—are not ready for it. If I am not mistaken, there has been a proposition in this very state; a law has been offered in the Minnesota legislature to require a physical examination or a physician's certificate as a preliminary to all marriages. I do feel that I know of no locality in the country where the general education of the people and their general knowledge is not such that a measure of this kind would develop a serious opposition to rather than a general and sustaining acceptance of its requirements.

Some of the suggestions made in the paper were to my mind excellent. It seems to me that there could be no better thing offered to the public at large than these lectures, for instance, that the Doctor mentioned and suggested; but we must remember that to give a course of lectures as suggested would require a very large amount of time, say a course running through an entire winter, and though I doubt whether one series of lectures would be sufficient in which to give the public such information as they ought to receive, my experience has been that the ordinary laity are not willing to attend any series of lectures that necessitates more than six or eight different meetings. However, there is no doubt that such education would be excellent. Again, while I believe that some of the people are anxious for education in these matters, I doubt whether we will secure it best by giving lectures with state or municipal sanction. I think it will go better and quicker through private sources, and when I say private sources, I mean sources distinct from the state or the municipalities, for instance. There is a feeling that the state should not go too far in interference with the rights of an individual. Many of us have a feeling that no state and no society has a right to contravene certain of our rights. Therefore, it seems to me that for any state to establish rules to regulate this matter at the present time will lead to a worse condition of affairs than there is at present. It would lead to a disastrous condition of affairs, because people who felt that their individual rights were transgressed upon and who were not willing to follow out the requirements of such state enactments would be induced to oppose them, and there would be a worse condition of affairs than there is at the present time. There is not a particle of question about the advisability of selected marriages, but we have a great many million people in this country and, for a long time to come the marriage will be a matter of simple emotion or notion, and so I think we will have to put up with the present dangers and risks and evils until we can build up from the bottom with that education which is going to be the primary motive power that will bring about in the future such action as is outlined in this excellent paper. If it only comes soon I shall be glad.

DR. L. H. MONTGOMERY, Chicago—While we are all individually at least in favor of the steps advanced by the author, it would come under the head of being called unconstitutional. There is a good deal to be said in favor of it, but there are a few objections to it. As sanitarians, the theory sounds very plausible and the most desirable thing in every respect, but to obtain such practical results it does not seem that this is to be in the very immediate future.

DR. L. B. TUCKERMAN, Cleveland—The beauty about all these schemes for regulating the question of marriage by education of the character spoken of is that they appeal to those to whom no appeal is necessary, and, to those to whom they ought to appeal, considerations of this kind do not appeal in any way whatever, nor can they be made to appeal. The thoughtful men and women of the industrial classes are already limiting marriage to a very great extent. Hon. Carroll D. Wright has collected some statistics recently of over 17,000 of men of influence locally among the trades unions in some twenty-two cities, and out of that 17,000 there were 15,000 and over unmarried—7 out of 8. Very evidently those 15,000 did not need any caution on the question of marriage. They were the more thoughtful among their associates and the simple fact of the uncertainty of their employment, the question of whether their job of \$1.50 a day would hold during their married life, made them abstain from marriage, and there is enough regulation of that kind among those who think. Those classes of industrial workers are not marrying to any great extent. That

relegates the marriage question among the masses of the population to those who do not do any thinking, but simply follow a physical impulse and for those who do not do any thinking, what use is there of undertaking such educational work!

