possible at lunch time, but the stomach is not accustomed to this kind of food at the earlier hour, and it will certainly resent it on a day of such anxiety.

Besides, why should it be concentrated? A little extra water in the stomach can certainly do no harm. As every medical man knows, if a patient be starved all night, and given nothing whatever by the mouth in the morning, he can still bring up fluid which would be at least as likely to choke him as the extra water would; while, on the other hand, the amount of straining required to bring up this thick viscid mucus is greatly in excess of that required to get rid of the more liquid substance, and the patient's discomfort is increased accordingly.

Contrary to the usual belief, ether cases generally suffer less discomfort after regaining consciousness than chloroform cases; and this, I think, is partly explained by the fact that the secretion in the stomach is more copious and liquid when ether is employed. So I have gradually been converted to the opinion that the want of food, and particularly of fluids, is an important factor in causing the disagreeable after-effects which are usually falsely ascribed solely to the anaesthetic.

It should further be remembered that the stomach develops a habit of expecting, and demanding in no uncertain manner, a meal at regular definite times; and that, if it be disappointed in this expectation, it will cause its owner to suffer if he takes an anaesthetic, goes on board ship, or often even if he merely happens to encounter some unpleasant smell. Hence I think it is most important that the patient's usual meal-times should never be upset immediately before an operation. The quantity of food allowed, and to some extent the actual kind of the food, should be carefully regulated, but the hour at which it is administered should not be altered.

Thus, supposing an operation (in a healthy subject) is to be performed at 9 o'clock in the morning, the patient should be left asleep, unless he awakes of his own accord, until at any rate 7.30, when he may be given his enema. Then, if he be accustomed to breakfast at about 8 o'clock, he may have a thin slice of bread-and-butter, or a small piece of toast, with as much tea to drink as he desires. He will then be able to settle down much more contentedly to his newspaper until the surgeon arrives. Tea is, I think, preferable to coffee, as the former is usually taken with considerably less milk than the latter.

If the operation be at 10 or 11 o'clock, he may have a similar breakfast, but with (say) two thin slices of bread-and-butter, if he wishes, or a somewhat larger piece of toast, provided his usual breakfast hour be 8 o'clock. If, however, he be accustomed to breakfast at 9, the amount of solid food should be as in the first case, unless the excitement of the approaching ordeal has caused him to awake earlier than usual, under which circumstances he may also have his small meal a little earlier.

If the operation be arranged for 12 or 1 o'clock, he may be given an ordinary light breakfast at the usual time; meat, however, being avoided. A glass of water might, in this case, be taken with advantage at about 11 o'clock.

For an operation at 2 or 3 o'clock, the ordinary breakfast should be taken at the usual time, and a cup of hot clear soup or beef-tea at 1 o'clock, together with a little water to drink.

This same arrangement is suitable for a case to be done at 4 o'clock, except that in this instance a little toast, bread, or biscuit may be given with the soup.

If 5 o'clock be the appointed hour, the breakfast and lunch should remain the same, but in addition a cup of tea may be taken at (or a little before) 4 o'clock.

If 6 o'clock be chosen, the patient may have his ordinary breakfast, and then a light luncheon consisting of fish or poultry at about 1 o'clock, followed by tea with bread-and-butter at 4 o'clock.

Finally, a patient who is to be operated upon at 7 o'clock may partake of his usual breakfast, lunch, and tea, simply avoiding currant cake or anything rich at tea-time. No fruit of any kind should ever be taken on the day of the operation.

I need not carry this list further, as it is unusual to perform operations of the class I am now considering after 7 p.m., and I trust I have said sufficient to make it clear that more attention should be paid to the ordinary habits of the individual patient, in order to relieve him as far as possible from the discomforts of anaesthesia. I have

mentioned definite hours for the meals (8 a.m. for breakfast, 1 p.m. for lunch, and 4 p.m. for tea) merely for the sake of convenience. If the individual patient under consideration be accustomed to take his meals at some other hours, these should be substituted for the ones I have indicated. An exception may be made in the case of breakfast if the patient should awake much earlier than usual on the morning of the operation. In this case, if he feels inclined for food at an earlier hour than usual, there is no objection to his having it then instead of later.

In private practice there is not the slightest reason for neglecting to devote the requisite amount of attention to each case in order that the patient's habits may be upset as little as possible, though the matter may be somewhat more difficult in a hospital; first, because some definite routine is far more necessary in a large institution, and secondly, because hospital patients are more apt to swallow lumps of solid food without sufficient mastication than are the people one meets with in private practice. I do not think, however, that these difficulties would prove to be insurmountable if a genuine attempt were made; and the additional mental and physical comfort of the patient would be ample compensation for the extra trouble involved.

OPHTHALMIC SCHOOL CLINICS IN THE COUNTRY.

By R. BEATSON HIRD, M.D., F.R.C.S.E.,

BIRMINGHAM.

SCHOOL medical inspection cannot be regarded as complete unless the defective children receive the treatment they require. However interesting it may be to know the percentage of children in our schools who are suffering from various physical ailments, it is quite clear that the practical value must certainly lie in alleviating these. A nation's future depends on its children, and having found that many of them are physically defective, we must see that these are enabled to become healthy and useful citizens.

