

A Thesis.

*On the Native
Indian.*

Mode of Louching

By

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The Native Mode of Couching.

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, Cooper and Sir Wm 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 Mahomedans and Hindoo Scults 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 Dukes and Ryzas of Calcutta who are by the Natives considered eminent 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 Asiatic works such as Ranson Boaler, Blue Sena, Shurchool Ashab. or Almut, Sudees, Pufusee, Soosriit, and Aidann &c. And it is named in the Arabic language Nazoolool Ma / Deposition of Water; in Persian Chi, Murwarced, / Pearl Drop, /

in Hindee *Proseabund*, and in Sanscrit *Musti-si-*
-bind, both meaning Pearl Drops, but it does not
 appear in any one of these works that an accu-
 rate account of it is contained; and as the Native
 Practitioners / both Mahomedans & Hindoos / are
 extremely deficient in knowledge of Anatomy
 it is not surprising that they should be so
 little acquainted with the Nature & Seat of dis-
 eases generally. The Oculists who are in the ha-
 bit of operating on this organ have no know-
 ledge of the Structure of the Eye, and therefore
 it cannot be supposed that they can have an
 idea of the Nature & Seat of Cataract. Few Native
 Medical men I imagine have had the curiosity
 to dissect and examine the eye of an animal
 to learn its component parts, for when my Father
 occasionally dissected an eye of a Goat or a Sheep
 before them they expressed surprise at its con-
 tents, and their admiration of the wonderful pow-
 ers of the Creator in the fabrication of the Eyes
 of animals.

The Hindoo & Mahomedan Oculists who in the Ara-
 bic Language are denominated *Richhaul* and
 in Hindee *Sutheea*, conceive that from the com-
 -bined influence of Phlegm and Bile a drop of

bad Water issues from the Brain into the Eye; that in the course of time the period being unlimited, this Water becomes turbid constituting the disease called *Moteabind* or *pearl* *Drop* from its supposed resemblance to a Pearl in the Eye; that so long as mere turbidness remains in the Water, and the Patient is capable of discerning objects the Disease is pronounced to be *Kiucha* or unripe, and unfit for an operation; and that when the turbidness & coagulation of this Water are so great as to exclude the rays of light; the Malady is then said to be *Phukha* or ripe and it is 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 *Senticular Cataract*, they assert to be the most favorable for an operation, and as the color declines gradually from white to black the Malady is considered less and less favorable for *Couching*. Of the Divisions of Cataracts into *Senticular*, *Capsular*, *Milky*, & *Casous* they have not the remotest idea, every case being considered by them as consisting of

good or bad Water. In dark colored Cataracts whether the Patient be capable of perceiving light from darkness or not, they decline Operating from a persuasion that the quality of the exhumated Water in the Eye is so vitiated as to render hopeless an Operation. The dark colored Cataract they invariably confound with that peculiar dark Appearance of the Pupil, which distinguishes *Sutta Serena* and *Amaurosis*. 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 not the slightest knowledge. They have however, for this Disease in ancient Sanscrit Medical Works three names. *Seemir*, *Kujjulbind*, and *Kaunch*. The first, I believe, means total blindness from affection of the optic nerve; the second a Drop of bad water, or water black as soot; & the third, implies *Sutta Serena* merely. In the Arabic Language *Amaurosis* is denominated *Boo Flaum* or *Blur*, and in Persian *Bouftan*, i. e. *Blence*, both meaning privation of sight. In the Arabic Works adverted to, and in particu-

lar that of Avicenna, Cataract termed *Kar-pool-ool* /
Ma / deposition of Water, is stated to be a peculiar
 kind of Humor which gradually thickens and coa-
 -gulates in the aqueous Humor of the Eye; and altho'
 the component parts of the eye are described by
 Avicenna with tolerable accuracy, yet the na-
 -ture and seat of Cataract seems to have ^{been} un-
 -known, when his Works were written. And the sub-
 sequent Asiatic 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 parts
 of the eye as contained in a work by Avicenna entitled
Quaestio Proalee Abui Sena, for the general informa-
 -tion of the profession who are unacquainted with the
 Arabic Language. The coats of the Eye are called
Tubiqant / Layers / the Humors *Rutobant* / Secre-
 -tion / the Optic Nerve *Sub Suleeb* / decussating
 nerve / and the Muscles of the Eye *Arzilant*.

