

would be to set the clock of progress back many decades, and to confess a lamentable want of confidence in the dictates of sound surgery.

If I rightly apprehend Maynard's position, his defence of this suggestion has sprung from loyalty to his old teacher, and his interest in it has been academic, and not practical. I should be surprised to learn that he really couches lenses under any circumstances. Holding the important position he does, it would be of interest if he would restate his views on the subject, telling us, not what "might be," but what "actually is," in his practice.

EXTRACTION OF CATARACT IN THE CAPSULE.

BY H. SMITH, M.D.,

MAJOR, I.M.S.,

Civil Surgeon, Jullundur.

In this paper I shall deal first with such of Major Elliot's facts as I have not dealt with fully before. In your May issue he quotes my paper in your issue of September 1905: "The vitreous seems to repair as well as any other tissue, and why should it not." He goes on to construe this as implying that I hold that when partially lost it is generated *de novo*. Any one who reads my paper or the passage quoted can see that it does not imply anything of the kind. He wants the evidence on which I base the expression quoted. The evidence is that after recovery of an eye from which there has been a small escape of vitreous (1) there are no appearances of scars or bands in the vitreous, (2) normal tension is maintained, and (3) the vision of the eye does not suffer. *Vide* my reply to Major Herbert in a recent issue on the "diaphragm" of the eye and dislocation of the retina. Major Elliot, in support of his interpretation of the above-quoted passage, argues against those few heterodox persons who hold that in such cases the vitreous is secreted *de novo* and quotes on the other side Parsons: "The vitreous is an inert jelly-like structure which subserves optical functions. In pathological conditions, so far as is known, it is purely passive. It is, therefore, advisable to avoid such expressions, as "shrinking of the vitreous," &c. which imply an activity which it does not possess: it is incorrect to use such expressions as hyalitis, &c." Major Elliot says: "It is difficult to believe that such a structure would easily be replaced if lost." As I before said, my language does not imply that I hold that vitreous is generated *de novo* in these cases; such is not necessary to my position, but I am very careful to avoid asserting that what we know little about is impossible and to leave such things open. Let us take the above quotation from Parsons which Major Elliot puts down as such a thing as we should believe as a dogma of our creed. It is a positive conclusion drawn from the absence of knowledge. I do not agree with

Parsons and Major Elliot that the vitreous is an "inert jelly-like structure . . . in pathological conditions so far as is known, is purely passive." The vitreous is an organised and highly specialized tissue which has its metabolism, gets its nutrition and gets rid of its waste as well as other tissue in the body. It would be the grand exception to all the other tissues in the body if it were "inert" and "passive" in health and in disease; if it had no more life than so much paraffin. How does the vitreous increase in size from the disappearance of the hyaloid artery in early life to the period at which the eye is at its adult size, a period during which its physiological functions are performed as in later life? During this period, that it grows must be regarded as an undoubted fact. The vitreous of a three months old baby is not as large as that of an adult. Where does its size come from? How does it grow? So far we do not know, but we know the fact that it does grow. In after-life does the mechanism through which it grows cease to exist? We do not know. Why should the capsules of the clove of vitreous—I assume that such is its structure—not become refilled after the manner in which an injured nerve fibre becomes regenerated? Hence I say *now* that we are justified in casting such dogma as that of Parsons aside, and leaving this an open question. My opinion is that the day will come when anatomists and physiologists will regard the vitreous as one of the most highly organized tissues in the body. Then the dogma of Parsons which Major Elliot lays down as an argument, that the vitreous takes no part in pathological conditions, &c. Why lay down dogma of this sort in face of the fact that the vitreous becomes fluid and ultimately shrinks in glaucoma, iridocyclitis and other conditions? Why tell us that it is "inert" and "passive" and draw deductions accordingly? It is a pity that the writers of books on general and special surgery were in so many instances not men of practical experience. If they were, we would not be entertained to such rubbish.

