A Thesis.
On the Native Indian Mode of Couching
By Henry Breton.
1853
The Native Mode of Coughing.

In describing the Native Mode of Operating in Cases of Cataract it is not my intention to dwell on the nature and causes of the Malady since an accurate account of them is contained in the admirable works of Saunders, Bopex, and Sir Fm. Adams, but confine myself to a narrative of facts in regard to the ideas of the Native Practitioners of Cataract, their method of treating it, the operation which both Hindoos and Hindoo-sculpts are in the habit of performing to restore sight, and the sequel of that operation.

In the course of my Father's communications with the Natives of Hydes, who are by the Natives considered medical professional men, he states that he had not the good fortune to meet with one at all acquainted with the nature of Cataract. Descriptions of this Malady are given in medical works such as Hanson, Board, etc. Sars, Church of Adab, or Ahmick; Indiana, Perseus, Scottish, and Indiaman. And it is practiced in the Arabic language, Iarool, or Iar; Deputation of Indians in Persia, etc., Burwarved, Pearl Drop.
bad water enters from the brain into the eye; that in the course of time the period being
limited, this water becomes turbid containing the disease called Phlebitis or Pearl
Warts from its supposed resemblance to a Pearl in the eye; that so long as (mero)turbidly
remains in the water, and the patient is capable of discerning objects the disease is
pronounced to be kibla or unrifed, and unfit for an operation; and that when the turbid-
ness or turbidity of this water are so great as to exclude the rays of light, the malady is
then said to be kibla or rifed and is by then fit for Couching.

They are aware of the existence of the different colored Cataracts, but of their nature they are
wholly ignorant. The White Cataract, (by which is meant the Lenticular Cataract) they expect
to be the most favorable for an operation, and as the color declines gradually from white to
black the malady is considered by and by favorable for Couching. Of the divisions of Catar-
acts into Lenticular, Cephalic and Vitreous, however, they have not the slightest idea, every
case being considered by them as consisting of
good or bad Water. In dark colored Oculars whether the patients be capable of perceiving light from darkness or not, they decline operation from a persuasion that the quality of the extra palated Water in the Eye is so glutted as to render hopeless any operation. The dark colored Oculars they invariably confound with that peculiar dark Appearance of the Pupil which distinguishes Esulta Serena and Amaurososis. Of this latter disease they are sensible of the existence; that is they are aware that there is a certain condition of the Eye which causes privation of sight and is irreducible; but of its nature, from their total ignorance of the structure of the Eye, they have got the slightest knowledge. They have however, for this purpose in ancient oriental medical works three names: Sennin, Kujjubind, and Kaunch. The first, I believe, means total blind (not from affection of the optic nerve); the second a Drop of bad Water, or Water black as coal; the third, implies Esulta Serena merely. In the Arabic Language Amaurososis is denominated Bothhum et Blur, and in Persian Ofttan, i Beeenee, both meaning privation of sight. In the Arabic words adapted to, and in particu-
Nor that of Avicenna, Cataract termed: Sarcot vol.
nda | deposition of Water, is made to be a peculiar
kind of humor which gradually thickens and co-
gulates in the Aquilous humor of the Eye; and altho
the component parts of the eye are described by
Avicenna with tolerable accuracy, yet the frac-
ture and seat of Cataract seems to have been
known when his Work was written. And the sub-
sequent Arabic publications in regard to this Disease
appear to be little more than compilations from
the former Works.

It may be as well for me to mention the different part
of the eye as contained in a Work by Avicenna entitled
Quadrarum Digestive. Hugo Sena, for the general informa-
tion of the proficion who are unacquainted with the
Arabic Language. The coats of the eye are called
Cubepaule | Layered | the Humor Postebank | secre-
tive | the Oric Moore | Long | Subtree | Decapulating
serve | and the Muscles of the eye Adjacent.
The portion of the telescope which is invisible
in the socket is called Fitbrie | Subtree | dense layers
and the part which is apparent is named Multis-
mania | Shelley | the Chorona is called Laurusana
| Dormice | the Choroid coat | Scutumvoca | G & uh
| Chorian -line | the Iris | Umbrella | Grape -like | the
Pupil: Indian style, [s.d.]. Stalk: part of the eye.