The portion of the Sclerotic coat which is invisible
 in the socket is called *Tubku Suleeb* / dense layer /
 and the part which is apparent is named *Mulhi-
 -hinia* / fleshy / the Cornea is called *Quruneea*
 / horn-like / the Choroid coat *Mushimee*, *Guh*
 / Chorion-like / the Iris *Anubee* / grape-like / the

Pupil Insan vol Aeen / Mortal part of the Eye, & the Retina Shubuksee, gub / Net-like. The Aqueous Humor is named Rutoobiki Byrgea / Secretion like the white of an Egg; the Crystalline Lens Rutoobut Juleedel, gub / Humor of the Appearance of Ice; & the vitreous Humor Rutoobut gupajee gub / Glass-like Humor. No mention is made of the Cavities constituting the Anterior & Posterior Chamber, nor of the Ciliary Ligament and Processes, from which it may 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 & Seat 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~~ was demonstrated to be the seat of Cataract. Remedies in the incipient state of Cataract are specified in the work of Avicenna as well as in other Asiatic publications, but they are vague as the Ideas of the authors are inaccurate as to the Nature of Cataract.

The remedies in the incipient state of Cataract consist principally of Emollients besmeared over the exterior parts of the Eye; purgatives com-

= posed chiefly of Aloes; mild sternutatories; aromatics, & Nephatics and corroborants to purify the humors of the Brain and so strengthen the System, with a view to obviate further deposits of bad water from the Brain, & thus arrest the progress of the Malady. But after it has completely formed the only remedy enjoined is Couching called in Arabic Kūdūkh (which means to displace. This operation, and it is the only one performed by Native Oculists for every kind of Cataract, is in Hindostance denominated Aukh binana, (repairing the Eye). The Couching Needle according to the Arabian Authors is named Mihit, & it appears to have been somewhat similar to that which has been described by Celsus & Pliny who flourished in the first century of the Christian Era, as the Eye was perforated and Couched with one 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 Celsus, but its antiquity has not been,
as far as I can learn, ascertained.

My Father, having heard much of the Na-
-tive Mode of Couching in all Cases of Cataract
and conceiving it to be impossible for any one
to operate on the Eye without a perfect know-
-ledge of its Structure, his curiosity was great-
-ly excited to see the operation performed; but
it was not for some time that an opportunity
was afforded him of witnessing what could
-~~could~~ be done by the Hands of a Native Oculist.
In 1824 information reached my Father that
Sir J. Birch Magistrate of Calcutta had been
restored to sight by an operation from the
hands of a Mussulman resident in Calcutta,
he lost no time in enquiring for him, & in pre-
-vailing on him to convince him (my Father) of
his ability by operating on the Eyes of Cata-
-ract Patients who might be brought be-
-fore him. On the first of July of the same year
this Mussulman, whose name is Saib Courree,
couch'd the Eyes of four blind people in the
presence of Dr Adam at the General Hospital

4 on the third of the Month my Father for the first time had the gratification to see a Native, totally unacquainted with the Anatomy of the Eye, perform on three Cataract Patients, mechanically, as it were, yet with gentleness & dexterity, a highly interesting Operation.

