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JAMES WARE, F.R.S.
(1756—1815)

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THE life of James Ware, although less eventful than that of Benjamin Travers, is, nevertheless, one which forms a notable landmark in the history of British ophthalmology. In years he was senior to, in work a contemporary of, Travers. But each was largely concerned in raising ophthalmic surgery from the degradation of quackery which distinguished it. Pettigrew, in his biography of Ware, unburdens himself, somewhat viciously, upon the subject of the prevalence of pestilent quacks as oculists.¹ Queen Anne, as we have seen, knighted a pretentious, uncultured cobbler of that ilk, and attached him to her Court. This action, we may assume, was mainly attributable to her character. That character, Smollett, the historian, describes as "deficient in that vigour of mind by which a Queen ought to preserve her independence, and avoid the snares and fetters of sycophants and favourites." Doubtless, by means of his wiliness, a strong feature in quacks, her quack attendant successfully ingratiated himself into her favour, and her defenceless good nature led to the commission of the act which history has recorded. But Queen Anne was not the only offender in this

regard. One, if not more, of her successors stooped to the same folly. George II appointed as his oculist, a quack, whose extraordinary career constitutes a remarkable example of that plasticity of belief in the impossible, to which our common humanity is so prone to yield. This quack, by virtue of his connexion with the English Court, as oculist to the King, gained entrance to all the Courts in Europe. Everywhere he was received as a person of honour. From crowned heads downwards his "skill" as an oculist was sought. Even with the then reigning Pope he was upon terms of intimacy. In short, this Chevalier John Taylor, as he was known, reveals himself, in the book he published of his travels, in a dazzling light of greatness. Space, however, does not permit of further comment upon his achievements. Nevertheless, with ungrudging justice, it must be conceded that this extraordinary man possessed ability. It was said of him that he was an orator: he used to give public lectures upon the eye; he spoke, and wrote a book in, French. He was able to do other things well. What mostly concerns us, however, is that ophthalmic surgery should have been encumbered with the reprobation which the employment of his faculties created. He might have chosen something else for their exploitation. Possibly he would have excelled as a diplomatist. In anything he undertook, quite possibly, he might have succeeded, and to have accomplished, during his career, as much as he did, showed his capacity—not as an oculist—but as one supremely endowed with the art of "industriously and expressly feigning and pretending to be what he was not."² He died in 1767 while on one of his continental excursions, and his fame survived him. It has been stated that his son and grandson continued the reputation he had won.³

Incidentally, the question of the appointment of quacks to the English Court reveals a curious exigency prevalent in the times of our ancestors. But those times were all in favour of the quacks. Our forefathers, by assuming a blameworthy attitude of neglect in respect to ophthalmic surgery, practically provided an open field for the invasion of impostors and charlatans. We cannot acquit our predecessors of blame in failing to appreciate the importance of this special branch of their profession and the dignity of its practice. Nor was it to their credit to have submitted, apparently without protest, to the appointment of quacks to professional posts. How invidious must have been the position of the medical establishment of the Courts of Queen Anne and George II, in the event of the quack oculist being summoned to meet in consultation the physicians and surgeons holding Court appointments. That was a contingency to which they would always be exposed in having as a quasi-colleague—a quack.

James Ware was a native of Portsmouth, where he was born in 1756. His father occupied for many years the important position

of master builder at the dockyard at Deptford. After receiving his education at the Portsmouth Grammar School, Ware became apprenticed to the surgeon of the King's yard, Mr. Ramsay Karr. Thus in the course of his apprenticeship, which included attendance at Haslar Hospital, his opportunities for gaining a knowledge of his profession must, for the time, have been regarded as exceptional. In due course he came to London and entered St. Thomas's Hospital. Here he became noted for his diligence, and in the last year of his studentship he was appointed Demonstrator of Anatomy. On leaving the Hospital fortune again favoured him. Happening to come in contact with a practitioner, Mr. Wathen, the latter, with a generosity worthy of record, gratuitously offered to take him into partnership. The offer was naturally accepted, and so successful and harmonious did the partnership prove that the connexion was continued for fourteen years, to Ware's great advantage. But the chief point in the arrangement was that Wathen devoted most of his attention to diseases of the eye. The enthusiasm he infused into his eye work inspired Ware, so much so that he determined to follow his partner's lead. From that time ophthalmic surgery became with Ware an obsession. To become an oculist was his great ambition, and we may presume that to gain his object he left nothing undone. In 1791 the partnership was dissolved. Ware then started practice on his own account, confining himself, but not at first exclusively, to eye work.