R. Retina: Sheelike, soft, [s.d.]. The aqueous humor is named by the term Yeru'ccie. Byssina secretion, like the white of an egg; the crystalline lens.

R. Retina: Sheelike, soft. Author of the appearance of the eye, the vitreous humor, retina, and the bony humor. No mention of the clefts constituting the anterior and posterior chambers, or of the inter-vitreal ligaments and vessels, from which it might be inferred that they were unknown in the time of Avicenna.

With this knowledge of the structure of the eye, it is surprising that the nature and seal of cataract should not have been ascertained by this distinguished author. According to Guthrie, it was not till the year 1651 that the crystalline lens was demonstrated to be the seal of cataract. Remedies in the incipient state of cataract are specified in the work of Avicenna as well as in other scientific publications, but they are vague as the ideas of the authors are inaccurate into the nature of cataract.

The remedies in the incipient state of cataract consist principally of ointments smeared over the interior parts of the eye; purgatives com-
posed chiefly of oils; mild demulcients, aromatics, &c., &c., and cordorants to purify the humors of the brain and to strengthen the system, with a view to obviate further absorption of bad water from the brain, thus arresting the progress of the malady. But after it has completely formed the only remedial as-joined is leeching called in Arabic el-kuddil (which means to displace). This operation, and it is the only one performed by native dentists for every kind of fistula, is in Hindostanee denominated Portuguese banana (preparing the eye). The couching needle, according to the Arabian authors is named milhik, & it appears to have been somewhat similar to that which has been described by Claudius Galen, who flourished in the first century of the Christian era, as the eye was perforated and leached with oil and the same instrument. The native mode of couching could not therefore have been derived from either the Greek or Arabian physician, since it differs in one material point, the use of two instead of one instrument.
The probability therefore is that the native operation was in practice before the time of Plato, but its antiquity has not been, as far as I can learn, ascertained. My father, having heard much of the native mode of operating in all sorts of foment and constricting it to be impossible for anyone to operate on the eye without a perfect knowledge of its structure, his curiosity was greatly excited to see the operation performed; but it was not for some time that the opportunity was afforded him of witnessing what could be done by the hands of a native surgeon. In 1821 information reached my father that Rev. J. Burch, magistrate of Calcutta, had been restored to sight by an operation from the hands of a Muslim, resident in Calcutta, and he lost no time in enquiring for him. I was preparing to leave him to convince him (my father) of his ability by operating on the eyes of patients who might be brought before him. On the first of July of the same year this Muslim, whose name is Saulee, cured the eyes of four blind people in the presence of Dr. Adam at the General Hospital.
On the third of the month May, Father for the first time had the gratification to see a patient, totally unacquainted with the anatomy of the eye, perform on three cataract patients, mechanically as it were, yet with great neatness and dexterity, a highly interesting operation. Sandowar, who is about 40 years of age, told me that he resided and practiced at an English in Calcutta upwards of 25 years, that he had in that course of time operated on several hundred cataract patients; that his late father who lived at Budeea, and his late grand father whose residence was at Burdwan, had practiced squashing for half a century; that from his father at Budeea he had learned the art, and that he used the same kind of instruments which his ancestors employed, with this exception, that instead of a file of steel formed into the shape of a Lancelet, he invariably made use of an English Lancelet. The instruments he uses are few in number, the Lancelet to perforate the coats of the eye, and the Salsee or Needle to depose the cataract. Rounded the upper part of the Lancelet at about a tenth of an inch from the point is round.
a piece of thread to prevent its penetrating the eye beyond that extent. The Sulco of Touching Needles is made of Copper of a Cylindrical Form of the thickness of a Gross Bill about five inches in length, tapering very gradually from the base upward to within half an inch of the Apex. The form of this half part of the Instrument (which I may call the Indus or Touching Needle) is that of a Pyramid of Three Sides, the Apex being Blunt; and below the Pyramid is a short neck which is the smallest part of the Instrument. About an inch from the Apex a thread is wound round that it might not penetrate further than this part. With these two Instruments thus prepared, it will be obvious that any person (without knowing the Structure of the Eye) who has a few times witnessed the natural mode of Operating for Cataaract, might without much risk of injuring the Eye, from the circumstance of the Indus or Touching Needle being blunt and without cutting edges perform the operation.