Santowree who is about 40 years of age told my ^{Father} that he resided and practised as an Oculist 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 Kuddeea, and his late Grand-Father whose residence was at Burdwan had practised Couching for half a century; that from his Father at Kuddeea he had learnt the art, and that he used the same kind of Instruments which his Ancestors employed, with this exception; that instead of a piece of steel formed into the shape of a Lancet, he invariably made use of an English Lancet. The Instruments he uses are two in number, the Lancet to perforate the Coats of the Eye, and the Sulace or Needle to depress the Cataract. Round the upper part of the Lancet at about a tenth of an Inch from the point is wound

a piece of thread to prevent it penetrating the Eye beyond that extent. The Salace or Couching Needle is made of Copper of a cylindrical form of the thickness of a Crow's Quill & about five inches in length, tapering very gradually from the base upwards to within half an Inch of the Apex. The form of this half Inch of the Instrument / which I may call the Indian Couching 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 the ^{eye} farther 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 Native Mode of Operating for Cataract, might without much risk of injuring the Eye, from the circumstance of the Indian Couching Needle being blunt & without cutting edges perform the operation.

Prior to the operation it does not appear, that the Native oculists use any drug as the Bella-

= donna, Stramonian &c. to dilate the Pupil,
 from being unacquainted with any Medicine
 capable of producing such an effect. The Mahome-
 = dan & Hindoo Physicians, who saw the effect of the
 Belladonna and Stramonium applied by my
 Father, expressed the greatest astonishment, &
 told him they had never heard of their ap-
 plication, and could not have credited their
 influence on the Pupil if they had not them-
 = selves witnessed the fact. It is not long since the
 practice of dilating the Pupil has been revived
 by the Modern Physicians of Europe, altho' it is ad-
 = verted to by Pliny, who in speaking of the
 Herb Jimpernell or Anagallis, says, Pupilas
 dilatat et ideo hoc inunguntur. Dute quibus
 paracentesis sit. Of this passage the following
 translation is given by Holland the Trans-
 = lator of Pliny. The same Medicine Jimpernell
 likewise is good for to dilate the Tunicles that
 make the Ball or Apple of the Eye, and therefore
 it is an ordinary course that their Eyes be
 anointed therewith before hand who are to be
 pricked with a Needle for Couching of Cataract.
 Of the practice therefore in former times of
 dilating the Pupil previously to Couching,

the passage quoted affords indisputable proof, but I believe no mention of it is made in any Asiatic Medical work.

The Instrument being prepared the Mahomedan Oculist Saubourne who operated on the 3rd July 1824 in the presence of W. Swining Esq. Surgeon to His Excellency the Commander 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 objects 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 support it firmly with both his hands to prevent motion. The Oculist then seated himself on a *Murha* or Stool about a foot in height immediately before the patient, and placing on his waistband the hands of the patient, he made three Salutations invoking the Almighty to grant him success and then commenced the operation on the left Eye. Raising with the left thumb the Upper Lid (a Speculum being never used) he fixed on the crown

of the head of the patient the fingers of that hand, and directing him to look towards his nose, he in an instant with the right hand perforated the eye with a Lances. 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 Lances 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 Couching Needle (called by Sautcoosee, Sulace which in Hindee means a coarse Needle), and thro' the perforation the Needle was gently introduced as far as its beak in- to the Vitreous Humor, and afterwards allowed to remain pendulous from the eye for about half a minute, the Needle being supported on a Popil of Silk or Cotton placed on the cheek to prevent it moving about, the collapse of the Sclerotic coat on the beak of the Needle preventing it from falling out of the eye; and so long as the Instrument was kept free from motion no irritation was excited. At this stage of the Operation the Eyelids were

allowed to close, and the patient kept still, as possible. After the lapse of half a minute the Eyelids were reopened 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 together gently pressed downwards into the Vitreous Humour and retained there a few seconds. The apex of the Needle was then gently raised from the Lens, and on the latter rising 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 Tunics of the Eye, supported on a bit of Cotton placed on the cheek and the patient kept quite still. During this interval an ignited Pool (Ball 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 spasmodic 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 thro' his nose, and at the same time Sautcourse with his clasped 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; and if no opacity were perceptible behind the Pupil, 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. On 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, & 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, & 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 Sautcourse convinced my Father of the Native

Mode of Couching being not only simple but very effectual, and that this Oculist had only one mode of performing the operation.