Major Elliot goes on to say that men in Europe follow up their cases. This is a stock phrase dished up to us not only in ophthalmic but in general surgery on all such occasions. A great man in Europe may have done 100 cataracts—when he is 40 years of age and written a book before he commenced. Does he really follow up his cases with so much care as we hear of? I much doubt it. It is way of persuading people that you are very careful. A patient goes to a consultant with coryza, for example, who takes down in a huge book a long history of the case even to the colour of his hair. The patient leaves saying "a very careful man, that man follows up his cases." Major Elliot wishes me to go into an absolute detail on every case I do of observation extending up to five years ophthalmoscopic and other. To do this would

be work for half the Indian Medical Service if they had no other work. Nothing, only such, will satisfy Major Elliot. I fear, he will have to remain dissatisfied. I have something else to do than to make out pedagogic statistics which at best would be considered to have a human element in them. If I cannot "follow up" my cases, I can assure your readers that my failures follow me up long after I care to see them and they are the cases of interest in this respect. It is now, I think, well known not only in India, but far beyond it that I welcome any member of the profession, and that I show him anything I have got to show—before the operation, the operation, the after-treatment and a large number of cases formerly done, come back to get their second eye done, both successes and failures, and I can say now, that my failures do not go elsewhere. The records are here extending back ten years in which they can look up any case they like. In any of the three months, March, October, or November, they can see about 1,000 cataracts extracted.

I have now many visitors who come for a few days to see for themselves and to form their own conclusions, and I have no doubt that they come to more definite conclusions in three days of those months on this subject than they would come to from the conning over of all possible details in statistics of 20,000 cataracts, even if they could exclude the idea of a human element in statistics. Statistics are at best a very poor substitute for what can be actually seen.

Major Elliot says, "but I have been struck with the number of blind eyes I see from old operations in which the characteristic upward displacement of the pupil indicates that the hyaloid membrane was ruptured at the time of operation. These observations have confirmed me in the profound respect for the dread in which European surgeons hold a vitreous escape." Any evidence seems sufficient to persuade Major Elliot when he has a case to support. This conclusion does not profess to be based on following up cases. It is simply an assertion. Is the upward displacement of the pupil which he lays down as infallible proof of escape of vitreous having occurred any evidence of that fact at all? In my observation it is absolutely no evidence on the point. Escape of vitreous is not in itself associated with upward displacement of the pupil. You may have it with escape. You may have it without escape. But in no case do you have it without adhesion of the iris to the scar of the corneal incision which is its sole cause. What would be the mechanical principle which led to upward displacement as a result of escape of vitreous?

Major Elliot does not agree with me on iritis following cataract extraction. He does not call a case in which there is "a plastic exudation from the lower surface of the iris attaching it to the capsule a case of iritis? It

is on this principle, I presume, his statistics of iritis are based. As regards iritis I mean exactly what I have written in clear and unequivocal language, which implies that Major Elliot and I are as far from agreeing on the causation of iritis and "irritation of the iris after cataract extraction," as it is possible to be. The fact that these conditions, practically speaking, do not occur after extraction in the capsule is an overwhelming argument in support of my contention.

I do not agree with Major Elliot that tampering with the lens capsule after its contents are out is less liable to cause escape of vitreous than expressing the lens in its capsule. It is much more liable in my experience to be associated with escape and copious escape of vitreous.

Major Elliot does not consider after-cataract an evil of any importance nor an invariable consequence of leaving capsule behind. In this connection *vide* the *Edinburgh Medical Journal*, March 1906, page 284, under the names of George A. Berry and W. G. Sym. "There is no complication which more frequently and more seriously tends to nullify good results than the changes which the capsule is apt to undergo, and the inflammatory processes which are caused by irritation of it, to say nothing of the annoyance, and even of the collapse of the patient's hopes following upon an operation for the removal or division of that structure." With this I agree, and I think, I am right in saying that the men whom Major Elliot calls "The Masters" are of one mind on this point. The degree of the collapse of the patient's hopes when he finds that the first operation has been a failure without a second, a third, or even a fourth operation—needling has often to be done two or three times before a satisfactory result is obtained, especially in the hands of men of little experience—is a thing so depressing on people of that time of life that it requires only to be observed to be appreciated. It requires to be seriously included in our original calculations as to whether we will remove the cataract by one operation or by many. Major Elliot quotes me "By extraction in the capsule no instrument or douche need be inserted to remove lens matter. The cause of the striped keratitis we hear of and other complications." He then goes on to say that keratitis follows in from twelve to fourteen per cent. of his cases since he adopted the douche and that this is better than he had before he adopted the douche and that he thinks this refutes my statement. It confirms my statement. These things, practically speaking, do not occur after extraction in the capsule. Meddling in the interior of the eye is a procedure for which a penalty has generally to be paid.

Major Elliot does not agree with me that lens capsule left is invariably an after-cataract varying only in degree of density. He says it is often invisible with an electric light. It would also be invisible with an X-ray light.