The treatment of defective school children has been occupying our attention for the past few years, and the question is still being debated as to who are to treat these children, and where the treatment is to be carried out. There are two classes of children to consider—namely, those dwelling in the towns and those who live in the country districts.

With regard to the town children, in some places the treatment is being carried out at the hospitals. At some of these special assistants have been appointed to cope with the much increased work, especially in ophthalmic departments, where the increase of refraction cases has threatened to strangle the routine work. Objection has been raised to the use of the hospitals for the purpose of treatment of these cases, though they are mostly drawn from that part of the population who rightly belong to the hospital class.

Another alternative to treatment at the hospitals is that of holding "school clinics," and paying medical men for undertaking the work. Such is being done in some parts of the country. It is of my experience in this matter that I wish to write. I do not intend to discuss the merits of one system as opposed to another. What the medical profession want to know is what is being done in different parts of the country, and how is it working with regard to all parties concerned. Then, perhaps, we shall be able to evolve some scheme which will work smoothly.

The question arises, What is to be done for the children in the country districts where there are no charitable institutions, and where cases demand special treatment? Of course, the children can be sent up to the towns to attend the hospitals. In the remoter country districts this has obvious disadvantages. Some parent or relative will have to accompany the child, thus adding to the expense. The greater part of a day has to be given up, often entailing a loss of wages to the parent. The expense in many cases is too heavy to be borne, and out of all proportion to the wages earned. There are other disadvantages, too, such as the "ticket system" and limitation of numbers, which are in vogue at some hospitals. In such cases the child runs the risk of not being seen after all. If the treatment can be carried out in these cases free

from many of these disadvantages, I think an effort ought to be made towards that end.

In the autumn of 1908 a voluntary association was formed in North Worcestershire, called the "School Medical Association." It was formed with the object of raising funds to undertake the medical treatment of the children found defective in the Bromsgrove District Council Schools. The success of the enterprise was largely due to the very energetic chairman. An appeal for funds was sent out, and on this was a statement with regard to the objects of the association, from which I quote the following:

This voluntary association was formed to follow up the education authority's medical inspection of elementary school children in the Bromsgrove and Lickey district. Up to now the authority has merely pointed out the existence of defects, and beyond informing the parents that defects existed which should be attended to, has taken no action as regards prescription or treatment, and it was found that many parents were—owing to lack of means and other causes—quite unable to take the necessary steps. The association deals more particularly with the treatment of defective eyesight, and the Worcestershire County Council have given permission for the free use of a room at the various schools for the carrying out of the oculist's work.

In the event of the parents not bringing the child for the initial examination, one of the association's visitors calls and endeavours to influence the parents.

The association considers cases where parents are unable to pay for the spectacles or drugs, and where thought advisable, make a grant towards part or the whole of the cost. Hospital notes are procured for any special cases that can be better treated at a Birmingham hospital, and drugs, etc., are supplied if required.

It is not the intention of the association to assume the responsibility which properly belongs to the parent, and where assistance is given towards the provision of spectacles they will be retained in care of the head teacher for the use of the children at school only.

The association now appeals for annual subscriptions, guaranteed for a period of three years, or for such shorter time as may be necessary, until the work may be provided for by the regulations of the local authority or the Board of Education, and invite your co-operation in the work.

It will be seen from the above that the association wished to remove certain of the disadvantages which I have spoken of, but intended that the parents should defray most, if not all, of the cost of drugs and glasses, the association paying the medical man for his services. This has worked well, and I believe over 80 per cent. of the parents have paid for the spectacles and drugs ordered. The necessary funds having been raised, a start was made late in the autumn of 1908, when the association appointed me as their oculist.

With a view to undertaking the treatment locally, I made a tour of the schools to see what accommodation there was for the work, and decided that it could be carried out there. For this purpose, permission was obtained to use the schools on Saturday mornings, when the pupils were not at work.

As only a few of the children attending the schools had been examined by the school medical inspector, it was decided to test the vision of all the children attending, and this was done by the teachers using Snellen's test types. A list was made of all children whose vision was not $\frac{6}{12}$. Children whose vision was better than this, if complaining in any way of their eyes, were also included. At the time of the examination the children attending these schools were as follows:

School.	Boys.	Girls.	Mixed	Infants.	Total.
Stourbridge Road C. S. ...	237	194	—	129	530
Catshill C. S. ...	106	110	—	102	318
Lickey End C. S.	—	—	195	88	283
Dodford C. S. ...	—	—	79	40	119
Sidemoor C. S. ...	—	—	—	128	128
Totals ...	313	304	273	467	1,378

Out of these there were found at that time 80 suffering from ocular defects, or 5.8 per cent. They were distributed thus:

School.	Boys.	Girls.	Total.	Percentage of School Total.
Stourbridge Road C. S. ...	12	15	27	5.0
Catshill C. S. ...	11	12	23	7.2
Lickey End C. S.	9	9	18	6.3
Dodford C. S. ...	—	4	4	3.3
Sidemoor C. S. ...	3	5	8	6.2
Totals ...	35	45	80	