No description can convey an accurate idea of the Native Mode of Couching; 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 dexterity of this Native Oculist in preparing the Crystalline Lens, was fully impressed with the belief that he possessed some knowledge of the Structure of the Eye and Nature & Treat 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 this 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 presented to him;

but what this white substance was, where it went after being displaced, and what became of it afterwards was known only to the Almighty. My Father ascertained that this Operator, 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 averse to operating, so long as the Patient had tolerably useful Sight, for then he considered the Malady to be Rucha or unripe, and in green and in dark colored cataracts, and in Cases which were attended with pains in the head, and incapability of the Patient to distinguish light from darkness 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 on 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 recollection 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 seven, but he said an eye once touched 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, & willing to submit to it.

Of cases of Amaurosis he judged by the dull black appearance of the Pupil, & loss of sight which he represented as the eye having lost its life, without the remotest notion 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 & 70.

On being asked how he could judge without knowing the Structure of the Eye, of the extent to which the Sulace or Indian Needle may be introduced, he replied, I had one precise extent prescribed to me, and from this I do not deviate whether the eye be

"Large or small; and finding when I had attained
 "Manhood that the distance between the marks 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 round the Needle at
 "this distance from the Point."

The cause of Cataract he ascribed to the com-
 bined influence of Bile and Phlegm, but what
 that influence on the Brain was he had not
 the remotest conception. He was aware that chil-
 -dren were sometimes born with it, that it re-
 -curred 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 sect 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. The after-treatment if inflammation ensued, was to apply on the Temple and Forehead Cataplasms composed principally of Turmeric and the leaves of some Narcotic Herbs and sometimes Opium ground together with a little Water, and if the inflammation were considerable, he opened the large Vein in the Forehead and ~~took~~ took from it 3 or 4 ounces of blood. The juice of the leaves and fruits of a variety of plants, (the narration of which would fill a volume,) he mixed with Water and ~~was~~ employed as a Collyrium, and he enjoined abstinence and confinement in a darkened room.

This I believe to be the whole which relates to Saub-cour's knowledge of the Malady his Mode of Treating 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 Treating, altho' he had practised 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 19th Nov 1824 my Father had the good fortune to meet with another Native Oculist a Hindu

= doo named Jhao Loll, of about 25 years of age
 who had arrived in Calcutta from Benares, and
 on that day saw him in his own House in the pre-
 = sence of the Students of the Native Medical Institu-
 = tion Couch successfully the right Eyes of two old
 women each between 50 and 60 years of age.

His mode of operating corresponds very near-
 = ly with that of the Mahomedan Quacks. But
 Jhao Loll makes the perforation with an Euro-
 = pean Lancet in the Sclerotic and other coats
 about $\frac{1}{10}$ of an Inch below the axis of the Pupil,
 and he is a little quicker, than his competitor
 in performing the operation after withdrawing
 the Needle which is similar to that used by Sant-
 = course, he applies on the eyelids 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 thick 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 Cobstun / Collyrium / is
 smeared all round the Orbit. A small bau-
 = dage is then bound over the Eye, and the ap-
 = plication allowed to remain two days. It is

them removed, and a fresh supply applied in a similar manner, after this nothing further is done. Two Patients who had undergone the operation in both eyes by Jhas Loll were brought to my Father as a proof of his success. One of the Patients had been couched ten days, the other 20 days, and they both appeared to my ^{Father} have recovered their sight with scarcely a mark of the perforation remaining.

The operation by these two oculists who are unknown to each other being similar, and corresponding with that which is practised, as stated by Dr Loll, by the Pratico oculists 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 practise their Art, but I believe they never leave their Homes unless on being called to some certain employment. All those that my Father saw in Bombay, were Moormen, and their general residence was in Gujurat. One of those Practitioners was a young man, the other aged; they came at different times, and were

unconnected with one another. The young man had, I understand, the most ~~delic~~ skillful hands of any person. He seemed to feel every thing that he touched with as much delicacy as a Spider, and the operations which my Father witnessed him perform~~ed~~ were executed with surprising skill.