Let any one examine these cases not with an X-ray light or an electric light, but with a paraffin candle, and he will see what difficulty there is in making out the details of the fundus when compared with a normal eye. What makes the difference is this after-cataract. I think I am right in saying that the general practice of cataract operators in Europe is to warn the patient before they extract his cataract that he will have to return a short time afterwards to have a secondary operation—needling of the lens capsule or after-cataract. Major Elliot regards iritis, keratitis and after-cataract as things of not much importance. How does the intelligent patient regard these matters? Does he regard his prolonged stay in hospital with iritis or keratitis, and the amount of mercury he has to swallow as a small matter? Does he regard an after-cataract as a small matter? Is the extensive use of atropine in the old operation in itself a small matter? I say it is not. It is one of the most dangerous drugs in the pharmacopoea, though so necessary in the old operation from the frequency of inflammatory complications of the iris. In extraction in the capsule it is not necessary and is a drug I have almost entirely ceased to use in that operation. The amount of congestion it produces is objectionable and a not inconsiderable danger of post-operative glaucoma, one of the most formidable of complications, is associated with its use.

Major Elliot saw a man try extraction in the capsule, who failed, tried it I presume on a written description—and since he was a man whose skill he had never seen beaten by "The Masters in Europe" that test was conclusive. I can understand the situation of a man attempting extraction in the capsule on a mere verbal description—the most highly technical operation in the whole range of surgery. He may hit it off or he may not. If that man had seen an experienced operator do 50 or 60 and been presided over by him while doing a few the whole difficulties would have vanished. Who are "The Masters in Europe," that they should be accorded such importance in this matter? They are men of very limited experience in cataract. Why should we subordinate our judgment to that of those men who are incomparably our inferiors in practical experience in this intensely practical matter. A question which is to be decided by practice not by theory.

Major Elliot's paper would not require a reply from me at such length, were it not that he poses as the guardian of the junior surgeons in India, men as capable of judging as he is, and advises them to beware of the "Cock at the bottom of yonder well."

He considers that I am not right in thinking that "The Masters in Europe" are opposed to me in this matter. At the British Medical Association annual meeting of 1903, when I read a paper on this subject the president of the section called

for speakers with the following qualification, "I believe, there is a deep-rooted opposition to this procedure in the meeting." Am I not right in regarding that as advising the meeting to put this subject on the Index Prohibitorum? Were the Americans and Australians present not right in putting the same interpretation on it?

In this controversy we should not forget the storm which Keegan and Freyer raised on litholapaxy among surgeons in Europe, and that had they not only been brilliant operators but able men litholapaxy might have died in the struggle. We should not forget the storm which Freyer's grand work on the prostate raised among surgeons in Europe. Plenty of theory and fundamental objections in both cases—practice has decided both questions. Prestige often ushers its possessors into an arena which their better judgment would dictate that they should avoid.

CATARACT EXPRESSION (SMITH'S OPERATION).

RESULTS IN 175 OPERATIONS.

BY F. P. MAYNARD, M.B., F.R.C.S.,

MAJOR, I.M.S.

Calcutta.

EVERY one must agree that Major Smith's name should be associated with removal of a cataractous lens in its capsule entire.

Though all Surgeons who have done many cataract operations have I take it removed over-ripe lenses in much the same way, Major Smith must be credited with having been the first to advocate the adoption of this as a routine method and by the introduction of important improvements in technique he has made it an operation *sui generis* not to be confounded with that known as Pagenstecher's. This confusion has been repeated in some criticisms of Smith's operation which have recently appeared in home journals.

Pagenstecher's operation is extraction of the lens in its capsule by means of a scoop or spoon passed in behind the lens and is, as far as I can ascertain, the operation which has been performed for years in the Eye and Mayo Hospitals in Calcutta by my predecessor, Surgeon-Major Macnamara, now of the Royal Westminster Ophthalmic Hospital. Smith's operation is expression of the lens in its capsule without the use of any scoop. Pagenstecher's causes only slight increase of intra-ocular pressure, but entails almost certain prolapse of vitreous. Smith's causes considerable increase of pressure until the lens begins to come out and in a large proportion of cases results in prolapse of vitreous also. The operations are as different therefore as they can be and Smith's is original in technique though founded on the old observation that prolapse of vitreous is by no means always followed by a poor result in cataract extraction.