Subsequently for his experience as an ophthalmic surgeon, he apparently relied upon his private practice. There is no record that he held a hospital appointment, or that he devoted any of his time to teaching. The reason for this is easily explained. In the beginning of the nineteenth century the number of ophthalmic posts was almost negligible. There was no demand for ophthalmic surgeons as such, partly because the eye work at the general hospitals was always allotted to a member of the surgical staff, and partly because in London, in 1805, there were only two ophthalmic hospitals, namely, the London Infirmary for Diseases of the Eye, and the Westminster Ophthalmic Hospital. Incidentally, it was always a source of keen disappointment to J. C. Saunders, who founded the former, that the Westminster institution should have begun its work before his scheme had materialized. The idea of promoting a hospital of the kind originated with Saunders. For some months he had publicly pressed forward his idea. But time was required before his object could be gained. The enterprise was delayed by lack of support. The "City Fathers" in those days, presumably, were less alert to the needfulness of a useful reform, and persuasion was required to convince them of its necessity, and so it came to pass that Saunders was forestalled in his undertaking. Somebody, commanding a greater influence, under

Royal patronage, with powerful support, was successful in promoting the Westminster Ophthalmic Hospital, and it was not until three months later that the London Infirmary for Diseases of the Eye was able to begin its valuable mission ⁴ (see note on p. 410).

It is a tribute to the zeal and interest he took in his work that Ware should have contributed so largely to ophthalmic literature. That he was able to do so presupposes that his private practice must have been an extensive one; otherwise material would have been lacking for literary purposes. Ware, in his day, was probably the best-read man in his subject. The verity of this conclusion is forced upon us by what he accomplished, by his references to classical and foreign authors, by his own admission of the time he devoted to the study of the work of others. Thus in some sense gratitude is demanded of his successors, for the strenuous life that he passed and its effect upon the advancement of our science.

It would occupy too much space to deal with all the various contributions published under Ware's name. The list is a long one, and the subjects are of unequal interest and importance. Out of this list, however, no hesitation need be felt in choosing a subject by which to illustrate his methods, his strenuousness, and his determination to promote the advancement of his art. That subject is cataract and its operative treatment, and upon this much of his attention was concentrated. From the early days of his career he began to show this bias. In keeping therewith, Ware set himself the task of translating, from the French, Wenzel's "Treatise on Cataract." The book was produced in 1791, and in bringing out a third edition in 1812, he annotated the text with criticisms based upon his own experience and methods of practice. In passing, it may be recalled that Wenzel had gained high renown as an operator. On the continent, and elsewhere, he was regarded as the highest authority upon cataract and its operative treatment. Surprise therefore need not be felt on learning that it was his habit to pay periodical visits to London, in order to practise his art. Similar modern instances of such invasions are not unknown to us. Travers in his "Synopsis" alludes to Wenzel. "The Baron de Wenzel," he writes, "to give him his full title, is reported to have said that he had 'spoiled a hat full of eyes' before he had learned to extract. This was doubtless a figure of speech, but it serves to show the appreciation of its difficulty by a great master of the art. Excellent directions for the operation have been given by Wenzel in his "Treatise," translated by the late Mr. Ware: and the essay of the latter gentleman, who was in no respect inferior to the Baron as an operator, upon the impediments to the success of the operation, is a work of much merit, and should be diligently studied by all who undertake it."⁵—This latter allusion is to Ware's treatise on "An enquiry into the causes which have most commonly prevented success

in the operation of extracting the cataract, with an account of the means by which they may either be obviated or rectified." Ware incorporated this small volume in the third edition of his translation of Wenzel's work.⁵ He enumerates the "causes" as six, and in discussing them worthily merits the friendly approval accorded the work by Travers. The description of the operative *technique* he followed emphasizes the attention he paid to detail. That was evidently a part of his nature: and was a strong point in his operative practice. He instances a habit which he had adopted for many years. Whenever he was required to do an extraction, he previously read over a list of what he called his "mementos," 24 in number; this list consisted, as he says, "of the accidents to which surgeons are liable in the operation of extracting the cataract, and the means by which such accidents may be either obviated or rectified."

