crittenden Joyes has carefully tabulated, from the records of our clinic at the University of Louisville, one thousand consecutive cases of eye disease, exclusive of defects in refraction, as they presented themselves for treatment previous to May 1, 1896. This includes both the white and colored cases, the proportion being 579 whites to 421 colored, and is a sufficient number for our present purpose.

Comparative Table of 1,000 Cases of Eye Disease (Condensed).

	Whites.	Negroes.
Diseases of the lids	90	50
" " cornea	80	107
" " conjunctiva	276	149
" " iris, ciliary body, and chorioid	35	70
" " lens	31	22
" " muscles	34	6
" " optic nerve and retina	14	6
" " eyeball and orbit	7	4
" unclassified	12	7
Total	579	421

In a review of the comparative tables offered, a number of interesting points are apparent.

The first question that presents itself for solution is the comparative frequency of eye diseases in the two races. Is the negro more often subject to eye diseases than the white? This question seems difficult of a satisfactory answer, since it is impossible to obtain the exact

number of each race from which our material for study was drawn. The white race in Kentucky outnumbers the colored nearly six to one. Yet we know that in charitable and clinical work this proportion does not prevail, a much larger comparative percentage seeking aid in such institutions being negroes. The only information obtainable that points toward a greater prevalence of eye disease in the negro is that furnished by the United States Census Bureau. If we accept this as accurate, we find that proportionately the number of blind in the State is greater among the negroes, being for the whites 1 in 960; for the colored, 1 in 843. Kollock asserts that in South Carolina blindness is rampant among the negroes.

A point of great interest furnished by our table of statistical comparison is the relative frequency of different eye diseases in the two races. This reveals the fact that the negro race is remarkably prone to certain forms of eye inflammation, and, on the other hand, presents an apparently complete immunity from certain others.

Of the 1,000 cases tabulated, there were 140 cases of lid troubles found. The negro does not show a single case of trichiasis or entropion, and of seven cases of epithelioma all were in whites. On the other hand, hordeola, chalazia, and eczema were noted as fifty per cent. more common in the negro.

Affections of the conjunctiva furnished 425 cases—276 white, 149 colored. In a study of these a most noticeable feature is the much larger percentage of the phlyctenular variety of conjunctivitis in the negro, and the practically complete immunity of the black to trachoma, only 2 cases being recorded to 63 in the white. These two cases were diagnosticated by some of the as-

sistants, and were in all probability cases of folliculosis, or so-called follicular trachoma—a form of conjunctival inflammation that at certain stages of its development is very much in its clinical appearance like true trachoma, yet never presents corneal involvement or cicatricial bands in the palpebral conjunctiva. I am of the opinion that, while this form is sometimes found in the negro, it is exceedingly rare.

Burnett, in Washington, Theobald, in Baltimore, Baldwin, in Montgomery, and others have verified the findings of the statistics here gathered with reference to the immunity of the negro from trachoma. It appears inexplicable that such a disease as trachoma, the bacterial origin of which seems conclusively proved, and which observation teaches is undoubtedly contagious, should show an aversion for the conjunctiva in the negro. Even if, as is maintained by some, an underlying blood dyscrasia is necessary for its foundation (the so-called lymphatic diathesis), as alleged by Noyes, we see no reason why the negro should escape.

The last word has not been said about this most interesting and oftentimes destructive form of eye inflammation. Why it should follow such a different clinical course in different subjects, often attacking an entire family in an isolated community, or why we see so many in whom for years the inflammation confines itself to one eye, are points upon which further knowledge is required before the question can be settled.

That form of conjunctival inflammation that often prevails during the warm season, and familiarly named summer trachoma, or circumcorneal hypertrophy of the conjunctiva, appears to be as frequent in the negro as in the white. These records show it to be slightly more

so, and I am sure during the last few years I have seen a larger proportion of such cases in the colored race. This affection, while often giving very much the appearance of both trachoma and follicular conjunctivitis, is undoubtedly a distinct disease.

In the study of corneal diseases, as presented in the table under consideration, there were found 187 cases—80 white, 107 blacks. Corneal inflammation more often than any other form of eye disease is apt to be the result of some vicious constitutional diathesis. Therefore, we should expect a large preponderance of these diseases among the colored. Our statistics show that they are forty per cent. more common in the negro.