Celsus observes that a Surgeon ought to be a young man, or of an ^{age} approaching to youth. The feeling, the resilience, the pliability of youth, with its perfection of sight are never more necessary than in the operation for the Cataract.

If any one will consult Celsus, he will find that his operation for the Cataract does not differ from the present practice of Leuro-jeans & doubles 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 practised 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 dissection; for an error even of a 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 man, 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 nor account of them; but on my ^{Father's} pressing him much to make some conjecture of the number 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 & soon returned to his country, and he never again saw him. He could have but little interest in deceiving my Father, but as is too frequently the case; he might wish 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 Oculists, 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 Couching, the Native Instrument will, in the generality of Cases of Cataract, be found to be more safe and manageable than the English Couching Needle, I believe.

To the Natives who wish to practice as Oculists the Hindostanee mode of operating appears preferable to the English mode of Couching, from the facility with which they can attain the Art even without being made acquainted with the Structure of the Eye and Nature & Seat of Cataract; 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 Couching Instruments can at all times be procured at a trifling expence in every part of Hindostan; and above all from the liability, if the Operator be a little expert, to injury of the

Eye 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 & 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 J. Adams, Secretary to the Medical Board, who has several times seen the Native operation performed, and W^m Swining Esq^r Surgeon to His Excellency the Commander in Chief who has himself several times in presence of my Father & me in the presence of Dr Abel Surgeon to the Governor General of India performed successfully the Native operation of Couching. Mr Swining's opinion, founded on actual experience is favorable to the Native practice & he joins my ^{Father's} ~~own~~ thinking it worthy of imitation even by European Professional Men who have not been in the habit of operating on the Eye, & who have not naturally a steady hand, from a conviction of its simplicity & efficiency he adopts it occasionally in his practice.

Several other Medical Gentlemen who have witnessed the Native Mode of Couching are, I believe,

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 ere long be generally known, and much more extensively practised by the natives themselves in every part of Hindostan than it has hitherto been.

So convinced was my Father of the Native Mode of Couching being safe & effectual, & within the compass of even inexperienced Practitioners, that, he resolved on teaching this Art / Stript of 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 practise 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 Sautcourse to search for & bring 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 successively brought my Father the Capable Students were allowed to practise in his presence, and the result warranted the continuance of the practice which bids fair, when more 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 Oculists in every part of Hindostan.

If Ocular demonstration of the safety & simplicity of the Native Mode of Couching had not been afforded ^{me} ~~me~~ I should never have ventured to allow the Students of the Native Medical Institution to practise on the living Eye, for the operation with an English Couching Needle requires on the part of the operator more than ordinary skill, & a thorough knowledge of the structure of the Eye, & perfect steadiness of hand, to prevent the Iris & ciliary Processes 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, & an ardent wish to render the Students useful as possible in India, induced ^{me} ~~me~~ to take upon himself

the great responsibility and anxiety in admitting of actual operations on the living eye by the inexperienced Pupils.

Precedence 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 on submitting to the operation & a repetition of the present on 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 houses, the number of failures which have followed does not appear to exceed that which usually occurs in Europe when the operation and after-treatment are performed and conducted by skillful and experienced Oculists. Sir W^m Saunders in his publication of 1819, states from the respectable authority of De Taraxa, La Courner & Roux, 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 $\frac{1}{4}$ of the whole. Admitting this proportion of failures from the Native mode of couching, the benefit of the operation will still be apparent, since $\frac{4}{5}$ of a 100 blind of Cataract, who have no chance of relief but by an operation, may probably be restored to sight in India by Native Oculists. A benefit immense 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, & Nature and Seat of the Disease incident 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 & 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 practise as Oculists 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 contemplation of the subject, is confirmed by the concurrent practice of mankind in every line of occupation and every part of the world in which perfect excellence has been made an object of pursuit. We see it in the most abstruse 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 not only the foundation for that division into distinct branches, by which the healing Art is characterized in our own day, but also the certainty of its continuance. The advantage of a division of labor is here as conspicuous as everywhere else; and the claims of superior dexterity of hand must re-

main with the man who confines him-
-self to ophthalmic surgery.