This act, or habit, might be regarded as wholly unnecessary in an operator of such experience as Ware. It would even seem to border upon an exaggerated punctiliousness, destined by repetition to become, in time, a perfunctory procedure. But we may believe that with Ware this was not the case. A more reasonable assumption is that it merely formed a part of the ideal which he had set himself to maintain—an ideal in which the value and importance of attention to detail in operative ophthalmic surgery was enshrined, as indispensable to successful results. That at least was the teaching, insisted upon throughout the works of this forefather of ours, more than a century ago, and the heritage transmitted to us is one containing a lesson, the significance of which the lapse of time has not diminished nor experience discounted.

I now turn to an interesting episode, bearing closely upon Ware's work in connexion with cataract. Although classified in the category of "bare oculists," and thus regarded with some degree of "shoulder shrugging" by his contemporaries, yet in 1801 he was elected a Fellow of the Royal Society. Having no claim to distinction save that which he had gained as an oculist, the inference is clear that the honour of election to the Society was due to his ophthalmic reputation. Curiosity led me to an investigation of the Royal Society's reports⁷ in order to ascertain the nature of his contributions.

Two papers only appear under his name. Each deals with an ophthalmic subject: the first was read in June, 1801, the year of his election, and the second in 1812, three years before his death.

The subject of the first paper deals with the case of a boy of seven years of age upon whom Ware had operated for double congenital cataract, with a successful result. This was a unique case, unique in the hitherto known experience of the disease, unique at the age at which the operation was performed, thus establishing a new method of treatment. It should be recalled that previously to the

publication of Ware's paper the customary and orthodox treatment of congenital cataract was to delay operative interference until the children had reached the age of from 12 to 14. The operation of selection was then extraction, an operation which in infancy was, for obvious reasons, practically impossible. Hence the delay which was deemed to be essential before relief could be afforded. Such was the advice invariably given to the parents in these cases, advice advocated, it may be added, and supported by Wenzel, and adopted by Ware. In 1775, however, it happened that Percivall Pott, the skilled surgeon of St. Bartholomew's Hospital—of Pott's fracture fame—published in his works a contribution on cataract, in which a different view was maintained.⁸ He advanced the opinion, ardently supporting it, that depression—couching—was a better operation, and could be safely performed in the early days of childhood. Nevertheless, while conceding that depression of a soft cataract was often impossible, he alternatively suggested freely lacerating the capsule and breaking up the lens, so that, as Ware describes, "the aqueous humour which Pott believed to be a solvent for the opaque crystalline might come into immediate contact with this humour," and thus secure absorption of the soft lens matter. All might have transpired well with the novel suggestion of Pott had he not marred its importance by maintaining the peculiar view that cataracts at all ages were capable of undergoing absorption. This theory was mainly founded upon the fact that he had seen cataracts couched in the adult, reduced in the vitreous merely to an appreciable trace. In brief, he argued that inasmuch as soft cataracts could be absorbed by the aqueous, and cataracts in the adult could undergo absorption in the vitreous, depression was obviously a better operation than extraction, as being less hazardous, more advantageous to the patient, and more easily performed by a dexterous operator. These views, however, did not commend themselves to his contemporaries. The camp of the extraction operators was strongly fortified. This appeal to surrender their position on the part of Pott, was firmly repudiated, and as strongly denounced. Just as they maintained their own convictions upon the relative value of depression and extraction, so they were induced to ignore the new suggestion for the treatment of congenital cataract. But while for several years this suggestion continued to escape general recognition, it was, at the same time, not forgotten in this country, and it fell to the lot of Ware to re-introduce it in a manner highly advantageous to himself. Thus we are brought to the incidents which led to the first paper he contributed to the Royal Society.