Prior to the Operation it does not appear, that the Nativedentists use any Drug as the Bellad-
= donna, Stramonium &c. to dilate the Pupil, from being unacquainted with any medicine capable of producing such an effect. The Malonoe = than, Blundis Boulbous, who said the effect of the Belladonna and Stramonium applied by my = Teller, expressed the greatest astonishment. I = told him they had never heard of their Ap = plication, and could not have credited their = influence on the Pupil if they had not seen = selves witnessed the fact. It is but long since the = practice of dilating the Pupil has been revised = by the Modern Paulists of Europe, although it is ad = verted to by Bling, who in speaking of the = Herb Pimpernell or Anagallis, says, Pupils = dilated et idee cor incongruint. Quoque quibus = paranentes sit. Of this passage the following = translation is given by Holland the Transla = = tor of Blinde. The same Medicine Pimpernell = likewise is good for to dilate the Inscleth that = make the Ball or Apple of the Eye, and therefore = it is an ordinary course that their Eyes be = annoyed therewith beforehand who are the = pricked with a Needle for Touching of Cataractes. = Of the practice therefore in Froinbo-Times of = dilating the Pupil previously to Touching,
the passage quoted affords indubitable proof, but I believe no mention of it is made
in any Ophthalmic Medical Work.

The Instrument being prepared the Graham-
dean Paulist, Saubon, who operated on the
3rd July 1824, in the presence of Mr. Wining lef-
Subjee to His Excellency the Governor in
Chief, the native Medical Students and my
Father, placed his patient in a sitting posture
on the ground, having previously bound over
the sound Eye a Bandage to preclude ob-
jects from being seen and thus preventing
as much as possible motion of both Eyes.

Behind the patient was placed an Assistant
to allow the Head to rest on his breast & to sup-
port it firmly with both his hands to pre-
vent distortion. The Paulist then seated himself
on a Murcha or Stool about a foot in height im-
mediately before the Patient, and placing on
his waist and the hands of the Patient, he
made three salutations invoking the Al-
mighty to grant him success and then
commenced the operation on the left Eye.

Raising with the left thumb the Upper lid to fre-

sion (being never used) he fixed on the corne
of the head of the patient the fingers of that hand, and directing him to look towards his eye, he in an instant with the right hand perforated the eye with a Lancet. The perforation was made in the sclerotic coat about a tenth of an inch from the margin of the Cornea, and a little below the axis of the Pupil, and the Lancet was allowed to penetrate to where the thread was wound, and was then withdrawn. The perforation thus made was sufficiently large to admit the introduction of the Indian Touching Needle (called by some course, Suturae which in Bieder means a course Needle), and thus the perforation the Needle was gently introduced as far as its head into the Vitreous Humor, and afterwards allowed to remain pendulous from the edge for about half a minute, the Needle being supported on a Drop of Spirit or Cotton placed on the cheek to prevent it moving about the Sulcus of the Sclerotic Coat and the Sack of the Needle preventing it from falling out of the Eye, and so long as the instrument was kept free from moisture or irritation was excited. At this stage of the Operation the Eyelids were
Allowed to close, and the feet kept still as possible. After the lapse of half a minute, the eyelids were pressed with the fingers of the left hand, and the point of the needle was directed to the upper and outer part of the crystalline lens, the instrument being held nearly parallel with the axis of the pupil, and the lens and its capsule were gently pressed downwards into the vitreous humour and retained there, a few seconds. The area of the needle was then gently raised from the lens, and on the folder, pitting with the instrument it was again and again depressed till it entirely disappeared. After this the eyelids were again closed, the needle let go, and allowed to hang as before for a few seconds from the eyelids of the eye, supported on a bit of cotton placed on the cheek and the patient kept quiet till during this interval an ignited soda or salt made of charcoal and clay, previously prepared, was placed in a shallow earthen cup and held near the eye to foment it, with a view to relieve any prostrating affection of the eye that might be present.