Having described the Native Ideas of cataract and mode of couching, 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 unsteadiness of the patient, little or no inflammation in the majority of cases ensued, and no after-treatment was required, the Patient appearing as if nothing had happened to him.

But in a few cases considerable degree of inflammation ran 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 unattended with any subsequent affection.

Indeed it is well known that considerable inflammation ~~arose which required active after-treatment to subdue, and in three instances the inflammation ran so high as to occasion complete disorganization~~ succeeds depression according to the European

Mode, and among the Native Cataract Patients in the Eye Infirmary at Bhowance - poor, inflammation so often followed an operation that Mr Egerton even remarked it by saying, shortly after my Father arrived in India, "that the Natives were little liable to inflammation after operations in general, but my Father found after Couching their Eyes that they were as susceptible as Europeans are of that affection."

When inflammation supervened after an operation, the treatment pursued by my Father was invariably on European Principles not deeming 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 Fathers experience 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 Kukur (Bengaler) named Runnah who on the 2nd of March 1825 was couch'd in the presence of Dr Newmarch and Capt. Armstrong by Pearson Singh Native Student. The Cataract proved to be a milky one with solid Nucleus, and in consequence of the turbidness of the Aqueous Humor occasioned by it, and the extreme Unsteadiness of the Patient under the operation, these Gentlemen had not so distinct an idea of the Native Mode of Couching as could have been wished. No inflammation however ensued. When the Aqueous Humor became transparent, the opaque 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 subjecting 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 & less firm, till at length on the 4th of June following, the Lens, by a spasmodic motion of the Eye, was forced into the Anterior Chamber.

On the 6th of the month Runneah came to my Father & shewed him what had happened to him & on that day my father had a favorable opportunity of pointing out to the Native Medical Students of the Medical Institution a diseased Lens constituting Cataract, and the process of nature in its solution, when removed *in situ*. 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 probation of the Indian mode of Coeking, he several times met with that peculiar kind of Cataract assuming the appearance of amaurosis, which Sir Wm Adams particularly adverts to in his admirable work on Cataract, speaking of capsular

Cataract Sir Wm 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 I have recently seen several in-
"stances where it had been pronounced a
"Maurosis by many of the most experienced
"Oculists.

"While my Father was in Bath up-
"wards of 2^y years since, he was consulted by
"Mr W***, a Gentleman engaged in an extensive
"brewery there, who had been blind for near-
"ly twenty years, from Cataract which so near-
"ly resembled the natural color of the Pupil,
"that his case had been considered and pro-
"nounced to be Gutta 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 similarly unfavorable, he alto-
 gether concealed them from my Father, under
 the impression that his knowledge of them would
 prevent him from operating, in opposition to
 the opinions of so many eminent Practitioners,
 nor was my Father aware of them, nor the length
 of time he had been blind, until the ope-
 ration for Cataract had actually been performed
 by him upon one of his Eyes. The result of this ope-
 ration, was in the highest degree successful,
 for, after the Kelina recovered from the torpor,
 which its Quiescence for so many Years had beca-
 sioned, his vision was perfectly restored, and
 with the assistance of Cataract Spectacles, he saw to
 read, and write, nearly as well as ever he did.

In support of his views my Father has
 drawn up the appended List.

Register of Cases of Cataract operated on by Pra-
 ctices according to the Indian Mode from the 1st
 of July 1824 to December 20th 1825.

From the 1st July 1824 to Oct. 15th 1824, 34 Cases were Couch'd
 by Sautcourse Mahomedan Oculist. Of these No. 2 Eyes by subsequent
 Inflammation were disorganized; in 2 Secondary Cataracts were form-
 ed, and the result of one case, not ascertained in consequence of the
 Patient left Calcutta 2 days or two after the operation.

