of wearing instruments. Those measures have since been tried in another institution, without success.

It generally happens, when the tendons have been divided, and the proper position of the limb attained, that the muscles, if they be not completely paralyzed, gain strength, and the patient may in time be able to walk very well. Sometimes, even when we have not that hope, it is worth while to divide the tendons, and extend the foot, with a view of enabling the patient to bear more comfortably upon it.

You have already heard that the growth of these paralyzed limbs is often imperfect—that they are short as well as wasted. You are not on that account to suppose that the abnormal position of the foot is a consequence, a compensation as it were for the deficiency of length in the extremity, because the same thing sometimes occurs in both extremities, or in one without there being any inequality of length. I should not have thought it necessary to allude to such an idea, did I not know that it is entertained by some persons whose opinions may have weight with you.

A condition very much like that of clubfoot is often induced in adults by chronic ulcers upon the legs, more particularly when they occur in the neighbourhood of the internal malleolus. You may have observed that in most persons who have been long afflicted in this way the heel is drawn up, so that they cannot place it upon the ground, the sole is contracted, and the toes are bent back upon the metatarsus; sometimes the foot is twisted, and the outside of the instep is placed upon the ground when the patient endeavours to walk; all which is probably caused, as in clubfoot, by the inaction and consequent shortening of the flexor muscles of the foot and leg.

Another affection, in some respects similar both in its pathology and treatment to clubfoot, is strabismus. A child has a convulsive attack, occasioned, perhaps, by the irritation of teething; the attack passes off, but leaves one of the muscles of the eye, generally the external rectus, paralyzed, the eye is in consequence rolled inwards by the unopposed action of the internal rectus, which in course of time becomes shortened after the manner I have described when muscles are under the influence of clonic contraction; so that, although the paralysed muscle may resume its function, it is not able to stretch its antagonist sufficiently to bring the eye again to proper position. When by an operation the internal rectus has been divided, the external muscle being free to act, rolls the eye outwards to an extent proportionate to the force it has re-acquired; this sometimes exceeds, at others falls short of, the desired point.

You see that squinting differs from clubfoot, inasmuch as the latter results from a paralysis of all the muscles alike, and the distorted position is assumed in consequence of the superior clonic power exerted by some of them; whereas squinting seems to be occasioned by a loss of the balance that should exist between the antagonising muscles, from some imperfection in the nervous influence acting upon one or more. The chance of cure by operation depends upon the force remaining in the enfeebled muscle; this may be tested with some accuracy by desiring the patient to close the sound eye, when the influence of volition which is now directed more fully upon the squinting organ should enable it to assume its proper position; the power thus temporarily acquired ceases, and the strabismus returns as soon as the other eye is opened, and brought into use again.

You should know that squinting often depends upon some imperfection in the eye, such as an opacity in one part of the cornea, or a want of sensibility in a circumscribed region of the retina, the eye being under these circumstances habitually rolled into such a position as affords the best opportunity for vision. It is worthy of remark, that the strabismus so commonly associated with amaurotic affections, is almost invariably of the diverging kind. This again I believe is explained by the abstraction of volition from the unsound organ; for the direction of the eyes with converging axes usually maintained, is a forced position dependent on the continuance of a semi-voluntary effort, and changing as soon as that is removed. No wonder, therefore, if this effort ceases when one of the eyes has become useless, or comparatively useless, and that the organ then reverts to the position which is most easily preserved.

The diverging strabismus is an important symptom in amaurosis; it indicates that the organ has ceased to be employed in ordinary vision, and the prognosis in such cases is very unfavourable. The eye which has thus, as it were, confessed an incapacity to assist and co-operate with its fellow, and has in consequence retired from the axis of vision, is very seldom restored.

Although our time has been occupied this morning in considering these two subjects, (the increase of irritability and the effects of the clonic contraction of muscles,) occurring as pathological phenomena, you must not think that we have by any means exhausted either of them. There still remain many interesting points in connection with both, which time will not allow me to enter upon. I have thought it worth while to say thus much upon them because they have an important relation to certain diseases which are of frequent occurrence, and because they are themselves the cause of various affections and distortions requiring surgical treatment. Their relation to an atrophied or weakened state of the parts concerned is so constant (though they may not always depend upon it as a direct cause,) that the present seemed to be the most favourable opportunity for speaking to you respecting them.

STATISTICS OF BLINDNESS.

By AUGUSTIN PRICHARD, Esq., M.R.C.S.,
SURGEON TO THE ASYLUM FOR THE BLIND, BRISTOL.

(Read before the Quarterly Meeting of the Bath and Bristol Branch of the Provincial Medical and Surgical Association, December 21, 1849.)