The eyelids were afterwards again opened, and the patient was directed to draw in his breath...
Several times forcibly tore his nose, and at the same time Saintcours, with his clasp hand, gave him two or three gentle pats on the head, with the view, to cause the lens to be forced downwards and drawn into the interior part of the eye, out of the sphere of vision. End if no opacity were perceptible behind the Span, the patient was asked if he could discern objects, if he could tell how many fingers were held up, and if he could see a thread drawn out before his eye. By the patient answering yes, the operation was pronounced to be finished; the needle was withdrawn, a piece of combed cotton placed on the eyelids and bound down with bandage, the patient was allowed to return to his home, and enjoined to remain in doors for a few days without moving the bandage from his eye. In this way the other patients were operated on, and my father affirms that all were, to his knowledge, restored to sight, as he saw them several times after they had undergone the operation. These and subsequent operations by Saintcours convinced my father of the native
Mode of curing being best only simple but very effectual, and that this Beullée had only the mode of performing the operation.

No description can convey an accurate idea of the relative mode of curing; it must be seen if a distinct notion of it be wished for, and then its simplicity may be clearly ascertained.

My father having observed the gentleness and patience of this nature, Beullée in preparing the crystalline clear, he was fully impressed with the belief that he possessed some knowledge of the structure of the eye and nature Head of cataract, but on enquiry was astonished to find him wholly ignorant of both. He candidly told my father, he knew nothing of what the eye was composed as he had never seen one dissected, and all that he knew of cataract was that it was a drop of water which oozed from the brain, and which in the course of time became white in the eye, and prevented sight, without however occasioning any pain whatever, and that the object of his operation was to remove this white substance (whatever it was) from the pupil, for on doing this he always found his patient could see things prevented them.
And what this white substance was, where it went after being displaced, and what became of it afterwards was unknown to the Almighty. My father ascertained that this operation, by the habit of examining the eyes of cataract patients, could judge when an operation was likely to succeed, but he knew nothing of the different kinds of cataract, excepting that they were of different colors, for which he had no name, and the only distinction he made was cataracts of good and bad water.

He was careful of operating as long as the patient had tolerably useful sight, for then he considered the cataract of the Ruchas to be ripe, and in green and in dark-colored cataracts, and in those which were attended with pains in the head, and incapacity of the patient to distinguish light from dark, he declined operating. When favorable cases of cataract in both eyes were met with he sometimes operated the same day on both eyes, but to ensure success he preferred touching first one eye, and afterwards the other on the first getting well.

The proportion of failures he estimated at
about 10 per cent, but of this he was not certain; as he had never kept a memorandum, and for the same reason he had no record of the number of secondary cataracts which succeeded his operations. The greatest number of times he had operated with success on the same eye he affirmed was twice, but he said an eye might be cured by him seldom required more than a second or third operation, and that when necessary he repeated the operation when the patient was entirely free from pain, and willing to submit to it.

Of cases of amaurosis he judged by the dull, black appearance of the pupil, and loss of sight which he represented as the eye having lost its life, without the permanent affect of the nature of the disease. He never operated on anyone younger than 12 years of age and seldom on people older than between 60 & 90.

On being asked how he could judge without knowing the structure of the eye, of the extent to which the disease or result of the cataract may be introduced, he replied, that one precise extent prescribed time, and from this he did not deviate whether the eye be
"large or small: and finding then I had attained

"manhood that the distance between the quarter of

the joints of my little finger was the extent to which

the instrument might be inserted into the eye.

"I invariably measure with my little finger,

"and apply the thread would the needle at

this distance from the point.

"The cause of Cataract he described to the com-

bined influence of bile and phlegm, but that

that influence in the Brain was he had put

the premature conception. He was aware that chil-

dren were sometimes born with it, that it re-

occurred without any apparent cause at any age,

but much more frequently in old age, and that

the period of its formation was unlimited. Men

and women he conceived were alike susceptible

of the Disease, and he declared that he was not con-

scious of one sex or class of people, from the occu-

pation they followed, being more liable than

another to the Malady, that in general chil-

dren were little subject to it, and that on them

he had seldom occasion to operate. He declared

he knew no medicine that would arrest the

progress of the Disease after it had begun to

form, and that when formed there was no
remedy, but an operation. But after treatment of inflammation ceased, was to apply on the Temple and Forehead to dress and dress them principally of Turmeric and the leaves of some aromatic herbs and sometimes Acanthus ground together with a little Water, and if the inflammation were considerable, he opened the large vein in the forehead, and by the force of 2 or 3 ounces of blood. The juice of the leaves and roots of a variety of plants (the incision of which would fill a pottle) he mixed with Water and employed as a Leechium, and he employed abstinence and confinement in a detached room.