My Father taught Hindoo Oculist, 6 Eyes were couch'd & all successful.
 and the following were by Mr. Sautcourse Native Student. viz.

| Names. | Sex | Sex | Hindoo | Mahomedan | Age | Period of Blindness | Duration of Eye operated on. | Date of Operation | Successful | Unsuccessful | Secondary Cataracts | Remarks |
|------------------------|-----|-----|--------|-----------|-----|---------------------|------------------------------|-----------------------------|------------|--------------|--|--|
| An old man | M. | " | H. | " | 45. | 1 Year | 1. | Aug. 11, 1824 | Success | " | " | Light imperfect |
| Roshun Alee | Do | " | " | Mo. | 55 | 1 1/2 do. | 1. | 21 st Do. | " | " | " | |
| Shaikh Mushoo. | Do | " | " | Do. | 40. | 1 Do. | 1. | Do | Do. | " | " | |
| Shaikh Khan Mohumud | Do. | " | " | Do | 45 | 1 Do. | 1. | Sept 8 th | Do. | " | " | |
| Jogee naw. | " | F. | Do | " | 38. | Do. | 1. | 24 th Do. | Do. | " | " | |
| Moradoun. | " | Do. | " | Do. | 44 | 2 Do. | 2. | 26 th Do. | " | Do. | " | Froze subsequent violent inflammation. |
| Rumhee. | " | Do. | " | Do. | 55 | 1 Do. | 1. 10. Eye | 7 th Nov. | Do. | " | " | |
| Janee Ayan | " | Do. | " | Do. | 40. | Do. | 1. | 15 th Do. | " | Do. | " | This case was combined with Amaurosis. |
| Fajir Alee | Do. | " | " | Do | 45 | 1 1/2 Do. | 1. | 15 th Do. | Do. | " | " | |
| Fakir perhid Mookerjee | Do. | " | Do | " | 40 | Do. | 1. | 6 th Decr | Do. | " | " | |
| Rechee Ram. | Do. | " | Do | " | 36. | 2 Do. | 1. | 21 st Do. | " | Do. | " | Com. fined with Amaurosis. |
| Bahoo Ram | Do. | " | Do | " | 45. | Do. | 1. | 14 th Jan. 1825. | Do. | " | " | |
| Puroun Mullah. | Do | " | Do | " | 40 | Do. | 1. | 6 th Feb. | Do. | " | " | |
| Jumaunee. | " | Do. | " | Do. | 35 | 1 1/2 Do. | 1. | 13 th Do. | Do. | " | " | |
| Shaikh Kureem Bukhs. | Do. | " | " | Do. | 45 | 2 1/2 Do. | 1. | 19 th Do. | Do. | " | " | |
| Hingun | Do. | " | " | Do. | 40 | 1 1/2 Do. | 1. | 29 th Do. | Do. | " | " | |
| Joo, Amaw | " | Do | " | " | 35 | 2 1/2 Do. | 1. | 24 th Do | Do | " | " | |
| Suroop. | Do | " | " | Do | 35 | 2 Do. | 1. | 25 th Do. | Do | " | " | |
| Ramja. | Do | " | Do | " | 43. | 1 1/4 do. | 1. | 14 th March. | Do. | " | " | |
| Kunneah | Do | " | Do | " | 38. | 2 1/4 Do. | 1. | 24 th Do. | Do | " | " | |
| Rumzaun | Do | " | " | Do. | 46. | 3 1/4 Do. | 1. | 30 th Do. | Do | " | " | |
| Kirrae Khan. | Do | " | " | Do. | 50. | 2 Do. | 1. | 5 th April | " | " | S.B. Operated on a 2 nd time with success - | |
| Shaikh Munnoo. | Do. | " | " | Do | 40. | 4 mos. | 1. | 15 th Do | Do | " | " | |
| Shawal Mullah | Do. | " | Do. | " | 50. | 2 yrs. | 1. | 27 th Do. | Do. | " | " | |
| Alleer Khan | Do | " | " | Do | 50. | Do. | 1. | Do. | " | " | Do. | Result not ascertained. |
| Rampeearae | " | Do | Do | Do | 60 | 1 1/2 Do. | 1. | 6 th June. | Do | " | " | |