The following brief account of the causes of blindness is drawn up from the examination of 100 cases, taken in order as they have fallen under my notice, as surgeon to the Asylum for the Blind in this city.

I have arranged the causes under five heads,—viz.,

Injuries to the Eye, Small-pox, Cerebral Disease, Inflammation of various kinds, and *Congenital Causes*. I have added a few remarks on the most striking points with reference to the causes of blindness, and have concluded this brief notice with a statement of the present condition of the remains of the organs of vision in these hundred cases.

CAUSES OF BLINDNESS.

I.—*Injuries.*—		
1. Cuts and punctures	7	
2. Blows from stones and blasting rocks	5	
3. Shot with arrow	2	
4. Shot with gun	1	
5. Burn	1	
6. Means not specified	1	
		17
II.—*Smallpox.*—		
1. Vaccinated	2	
2. Not Vaccinated	6	
3. No evidence	5	
		13
III.—*Cerebral Disease.*—		
1. Connected with epilepsy and other fits	3	
2. Following fevers	7	
3. With headache, &c., but no fits	12	
4. After a blow on the head	1	
		23
IV.—*Inflammation.*—		
1. General internal inflammation ...	7	
2. Purulent ophthalmia of adults including all cases after infancy ...	5	
3. Purulent ophthalmia of newly-born infants	16	
4. Cases which became blind in earliest infancy, about which there is no history, but which from appearance of the eyes were in all probability cases of *ophthalmia neonatorum*	6	
5.—Following measles	2	
		36
V.—*Congenital Causes.*—		
1. Amaurosis	4	
2. Cataracts with amaurotic or weak condition of the retina	5	
3. Other congenital causes	2	
		11
Total		100

I. Of the 17 who became blind from accidents, only 7 met with accidents in both eyes; in the large proportion of 10 out of 17 there was an injury in one eye only, and the other was lost from inflammation, or from atrophy, subsequent to the injury, and without doubt consequent upon its occurrence, or according to the common expression, from sympathy between the two eyes.

II. Two of the small-pox cases had been vaccinated; six had not; and in five there was no evidence, but in all probability they had not received its protection—an opinion strengthened by the very fact of their knowing nothing about it.

III. The cases of blindness caused by cerebral disease are all of them amaurotic. In one instance only have I had an opportunity of making a *post-mortem* examination. This was the case of an epileptic who had been blind 57 years. In his brain I found several ossified deposits as large as nuts, apparently in the pia-mater, but imbedded in the substance of the brain. The optic nerves, as is the case with other organs which are long unused, had become shrivelled and contracted into mere fibrous cords. He had preserved his intellect up to the date of his last attack, notwithstanding that he had been deaf and blind for 57 years, and had had at least three epileptic fits *per diem* through that long period. The number of cases of blindness following fever (7 per cent. of the entire number) is larger than I should have thought probable, considering the vast number of fever cases which occur, and the rareness with which organic lesion of the brain follows in those instances which recover from the fever.

IV. Of the cases of purulent ophthalmia, I may just remark, that as no serious disease is more certainly manageable and curable, if treated properly and in early stages, (*i.e.*, before the cornea has become opaque or has sloughed) than this is, it gives us at least 16 per cent. (probably never 20 per cent.) of these 100 blind persons, who but for neglect of some kind would never have become objects of charity or inmates of a blind asylum.

V. Of the 11 congenital cases, 4 were amaurotic, without cataracts; 3 of these have brothers and sisters blind:—thus, one had a blind brother, one a blind sister and brother, and the other two blind sisters.

I could collect no evidence respecting blindness in other members of the family, but I may remark that hereditary cataract occurs generally in the curable form of the disease, and as such would not be likely to supply us with candidates eligible for admission into this establishment; and also that, according to my experience of cataract cases, a family tendency shows itself more frequently among brothers and sisters than between parents and their children. These are, however, 5 cases of congenital cataract with defective condition of the sensory apparatus of the eye, but there is no evidence of their originating in an hereditary tendency.

Of the hundred cases, 47 are totally blind, *i.e.*, unable to discern light from darkness, 53 are able to see the light in greater or less degree. Two of the 47 affirm that their eyes are weak to the light when the sun shines brightly, although they are entirely unable to distinguish light from darkness; if this is confirmed by further observation, it will be an important physiological fact with regard to the function of the fifth pair of nerves.

The account of the causes of blindness is of course the most important consideration in a practical point of view; and when we remember that 20 per cent. of these poor blind people lost their eyes from purulent oph-

thalmia, and nearly 10 per cent. from small-pox, through neglect of vaccination, it gives us a sum total of nearly a third of the whole number, whose blindness might have been prevented—in the former case by suitable treatment, and in the latter by vaccination.