This I believe to be the whole which relates to Saunderson's knowledge of the malady his mode of dressing and method of conducting the after-treatment.

On his being asked how it was that European professional gentlemen knew so little of his mode of curing, altho' he had practiced as an Oculist in Calcutta 25 years, he said he was afraid of teaching European Gentlemen his art lest he might himself be deprived of his bread.

On the 17th Nov. 1824 my father had the good fortune to meet with another native Oculist at Sin.
= do named John Soll of about 25 years of age
who had arrived in Calcuta from Benares, and
on that day saw him in his own HOUSE in the pres-
ence of the students of the Native Medical Institu-
tion, though successfully the right eyes of two old
women each between 50 and 60 years of age.
This mode of operating corresponds perfectly
with that of the Mahrummetsan bullet. But
John Soll makes the perforation with an Iron
= jaw Sanced in the sclerotic and other balls
about ¼ of an Inch below the axis of the pupil,
and he is a little quicker than his competitors
in performing the operation after withdrawing
the needle which is similar to that used by that
= source. He applies on the eye-lids a bit of
folded Rag moistened with cold water allowing
it to remain on about five minutes. This Rag
is then removed, and another piece of Rag
spread thickly with a composition of Turmeric,
flour, and a little opium of the consistence
of Paste is put in its place, and at the same time
this substance called Cobtum (Calamus) is
smear all round the Orbit. A small bag-
= cage is then bound over the Eye, and the ap-
lication allowed to remain two days.
then removed, and a fresh supply applied in a similar manner, after which nothing further is done. Two Patients who had undergone the operation in both eyes by Elias Soll were brought to me dated as a proof of his success. One of the patients had been blinded ten days, the other 20 days, and they both appeared to me, have returned their sight with scarcely a mark of the perforation remaining.

The operation of these two Londonists was so unknown to each other being similar, and corresponding with that which is practiced, as stated by Dr. Scott, by the native Londonists of Bombay, although there is a little difference in the composition of the needle some being made of Brass, other of Copper &c. the identity of the operation in Hindostan is satisfactorily proved.

These people occasionally travel to a distance to practice their Art, but I believe they never leave their native home unless being called to some certain employment. All those that any farther saw in Bombay, were foreigners, and their general residence was in Surprat. One of those Practitioners was a young green, the other aged; they came at different times, and were
unconnected with one another. The young man
had, indeed, the most delicate touch of
any person. She seemed to feel every thing that
she touched with as much delicacy as a spider,
and the operations which my Father witnessed
him perform were executed with surprising
till.

Believ it is observed, that a Surgeon ought to be
a young man, or of an approaching to youth.
This feeling, the elasticity, the flexibility of
youth, with its perfection of sight are never
more necessary than in the operation for
the Cataract.

If any one will consult Claudit, he will
find that his operation for the Cataract does
not differ from the present practice of Euro-
pean surgeons, doubtless gave rise to it.

My Father asked his Indian Operator by what
means he had acquired his knowledge of this
operation. He replied from his Father. They
prac-
tised it from Father to Son. He had never seen
the dissection of the eye of any animal, nor
does he believe that any of his family had.
In spite of all this, it is impossible not to think
that the knowledge of this very delicate operation
must have been derived from actual detection; for an error even so small space would inevitably lead to a destruction of vision for ever. My Father states, that he was so struck with the skill of this person, that he was very anxious to ascertain from him the general result of his practice; the proportion of his successful and unsuccessful operations. He acknowledged at once, that he kept no register for account of them; but on my pressing him much to give me some conjecture of the success = for in one hundred who were improved by the operation, and of the number who received no benefit from it, he said after a good deal of hesitation, that he did not think above five in one hundred remained without benefit. My Father proceeds to state, that he had no means of ascertaining the real state of the question with more certainty; the man was a stranger to him, and soon returned to his country, and he never again saw him. He could have but little interest in deriving any Father, but as it is too frequently the case, he wished to give himself consequence by magnifying his success; he might have forgotten many of his failures; and without
Supposing that he meant to mislead my Father, we ought probably to make a large deduction from the favorable side of the Account.