In 1800 he was called upon to operate for congenital cataract in a Portuguese boy of 14 years. He found that extraction was impossible owing to the extreme restlessness of the patient; he then took his "couching" needle and attempted to perform depression; in this

also he was unsuccessful. Next he proceeded to carry out the method advocated by Pott. The result appears to have astounded him. "In a few days," as he tells us plainly with glee, "the opaque matter in the anterior chamber was wholly absorbed; the pupils became clear, and the lad recovered his sight in both eyes." Previously to this case, in 1793, Ware was consulted by a "respectable clergyman," whose son, aged six months, was the subject of congenital cataracts. The usual advice was given; operative treatment would have to be deferred until the boy had reached his twelfth year. Seven years later, however, the parents, harassed and impatient at the boy's continued blindness, returned to London and implored Ware to undertake some measure for his relief. An agreeable surprise awaited them. Ware had changed his opinion in regard to the usual and accepted treatment. A month previously he had gained a new experience in the case of the Portuguese boy, and was thus in a position to advise an immediate "needling" of the lenses of the child of this "respectable clergyman." Each lens was so treated, the second a month after the first, with a good result. These facts, embellished with detail and co-ordinated with personal impressions, were incorporated in his paper. He decided to resort to the medium of the Royal Society for the purpose of making his experience known, and, by so doing, possibly at the same time secured his election to the Fellowship.

This paper, however, accomplished something more than merely benefiting the author. From the publicity it gained, attention was drawn to a new treatment of such conspicuous advancement upon the old method as to compel its adoption by ophthalmic surgeons. No doubt can be felt that Ware, by this contribution, was chiefly instrumental in consolidating opinion in favour of the suggestion which Pott had made in 1775. At least it is certain that from Ware's time onwards, the treatment by discission of congenital cataract came to be recognized as the only available operative procedure. Saunders records that at the London Infirmary for Diseases of the Eye, between June, 1806, and December, 1809, sixty cases of congenital cataract were under his care, all of which he needled. He was the first ophthalmic surgeon in this country to use extract of belladonna in the preparation of his needling cases. The discovery, about this time, by Reimarus, of the mydriatic action of belladonna—the alkaloid was then unknown—came as a great boon to the discission operators. The advantage it secured was that of enabling our forefathers to perform their needling operations without risk of wounding the iris—a complication they feared, and one which they held should, at all hazards, be avoided.

The second paper contributed by Ware to the "Proceedings" of the Royal Society consisted of a dissertation upon the subject of myopia; or, to give it its full title, "Observations relative to the near

and distant sight of different persons." This was a matter of personal interest to himself. He was a myope of high degree, and he narrates some experiences of his use of spectacles for the correction of this refractive error. Of some interest in these days are the results recorded of an inquiry he conducted into the prevalence of myopia. He found that in the three regiments of Footguards, amounting to 10,000 men, not more than half-a-dozen recruits were rejected for short sight during twenty years, whereas myopia was common among the undergraduates in the Universities. In one of the Oxford Colleges, he states, 32 persons out of 127 were short-sighted, for whom glasses were necessary. No effort, however, is made in the paper to discuss or attempt to explain the disparity of incidence in the defect between the classes of persons concerned. Here was an opportunity he obviously missed of advancing some trenchant views upon the causes of the prevalence of myopia. Posterity would have been glad to learn the impressions of one so observant upon a subject of such importance. On the contrary, disappointingly, he is satisfied merely to record his statistics, and, overlooking the inference to be drawn from them, evinces no surprise at their disproportionate character. The following quotation is worthy of note: "Persons who have been couched require two pairs of glasses, one for distance and the other for reading, proving, thereby, that the adaptive power of the eye depends upon the presence of the crystalline," a step towards solving the problem of accommodation.

The election of Ware to the Fellowship of the Royal Society suggests some comment. He was the first "bare oculist" to gain the distinction, but he showed what a "bare oculist" could do. His work commended itself to an independent body of his scientific contemporaries and, to their credit, they ignored the sentiment which they probably knew prevailed against the class he represented. Moreover, his election may be regarded as a reproof to those by whom specialism in medicine was opposed. Ware justly earned the honour conferred upon him, and in honouring him the Royal Society contributed materially to the recognition that ophthalmic surgery had passed beyond the dominion of quacks—a new order of things which surgeons, working like Ware, had so strenuously striven to accomplish.

Some remarks may here, perhaps, be interpolated in respect to the operative *technique* adopted by our forefathers in their extraction cases. The opportunity for doing so is afforded by Ware's translation of Wenzel's treatise, and the criticisms he appends in regard to the latter's methods. Wenzel, as it has been said, had acquired a European reputation as a skilled operator. In consequence thereof it is probable that he gained the position of a mentor among those at that time desirous of emulating his example.