The variety of corneal disease most rife is that form of relapsing destructive ulceration characterized as phlyctenular or strumous. Unlike what is true of the whites, this ulceration is as often found in the adult as in the child. That portion of the eye commonly known as the uveal tract, iris, ciliary body, and chorioid, furnished us in our study 105 cases—35 whites, 70 negroes. Out of 58 cases of acute iritis, 43 were in blacks. Of these 43, 33 were shown to be syphilitic. The iris and ciliary body are the parts of the eye usually first showing the ravages of syphilis, and the negro seems to be many times more prone to this complication. Saussure asserts that seventy per cent. of the negro population of the South either inherits or acquires syphilis.

In the study of iris diseases in the negro, our statistics prove a point we have for a long time noted and emphasized—namely, the peculiar proneness for gummatous infiltration to accompany the inflammation. Of six cases of gumma of the iris found, all were in negroes. Not only is the iris frequently the seat of such formation,

but the only cases of gumma of the ciliary body that have come under my personal care have been in this race. It has been stated that syphilis in the negro does not present itself in the malignant form often seen in the whites, and that it responds more quickly to proper treatment. With this observation the teachings of the statistics presented do not agree. The forms of syphilitic iritis and cyclitis, with extensive condylomatous developments quickly ruining the eye, are found most often in this race, and, while they respond promptly to proper treatment, the inflammation has usually been of such a violent nature as to destroy the usefulness of the organ before the constitutional effect of the remedial agent has been obtained.

Diseases of the crystalline lens offer 53 cases for study—31 whites, 22 negroes—showing no great difference in the tendency to cataract development in the two races. The optic nerve and retina furnish 20 cases for consideration—14 whites, 6 blacks. Of these six, five were cases of primary atrophy of the optic nerve. The frequency with which non-inflammatory optic atrophy is found in the negro is familiar to all, many of them being cases in which it is impossible after thorough examination to find the cause for its development.

Affections of the eye muscles were found most common in the white race. The point of interest gained from these cases was with reference to the statement that has been made that the negro was practically exempt from uncomplicated squint, and, when present, that it was secondary to some intra-ocular disease or corneal macula. While it may not be found in so large a proportion of cases as in the whites, it is by no means uncom-

mon, being in the relation of one to five in the whites. There are no reasons, from a study of this subject, why we should not find as many cases of convergent squint among the colored race as among the whites, since the same conditions that are the underlying factors in squint are present in both races.

The cases upon which these observations were based were gathered as they presented themselves for treatment, and do not include all the cases we have seen. Exclusion was made of those offering for correction of some defect in refraction, preferring to base our study on eye inflammations and diseases alone. Since the negro has been thrown upon his own resources, the struggle for existence has increased his exposure to diseases that lead to eye complications. The extra amount of work thrown upon this organ subjects it to the same demand as the eye of the white race, without the same vital power of resistance.

Further evidence of the prevailing causes of blindness in this race may be gained by a consideration of the colored inmates of the State institution for their education at Louisville. These I was permitted to examine by Professor Huntoon. I found of 39 cases, wards of the State, that 51.3 per cent. were blind from diseases that affected the cornea primarily, and of these 33.3 per cent. were from so-called scrofulous keratitis. In the same institution, of 155 whites examined, 18.1 per cent. were blind, the result of trachoma and its sequelæ, while the colored children did not present a single instance resulting from "granular lids."

A consideration of the material I have here gathered for study, while not disclosing anything new to most of those familiar with the subject, certainly fur-

Tabulated Report of Colored Blind Cases at the Kentucky Institute for the Blind.

	No. of cases.	Per cent.
Keratitis, phlyctenular	13	33·3
Purulent ophthalmia	7	18·0
Congenital and lamellar cataract	4	10·3
Iridocyclitis	5	12·8
Atrophy of the nerve	4	10·3
Retinitis pigmentosa	1	2·6
Nystagmus	1	2·6
Traumatic and sympathetic	3	7·7
General disease (small-pox)	1	2·6
	39	100·0

nished evidence in support of the statement that the negro race will be found to suffer to a greater percentage from the graver forms of eye disease than the white, and that certainly in this State blindness is more prevalent than among the whites. Further, that a well-defined difference exists in the two races in their proclivity to certain forms of eye disease, the negro being particularly liable to the destructive forms of corneal disease and to the varieties of iritis accompanied by condylomatous developments. On the other side, he presents a peculiar, indescribable immunity from that form of contagious conjunctivitis familiarly known as "granulated lids," and a lessened liability to cancerous growths in this locality. Eye diseases as a class follow a more disastrous course, and consequently a larger number of blind are found.

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