The native Instruments will doubtless appear to European Surgeons rude and ill calculated to effect the object intended; and the operation will seem awkward and tedious; but in the hands of young practitioners unaccustomed to Touching, the native Instrument will, in the generality, of Cases of Cataract, be found to be more safe and manageable than the English Touching Needle, I believe.

To the natives who wish to practice as Surgeon the Hindostance mode of operating appears preferable to the English Mode of Touching, from the facility with which they can attain the Art even without being made acquainted with the Structure of the Eye and Nature of Fluid of Sabrass from its being by its simplicity better adapted to the habits of the Natives generally, who, in all their arts adopt the most simple method; from the facility with which the native Touching Instruments can at all times be procured at a trifling expense in every part of Hindostan; and above all from the habit if the Operator be a little expert to injury of the
One in the act of operation, from the needle being blunt, and without cutting edges.

It is my father's firm and decided opinion, together with other eminent and able practitioners in India, that the native mode of operating might be adopted into general practice with great advantage. In this opinion he is supported by Dr. Adams, Secretary to the Medical Board, who has several times seen the native operation performed, and by Surgeon to His Excellency, the Commander in Chief who has himself several times in presence of my father and moi in the presence of Dr. Ad. Surgeon to the Governor General of India performed successfully the native operation of coughing. Dr. Twining's opinion, founded on actual experience, is favorable to the native practice. He judges, after having seen the operation, it worthy of imitation even by European professional men. All have not been in the habit of operating on the eye, and who have not naturally adapted from a conviction of its simplicity and efficiency, he adopts it occasionally in his practice.

Several other medical practitioners, who have adopted the native mode of coughing are, Selborne,
convinced of its being effectual, and it is to be hoped that from a state of obscurity, this highly operation to restore sight to the blind will the long be generally known, and much more eaten skill, practiced by the natives themselves in every part of Hindostan than it has hitherto been.

So convinced was my Father of the nature mode of couching being safe & effectual, & within the compass of even inexperienced practitioners, that, he proceeded in teaching this art skilful to its superfluity, practically to the native students of the Medical Institution under his charge, and accordingly he commenced giving them demonstrations of the structure of the eye, and explanations of the nature & seat of cataract, making them daily practical, with both hands on the eyes of goats & sheep until they had acquired facility and dexterity in performing the operation. At the same time my Father entertained on monthly salary, candidates to learn for being cataract patients for the purpose of operating on them in the presence of the students to inspire confidence in their minds of the feasibility of the operation with their own hands.
As cases of cataract were excessive, I brought my father to the capable students were allowed to practice in his presence, and the result warranted the continuance of the practice which bids fair, when prove widely extended than it at present is, to be highly beneficial to the unfortunate natives blind with cataract, who have scarcely a hope of restoration of sight from the great want of specialists in every part of Hindustan.

If peculiar demonstration of the safety, simplicity of the native mode of cataract, had not been afforded might never have ventured to allow the students of the native medical institution to practice on the living eye, for the operation with an English stylet-child requires on the part of the operator more than ordinary skill, a thorough knowledge of the structures of the eye, & perfect steadiness of hand, to prevent the iris and iridium from being entangled and lacerated. Nothing therefore but a conviction of the mode of operating for cataract being unattended with much risk to the eye, the student wish to render the students useful as possible in India, inclined to take upon himself
the great responsibility and anxiety in admitting of actual operations on the living eye by the inexperienced pupils.

Evidence will hardly be given of the difficulty my father has met with even in such a populous town as Calcutta in procuring cataract patients for operation, from the remarkable apathy which pervades the native character, from their extreme repugnance to remaining from their homes a single day to undergo a cure. It was only by employing messengers to seek for them, and by holding out to the patients the hope of a present submission to the operation & repetition of the present one allowing my father to see the eye a few days after the operation, that he had been enabled to obtain the number of subjects enumerated in the list, and to ascertain in the majority of cases the result of the operations performed.