DR. F. C. VALENTINE, New York City—The state has no right to infringe upon the inborn privileges of individuals. Is it an inborn privilege of mine to take an axe and drive you all out of this room? Not at all. Yet, the possessor of a residual gonorrhea may kill the woman he marries and may cause the state to be loaded with charges, children gone blind from the gonorrhea which was transferred to an innocent woman. Of syphilis I need not speak. Eloquent men have discussed that matter thousands of years ago when they promised that the sins of the fathers would descend to the third and fourth generation. We can not, it is quite true, as long as our present, perhaps theoretically the best, form of government exists, limit the rights of the individual, and especially in this one regard. But as long as we can quarantine cholera or small-pox or scarlet fever so well, I think the state is entitled to quarantine the two diseases that kill more than all others put together. In August of last year, Neisser of Breslau, at the Congress for Venereal Diseases in Brussels, showed that gonorrhea was a disease second in frequency only to the measles. He showed it from carefully made statistics, and yet in this country we make no effort to protect the public from the devastation of this one disease. It is quite true that the committee which last year here reported on the subject of marriage of gonorrheics were practically ruled off the floor because venereal ailments are not reportable diseases. But there can be enacted laws, through your influence, which will make marriage impossible without a certificate from a qualified physician that the would-be husband is free from gonorrhea and syphilis. You say that is a very difficult and complicated task? I agree with you, until we are educated in the matter. But is it not far more difficult and complicated for the state to support blind paupers, grown blind in consequence of gonorrhea? Is it not a fact that 80 per cent. of the children born with eyesight and who went blind within forty-eight hours after their birth, lost their sight on account of gonorrhea? Is it not true that 80 per cent. of the women who died of diseases of the reproductive organs, died from gonorrhea acquired innocently from their husbands, who imagined that they were cured? Now, I do not think that all men are selfish, but I do consider ourselves the weaker sex, because no woman, I think, would intentionally marry if she could communicate any disease. Men do it through ignorance and through weakness. I therefore think it behooves this Association, and particularly this Section, to make known to the legislatures the really easy manner in which one who has suffered from gonorrhea can be examined to decide whether he is free from the disease. This subject is entirely too wide a one for any five minutes' discussion. As you well know, however, it may be treated. There are other men who will continually bring up this subject before the Section, until eventually something is done about it.

INJURIES OF THE CHOROID, WITH REPORT OF CASE.*

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Injuries of choroid per se, with the exception of rupture, are so rarely seen, in fact it is so nearly impossible for them to take place without involvement of other ocular structures, that they can simply be alluded to as a possible occurrence. Small foreign bodies may pierce the sclerotic or the cornea and lens, and lodge in the choroid, and can often be detected there with the ophthalmoscope, and incised wounds of the sclerotic very frequently involve the choroid to a greater or less extent.

* Read at the Fifty-second Annual Meeting of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee of the Section: Drs. J. A. Lippincott, Casey A. Wood and H. V. Wüldemann.

Hemorrhage into the choroid and retina may produce extensive changes in these membranes and impair the sight materially if the macular region is affected. Oliver¹ reports an interesting case where a boy was struck in the eye with a stone. Shortly after the injury both choroidal and retinal hemorrhages were detected. Later pigmentary and atrophic changes took place and vision was reduced to 20/40.

The most common injury, as previously stated, is rupture, the result of a contusion or a direct compression of the eyeball as a consequence of a shock, that has been imparted to the orbital or the peri-orbital bones by a blunt body, and this is very often complicated by a rupture of the external layer of the retina. In the great majority of such cases this solution of continuity of the choroidal tissues is usually single and is situated between the optic disc and macula lutea, very rarely to the nasal side. Cases of double, triple and even quadruple rupture have been seen and reported by Teillair, Fage and others.

The case that I have to report, while in the main similar to the majority, presents some peculiarities. In the first place, the rupture, which was an extensive one, was

(Rupture of the Choroid (Sisson).)

to the nasal side of the papilla; secondly, the case was complicated by a spinal lesion in the lumbar region, which was said to have existed since the patient was 3 years of age. The visual disturbances were very great. The case was taken into the courts, and the questions that had to be considered were: Was the blindness the result of the injury to the choroid or the spinal lesion? Was the patient a malingerer?

T. D., age 16; May 15, 1897. Patient received a blow on the right eye from a rock thrown by a motorneer. When called, found an extensive cut in the soft tissues, covering the superciliary ridge; great swelling and ecchymosis of the lids. A further examination revealed the presence of a foreign body in the cornea, which upon removal proved to be a small piece of stone. Instilled atropin, prescribed an antiseptic wash and ordered patient put to bed. He made an uneventful recovery.