Freytag, at the end of the seventeenth century, was the first to attempt an extraction operation. Daviel was the first to bring it under public notice, and, according to Ware, "the ingenuity and industry of Wenzel brought this mode of operating to a state of perfection never before attained." It is clear that Ware was influenced in his operative work by Wenzel's admitted pre-eminence. On the other hand, he was no slavish imitator. Despite his evident admiration for Wenzel's work, he nevertheless placed in the scale against it his own judgment and experience before accepting a method of practice favoured by Wenzel. The following is an instance. Long before the beginning of the nineteenth century it is interesting to note that Wenzel was in the habit of opening the lens capsule with the knife, in the anterior chamber, previously to making the counter-puncture. This method, practised by some ophthalmic surgeons in the present day, did not appeal to Ware. He criticizes it with judgment, and his criticism is well founded. "This process," he writes, "of puncturing the capsule with the same instrument that is used for dividing the cornea, and at the same time, is rather a work of dexterity than of usefulness, and as it is often attended with much hazard of wounding the iris, I have not thought it desirable to adopt it." When we reflect that the operator in those days was called upon to extract the lens with the patient's pupil undilated, agreement must follow that considerable dexterity was requisite in order to open the capsule with the section knife without involving the iris. Again, it was, in Ware's days, the universal custom to operate for extraction without using a speculum. The objections urged against its use were many. Among these it was said to make the operation more complicated, more disturbing to the patient, more embarrassing to the operator, and at the same time to cause irritation of the eye. In general, Ware agreed with these views, save in the case of children. The speculum he employed seemed to have lacked nothing in quaintness. It consisted of an oval ring, to the upper rim of which a shoulder was fixed to support the upper eyelid, while to the lower rim was attached a handle of a length and shape so adapted as to enable the surgeon to hold the instrument in position while operating. It is satisfactory to learn that Ware found this appliance "very convenient." In operating for extraction without a speculum, the attendance was necessary of a skilled assistant. His duties consisted in keeping the patient's head still, in drawing back the skin of the upper lid, in controlling with the pressure of his fingers the contraction of the orbicularis, and in depressing the lower lid. The surgeon with the knife in one hand, employed the forefinger of the other in supporting the upper eyelid, leaving the middle finger free to stroke the cornea, and thus coax the iris to return to its natural position should it happen to come in contact with and

impede the progress of the knife. Incidentally the lot of the skilled assistant, upon the whole, was not one to be envied. He was liable to accidents. Wenzel in 1765 was summoned to London to operate for cataracts upon an English duke, and he records that the resistance of his noble patient was so violent under the use of the knife that the assistant was nearly knocked down. And allusion is made to another incident of the kind.

A further point seems worthy of mention. It is evident that our forbears, at the time under discussion, had great confidence in their operative *technique*. That confidence was presumably the outcome of their results, results which appear to have been astonishingly good. Nowhere in their literature have I come across any tabulated lists showing the number of extractions performed and the successes compared with the failures, but it may be noted that frequent references occur in Ware's translation of Wenzel's work to the slight degree of reaction which followed the operation. Thus the inference follows that sepsis must have been an infrequent episode and not a concurrent result of extraction operations performed by skilled surgeons in the pre-antiseptic days of their time.

The records of the personal life of Ware are meagre. His were not the days of contemporary medical journals available for the issue of appreciative obituary notices detailing the life-history and accomplishments of our forefathers. Nevertheless, a few facts have been transmitted to us, with the curious omission that in none of the references to his career is mention made of his medical qualifications. Ware married, in 1787, a widow, the daughter of a "respectable" city merchant, and by this marriage a large family of sons and a daughter was born to him. He was one of the founders of the School for the Indigent Blind, and took an extremely active part in promoting the Society for the Relief of Widows and Orphans of Medical Men, to the Presidency of which he was elected in 1809. He died in April, 1815, at the age of 59, at Turnham Green, and was buried in the family vault in the Bunhill Fields burial ground.

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*The institution referred to by Saunders was not that which now exists under the name of The Royal Westminster Ophthalmic Hospital. Of the former, nothing seems to be known. It may not have survived or it may have been incorporated in Guthrie's scheme.—P. D.