Notwithstanding the great disadvantage of novices performing the operation for cataract, and of the patients not being under control to undergo the after-treatment, if inflammation ensued, from the impossibility to prevail on them to remain in any other
place than their own homes, the number of failures which have followed does not appear to equal that which usually occurs in Europe when the operation and after-treatment are performed and conducted by skilful and experienced Oculists. Sir W. Williams in his publication of 1817 states from the respectable authority of De Tartas, La cournonnois, that in France the operation is considered successful when two patients out of five, or when one half the number of patients operated on are restored to sight. But in England the number of failures in a given number of cases in the several Infirmarys, and of secondary cataracts are not precisely stated. Possibly the aggregate number of failures may be about 1/4 of the whole. Admitting this proportion of failures from the native mode of teaching the benefit of the operation will still be apparent, since 3/4 of all blind of cataract, who have no chance of relief but by an operation, may probably be restored sight in India by native Oculists. Abundant instance may be found when the vast population of India, and the frequency of this malady amongst
them, combined with the great disproportion of operators to the number of Inhabitants of Hindostan are considered.

The great advantage of this simple art is that it can descend from father to son, as is verified by the instances recited, without professional knowledge being materially required. But if the anatomy of the Eye, the Nature and seat of the Disease, and coincident to it be taught on European Principles to the Natives, the Art will assuredly become more perfect than it at present is. Possessing thorough knowledge of the Structure of the Eye, and of Cataract in its various forms and stages, they will be able to impart very easily to their Progeny at an early age, the information they have themselves acquired, and thus in the course of time a number of young Natives will probably be found competent to practice as surgeons in various parts of Hindostan, and should they restrict themselves to this branch of the Profession, they may be expected to acquire skill in Operating superior to that of their Progenitors, who are employed in the other branches of Surgery, for
it has been well observed by Sir William Adams. That the man who would devote the
whole of his skill and attention to one particular branch
of study would be more likely to acquire
"dexterity" in that single branch, than he
"who would divide his talents amongst
all its multifarious branches equally.
"And the conclusion we should thus be led to, by
"a speculative system planned of the subject,
"is confirmed by the concurrent practice of
"mankind in every line of occupation.
"and every part of the world in which per-
"fect excellence has been made an object of
"pursuit. We see it in the most abstract
"sciences, and in the lowest handicraft Trades
"among the Mechanics at Birmingham, 
"Sheffield, and the Prize Students at Oxford
"and Cambridge. And it forms in effect an
"only the foundation for that division into
"district-branches, by which the healing Art
is characterized in our own day, (but also
the certainty of its continuance,). The advan-
tage of a division of labor is here as conspi-
rous as everywhere else; and the claims
of superior dexterity of hand must re-
main with the man who confines himself
self to Ophthalmic Surgery.

Having described the General Idea of Le
lens-act and mode of teaching, I now proceed
to give a brief Account of the Sequela of the
operation.

If no accident occurred in
the course of the operation from the unindedi-
 unsuspected of the patient, little or no inflamma-
tion in the majority of cases ensued, and no after-
treatment was required, the Patient appear-
ing as if nothing had happened to him.

But in a few cases considerable degree of in-
flammation pain so high as to occasion
complete disorganization of the eye.
From the facts established it may be
inferred that cases of violent inflammation
are few in comparison with those un-
attended with any subsequent affection.
Indeed it is well known that considerable
inflammation cases which required active
after-treatment to subdue, and in those in-
hance the inflammation pass to high
(as to occasion) complete disorganization
succeed depression according to the European.
Mode, and among the native patients in the Eye Infirmary at Bhowancee - poor, inflammation so often followed an operation that Sir Egerton even remarked it by saying, short, after any Father arrived in India, "that the Natives were little liable to inflammation after operations in general, but 'my Father found after teaching their eyes that they were as susceptible as Europeans are of that affection.

When inflammation supervened after an operation, the treatment pursued by Sir Father was invariably on European Principles not deviating the Native Mode so efficacious.

The number of secondary cases following the native mode of operation was not more than that by the European system.