On Oct. 4, 1897, patient presented himself at my office for examination, saying that since the injury he had been almost totally blind in the eye. In the meantime he had sued the company for a large sum of money. At this time the following history was obtained. When 3 years of age, patient fell and broke his back, and has had to walk with a crutch ever since. An examination revealed the following: There was a visible angular deformity in the lumbar region of the spine, motor paralysis of the left leg and both patellar reflexes were absent.

He did not remember of ever having suffered any pain at any time. An examination of the eye showed the following conditions: V. of R. E., 2.5/200; V. of L. E., 20/15. Field of vision in R. E. was very much contracted. Pupil was of medium size, responding only to strong artificial light. A small rent existed in the lower part of the circumference of the iris. Only a very slight opacity was seen on the cornea at the spot where the foreign body had lodged. The ophthalmoscope revealed the following: To the nasal side of the optic papilla, about three papilla-diameters, and extending in a curved direction, the concavity directed towards the papilla, there was a rupture of the choroid, about four papilla-diameters in length, at the upper and lower extremities, and on either side of the rupture there were large deposits of pigment. The central part of the rupture was perfectly white, and the blood vessels could not be traced over it, showing that there had also been a rupture of the retina. The nerve head was grayish. Ophthalmoscopic appearance of left eye was normal. The usual tests showed that the patient was not a malingerer.

December 11, 1897, condition same. Patient complained of pains in the head at intervals.

January 13, 1900, V. R. E., fingers at 6 inches; L. E., 20/15. Palpebral and bulbar conjunctiva both eyes slightly injected. T was — in both eyes. Ophthalmoscopic appearance of right eye, same.

January 16, 1900, patient came to office complaining of the right side of the face paining and burning him, which he said had not existed previous to the injury. Condition of the eyes same. This was the last time patient presented himself.

These are the variety of cases that are most puzzling and upon the medical expert's opinion may hang the decision. As to just what influence, if any, was exerted by the spinal lesion is a question. We are told that in those much rarer cases of organic injury to the spinal cord, or of myelitis, or of hemorrhage in, or inflammation of its membranes, following on railway and other accidents, organic eye disease seldom results. As regards optic neuritis and optic atrophy, which used to be held as frequent consequences of spinal injuries, Thorburn² states that the slight spinal injuries are very common, but there is no evidence that they tend to be followed by changes in the optic disc. Such injuries are, however, in rare cases followed by chronic meningitis and myelitis, and in the latter condition there is a *priori* probability or possibility that optic neuritis may supervene.

Page³ says there is no evidence of pathological change in the optic nerves being common in cases of spinal injury and nervous shock. Albutt⁴ found hyperemia of the optic papilla with some indistinctness of its margins and overfilling of the retinal vessels, but no optic atrophy, nor tendency of the condition to pass into optic atrophy, and referred the changes he found to secondary, sub-acute meningitis at the base of the brain. It is now well-nigh a quarter of a century since Albutt published these views, and little or no confirmation of them has since appeared; yet even Albutt did not see optic atrophy as the result of spinal injury. In the case reported it is hardly possible that the loss of vision was the result of pre-existing spinal lesion.

The author presents this clinical picture for what it is worth, fully realizing, as stated in the outset, that the injury itself presented no very striking peculiarities, but the complications and the medicolegal aspect of the case make it of interest to the practicing specialist.

BIBLIOGRAPHY.

1. Norris and Oliver's System of Diseases of the Eye, vol. iii, p. 692.
2. A Contribution to the Surgery of the Spinal Cord, London, 1889, p. 178.
3. Railway Injuries in Their Medicolegal and Clinical Aspects, London, 1891, p. 43.
4. On the Use of the Ophthalmoscope, London, 1871, p. 197.