In conclusion, I have drawn up a very short table of the present condition of the eyes of these 100 cases:—

PRESENT CONDITION.

	Both.	Right	Left.
Eyes sunk	20	23	14
Staphyloma	5	9	11
Amaurosis	21	2	2
Amaurosis with cataracts ...	5	2	0
Adhesions between the cornea and iris, and iris and capsule, with closed pupil ...	2	5	13
Corneal opacities	2	4	5
Total	55	45	45

Of the results thus obtained, there is one point which is triking, viz., the much greater frequency with which the right eye was sunk, when only one was in this state, being in proportion of 23 to 14. Most of the staphylomatous cases, after a considerable time, came to this termination, either by bursting or by becoming so painful and prominent as to render it necessary to resort to the disagreeable operation of removing the anterior part of the eye. I have found it requisite in three instances out of this hundred during the last two years, in this way to transfer a case from the list of staphylomatous to the list of sunken eyes.

ON THE TREAMENT OF CHOLERA.

BY HERBERT GIRAUD, ESQ., BOMBAY,
SURGEON TO THE JAMSETJEE JEEJEBHOY HOSPITAL.

To the Editor of the Provincial Medical and Surgical Journal.

DEAR SIR,—Having received lately a letter from my brother, Professor Giraud, of Bombay, in which he gives an account of his treatment of cholera, I have transcribed that part of it which relates to the disease, and now forward it to you, thinking it possible that you may deem it sufficiently interesting to render it worthy of a place in the pages of some future number of our *Journal*.

I remain, dear Sir, yours very respectfully,
FREDERICK FRANCIS GIRAUD.
Faversham, Kent, January 14, 1850.

Bombay, Nov. 16, 1849.

MY DEAR FREDERICK,—You have often heard from me that cholera had not visited Bombay for three years, an unprecedented period of total absence of the scourge. But whilst you were all in alarm at its invasion in England, it broke out amongst us here; its extent, however, was comparatively limited. The first cases occurred near our old house, about the first of August, and it then made its attacks here and there throughout the island, and amongst the shipping in the harbour, whilst at the same time it prevailed on the main land, as well as in the higher countries of the Deccan. As has been always observed, the first cases were the most severe, and as the number of cases decreased about the beginning of October, so their severity was lessened. Between eighty and ninety cases came under my care in the Jamsetjee Hospital, and never since I have been in India have I had an opportunity of studying the disease so carefully as during the last epidemic. Besides my own cases, I had the advantage of seeing Morehead's with him, and his experience has been of great advantage to me. We find that the disease most commonly attacks people who are in a low state of health; and generally during its prevalence attacks of diarrhœa and derangements of digestion are very common. We also observe, in a very great majority of cases, a preliminary stage, in which nausea, giddiness, and diarrhœa precede the more characteristic symptoms of the disease. When this preliminary stage begins, we move the patient from the locality in which he has been living, let him drink pretty freely of mulled spiced port wine, or hot brandy-and-water, and restrain the tendency to diarrhœa with vegetable astringents and opium. We *fancy* that a great many cases are in this way prevented from passing into cholera. When the disease is becoming fully developed, the evacuations incessant and watery, we have recourse to ACETATE OF LEAD, giving a pill containing two grains of it, with one-sixth of a grain of opium, every half hour; and certainly I have never seen anything like the acetate of lead in checking the incessant purging. We sometimes continue it till the patient has taken from forty to sixty grains.

Where the pulse becomes small and rapid, the surface cold and clammy, and the voice sepulchral—where, in fact, collapse is commencing, we give, at the same time with the acetate of lead, repeated doses of brandy, sometimes with æther, but not with ammonia, which would decompose the lead salt. Of course in this stage we use the usual means of applying artificial heat, and keep up frictions on the surface, and those of common salt are the most efficient.

The vomiting does occasionlly defy every remedy; I have tried creosote and chloroform, but without avail. In the state of complete and almost pulseless collapse, we acknowledge that all our appliances are valueless, and we are cautious not to attempt too much, —not to pour in too much brandy or other stimulants, lest if the flickering flame of life should re-kindle, we may have cause to repent our indiscretion. But the slightest signs of reaction are the signals for the recommencement of a rational system of treatment. We now give either small and frequently repeated doses of calomel, or in certain cases ten grains twice in the course of the day; and if there be the slightest tendency to head affection, or if the bowels be not relaxed, we do not combine the calomel with opium.