Sometimes it has happened in my Father's practice that cases which appeared to need a second operation, and which in England would probably have undergone a second operation from the anxiety of both the Operator & Patient for restoration of sight, have in time spontaneously disappeared leaving the Patient in the enjoyment of sight.
Among the number was a singular case of a Habur (Negro) named Khamakah, who on the 29th of March 1825 was cooked in the presence of Dr. Chalmers and Capt. Armstrong by Hudson Singh Native Student. The cataract proved to be a cassingne with a solid cebear, and in consequence of the turbidness of the aqueous humor occasioned by it, and the extreme lenticular-ness of the Patient under the operation, these Gentlemen had not to distinguish any idea of the native mode of coughing as could have been wished. No inflammation however ensued. When the aqueous humor became transparent, the glaze crystalline lens was observed to have risen in the sphere of vision. The man became blind as he was before the operation. A few days after, my father perceived in the upper part of the pupil a black segment of a circle, and the man told him he could see light a little better than before but he could not discern objects. Convinced that the process of absorption of the crystalline lens had commenced my father resolved to wait the result of this case for some time before suspecting him to a second operation. In a short time the crystalline lens began to move about.
behind the Pupil on every motion of the Eye, and its attachment became gradually less firm, till at length, on the 1st of June following, the Lens, by a spasmodic contraction of thevide eye, was forced into the Anterior Chamber.

On the 6th of the month Runneal came down to

ther Splendid home that had happened to him on that day. My father had a favorable oppor-

tunity of pointing out to the Native Medical

Students of the Medical Institution a diseased

Lens constituting Cataract, and the screens of

Nature in its solution, when removed with

A very small portion of the Lens seemed to

have been absorbed behind the Iris, but in

the Anterior Chamber the circumference of

the Lens was speedily removed. A small

part of the Nucleus however still remained,

but there was every prospect of its gradually

disappearing.

In the course of my Father's exploration of the Indian

Source of Cocchicine, he several times met with

that peculiar kind of Cataract attending

the appearance of Anthracosis, which Sir A

Adams particularly adverted to in his admir-

able work on Cataract. Speaking of Cocchi-

Cataract. Sir Jem Adams states "when the
"opacity, is in the anterior part of the Membrane
"it is easily discernible, but if the posterior part
"alone of the capsule is the seat of disease it is
"with more difficulty ascertained, and it will
"often require a strong light to fall on the eye
"after the Pupil has been previously dilated
"by the Belladonna before its exact situation
"and extent can be seen. I am induced to point
"out the latter species of the disease, because as
"far as I am able to learn it has not been spe-
cifically noticed by any writer on the subject of
"Cataract, and that recently been uniform-
"ly ascribed where it had been pronounced a=
"to Mauro's by many of the most experienced
"Gunists.

"While my Father was in Bath up-
"wards of fifty years since he was consulted by
"Mr... a Gentleman engaged in an extensive
"brewery there, who had been blind for near-
"ly twenty years, from Cataract which he near-
"ly resembled the natural color of the Pupil,
"that his case had been considered and pro-
"nounced by Guta Serena. He had three times,
"during this period, gone to London, to obtain
the best advice. The opinions uniformly expressed of his case, to the time of my Father seeing him, having been uniformly unfavorable, health together concealed them from my Father, under the impression that his knowledge of them would prevent him from operating, i.e., depositing the opinions of many eminent practitioners, and was my Father aware of time, nor the length of time he had been blind, until the operation for Cataract had actually been performed by him upon one of his eyes. The result of this operation, was in the highest degree successful, for, after the retina recovered from the rigor, which its subsidence for so many years had occasioned, his vision was perfectly restored, and with the assistance of Cataract spectacles, he was able to read, and write, nearly as well as ever he did.

In support of his views my Father had drawn up the following list:

Register of Cases of Cataract operated on by relatives according to the Indian Mode from the 1st of July A.D. 1824 to December 31st 1825.

From the 1st July 1825 to Oct. 15th, 1826, 34 cases were looked by Intervene his homestead Charlot. Of these for 2 eyes by subsequent inflammation were discharged; 14 secondary Cataracts were formed, and the result of the case, not ascertained in consequence of the patient left Calcutta deposit two after the operation.
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**Remarks:**
- S.B. departed on a second time with leave.
- S.B. not accompanied.