but am not fully convinced of its frequent occurrence among them. Among several hundred colliers who resort to the North Staffordshire Infirmary for treatment every year, not half a dozen apply on account of nystagmus. Still it may be regarded as a morbid condition, having some peculiar relation to the employment pursued. It occurs in other people who from some eye-malady, as, for example, leukoma, suffer from imperfect and irregular access of light to the fundus oculi, and the suggestion rises to my mind whether the flickering lights of lamps, amid surrounding darkness, may not set up irregular muscular action; a sort of chorea of the ocular muscles. And why it happens in some and not in other colliers, may be attributed to inherent nerve weakness, constitutional or acquired, in those that suffer. Miners are pallid, with a dusky, unhealthy complexion; but their pallor is usually not from ordinary anæmia, and may be attributed to the absence of sunlight at work, causing a sort of blanching, to the begriming of the skin, affecting cutaneous circulation, and generally to the absence of fresh, healthy breezes to stimulate that circulation. Dr. Paul Fabre, from a microscopic analysis of the blood, asserts that the number of blood-corpuscles and the quantity of hæmoglobin are normal, and that true anæmia is not more common among them than among other workmen. The prevalence of ankylostomum is another reputed circumstance his inquiries do not confirm. Colliers, again, prematurely look old; the expression of their faces grows anxious and depressed; they are seldom stout, are weak-kneed, have a shambling gait, and oftentimes bowed backs. Their occupation is generally exhibited by blueish scars on their faces and hands, the results of small lacerations into which the coal-dust has entered and permanently stained—just as happens in tattooing with gunpowder.

Statistics.—In the matter of statistics, I cannot just now advance any figures carrying great weight; the number of colliers with which I have to deal being too few for the purpose. I have collected the diseases prevailing among 211 cases, and find that bronchitis, acute and chronic, constitutes 36.5 per cent. of the whole number; rheumatism, 17 per cent.; dyspepsia, 9.17; and phthisis, 4.23 per cent.

EXTRACTION OF SOFT CATARACT BY INTRA-CAPSULAR IRRIGATION.¹

By CHARLES G. LEE, M.R.C.S.,

Honorary Surgeon to the Liverpool Eye and Ear Infirmary.

At the Brighton meeting of the British Medical Association I brought before this Section five cases of senile cataract in which intracapsular injection of water had been employed for the removal of soft cortical matter. I then expressed my preference for irrigation rather than injection, and showed the apparatus I had devised for carrying out the process. It will conserve the time of the Section if at the outset I state that I have seen no reason either to modify the views I then expressed or to induce me to recur to the use of McKeown's syringe.

Since the Brighton meeting I have operated on sixteen cases; these, added to the five already referred to, bring the total to twenty-one cases, and include every case of senile cataract in which either injection or irrigation has been used by me in my hospital practice up to the present. The results I beg now to submit to your scrutiny, summarised in the following table—

Of 21 cases in all, 10 obtained $\frac{3}{4}$	
" " 3 " $\frac{3}{4}$	
" " 6 " $\frac{3}{4}$	
" " 1 " $\frac{3}{4}$	
" " 1 Distant v. not stated. Jä 14.	

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As a considerable proportion of senile cataracts are extruded entire without leaving any remnants of cortex behind, and in others pressure, either digital or instrumental, suffices to clear the pupil, enabling the patient to count the operator's fingers held in front of his face, no further proceeding is necessary.

There remains, however, a residue in which, after using all the pressure we think justifiable, the pupil continues more or less occluded with sticky cortical matter, and the patient is unable to see the fingers held up; with so much tenacity do the flakes

adhere that even the method adopted by Mr. McHardy—namely, to allow time for re-secretion of the aqueous to take place—is inoperative. These are the typical cases for irrigation, and are represented by my list.

In many of these cases not only was the soft matter removed from the pupil, but fragments often of a considerable size were washed from behind the iris, where, unless the capsule had been thoroughly searched by the water, they would have remained, their presence unsuspected, until an attack of iritis or iridocyclitis had been set up. That the danger of the supervention of iritis is very much diminished by thus thoroughly clearing out the capsule, I am persuaded, but have not yet accumulated evidence of sufficient weight to bring before you.

In looking through the list to discover whether any vision were present at the date of operation, I find six cases in which so considerable an amount was present that the cataracts might well be described as immature.

The term immature is, however, so vague that it will be well to state the exact condition present: four of the six cases were able to count fingers at a distance of one foot from the eye; the other two could accomplish the same feat at a distance of five feet. In none of these six cases was a less acuity than $\frac{3}{4}$ obtained, and two are in the highest rank, being able to read $\frac{3}{4}$. Mr. Charles Higgins's paper in the *Lancet* for May 12th, 1888, in which he relates the results of a certain operation on six cases of immature cataract would have been more valuable as a standard of comparison, had he furnished the condition of the eyes which enabled him to describe the cataracts as immature.

If Mr. Higgins's ideas of maturity and my own at all correspond, then we have in irrigation a preferable method of procedure to that of removing the lens in its capsule, as the best result obtained by Mr. Higgins was $\frac{3}{4}$, and in one case he was fain to be content with $\frac{2}{4}$.

A detailed description of the operation would necessitate my inflicting on you a recapitulation of what I have already fully described at the Brighton meeting. The cases have furnished nothing on which to plant the red flag of danger; vitreous has in no instance been lost, nor has any inflammatory reaction been kindled by the water. The slight prolongation of time occupied by irrigation is of small import contrasted with the end desired. Iridectomy was performed in every case either at the time of extraction or previously; and although I attribute the comparatively poor result obtained in the case at the foot of the list to an attack of iritis, which came on after the preliminary iridectomy, I am of opinion that excision of a portion of iris is almost an essential precursor to irrigation.

A distinguished American oculist (Dr. H. Knapp) has recently published his results of 100 cases of cataract extraction without iridectomy, which give only 1 per cent. of failure. This is sufficiently brilliant to induce many of us to make trial of simple extraction; and possibly the experience of some members of this Section present, which may be even larger than that of the gentleman already alluded to, may be similarly encouraging. Even then I venture to believe that when a more extended trial has been made it will be found that success will be more likely to follow, not so much those efforts which are directed chiefly to simplification of our operative measures, admirable as those aims may be, but those which are rather concerned in the removal of every particle of lenticular matter, or any other substance which, by its presence, might interpose in the smooth and beneficent processes of the vis medicatrix nature.

ON AN OPERATION FOR SYMBLEPHARON BY TRANSPLANTATION OF MUCOUS MEMBRANE FROM THE LIP.¹

By T. S. MEIGHAN, M.D.,

Surgeon to the Glasgow Eye Infirmary.

In bringing the subject of the treatment of symblepharon before you, it is not my intention to review the history or to criticise the various operations that have been devised from time to time for the cure of symblepharon, but rather to explain to you a method of treatment by transplantation of mucous membrane from the patient's own lip.

I have notes of ten cases operated on by this method at the

¹ *Gazette des Hôpitaux*, and *JOURNAL*, 1887, p. 583.

² Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association, held in Glasgow, August, 1888.

¹ Read in the Section of Ophthalmology at the Annual Meeting of the British Medical Association, held in Glasgow, in August, 1888.