With regard to these percentages, I should like to make a few remarks. Lickey End and Stourbridge Road Council Schools are modern brick buildings, well lighted, though faulty in arrangement in places, and with good ventilation and usual accommodation. They are well situated and have good playing grounds. On the other hand, the Catshill Council School is bad. Situated in the midst of a poor village, low, and beside a stream, it had a damp air about it in winter. The building of brick is small and totally inadequate for the numbers attending. The ventilation in consequence, especially in winter, is very bad, and the lighting, especially in the infants' school, insufficient. The cloak-room accommodation is too small, and the playing grounds suffer in like manner. It is not surprising, then, that this school should yield the highest percentage of ocular defects. It was decided that the school should be rebuilt over a year ago, but this has not yet taken place. The inhabitants of Catshill are nail-makers, and the standard of living very bad. The low percentage of defectives at Dodford is accounted for by the fact that they are all young children.

The arrangements made for the work were as follow: I attended at one of the schools at 9.30 on a Saturday morning. The number of children, whose parents had been notified, were in attendance at that time for examination and treatment. The refraction cases were first dealt with, homatropine or atropine drops being instilled. As each child had to be measured for the spectacle frames and a record kept of all particulars, for future reference, it was found that not more than 12 to 15 cases could be seen in a morning. While the cycloplegic was taking effect the cases of external diseases were examined and prescribed for, and any necessary instructions were given to the parents, who in many cases then left, returning later, if necessary, to fetch the children. I made it a rule to find out if any child was under the treatment of a local medical man, and always gave him the opportunity of undertaking the treatment where possible. All the children seen by me were of the poorest and bona fide hospital patients. For refracting purposes one of the smaller class-rooms was selected as a dark-room, and was rendered so by blinds and screens where necessary. For a portable lamp I used a Priestley Smith candle-lamp which I mounted on a telescopic metal camera tripod. This enabled me to put the lamp at any height desired. There was nothing to go wrong, and I found it worked admirably and gave quite an excellent light for refractive work. It was necessary to see some of the cases more than once, and in all eight visits were required to complete the work for that year.

I will now refer briefly to the defects found in these 80 children.

The sex incidence was: Males, 43.75 per cent.; females, 56.25 per cent. These figures correspond exactly to those given by Bishop Harman.¹ Of these, the majority required glasses—namely, 69, and they were made up as follows:

Hypermetropia ...	37	} = 64, or 92.75 per cent.
Hypermetropic astigmatism ...	27	
Mixed astigmatism ...	1	
Myopia ...	2	} = 5, or 7.25 per cent.
Myopic astigmatism ...	2	

The percentage of myopes is low. Harman¹ found that they formed 29 per cent. of the refractive errors. It has been maintained that the country children tend to be long-sighted and the town children short-sighted, and these figures help to bear this out. Of the 5 cases of myopia, 3 occurred in the Stourbridge Road School, which belongs to the town of Bromsgrove. The one case of mixed astigmatism was in a child of 4; of the other myopes, 1 was 10 years old, and 3 were 12 years old. With regard

to the ages of the children affected, 18 were 6 or under, and came under the division known as infants. The vision of 7 of the children was less than $\frac{1}{8}$.

The next most common condition was squint. There were 13 cases, and of these 10 were left, 2 right, and 1 alternating. In connexion with this it is interesting to note that the number of cases of anisometropia was 20, and the proportion of worse eyes was 4 right to 16 left. By the term "anisometropia" I mean all cases where one eye differed from the other by one dioptré or more, the worse eye being that with a higher degree of refractive error.

There were 5 cases of nebulae of the cornea. One was due to traumatism, 2 to ophthalmia neonatorum, 1 to phlyctenular keratitis, and 1 of doubtful origin—probably phlyctenular. The other conditions found were: Spasm of accommodation, 2; conjunctivitis, 4; blepharitis, 7; ankyloblepharon, 1; hordeolum externum, 2; heterochromia, 1; congenital cataract, 1; fundus disease, 2 (1 myopic); retrobulbar neuritis, 1; and nystagmus, 1 case (nebulae of cornea).

This year the work has been continued, the total number of children attending the above schools being 1,410. In addition two other schools have come into the scheme—namely:

Linthurst Church of England School with 94 children
Rubery St. Chads " " " 213 "

The total number of defectives treated this year has been as follows:

School.	Boys.	Girls.	Total.
Stourbridge Road	13	9	22
Catshill	—	7	7
Lickey End	1	4	5
Linthurst	2	1	3
Rubery	—	2	2
Totals	16	23	39

The number of visits made has been five. One was a tour of inspection of all the schools to see all the children who had been treated and the way they were progressing. It was extremely gratifying to hear from the teachers how well they were getting on. I may record the case of one of the school "dunces," a child who had given much trouble to the teacher, and who was regarded as a naughty and unmanageable child. A pair of spectacles to rectify the marked refractive error cured the moral and mental deficiencies and rendered the child an industrious pupil! How many children have suffered in like manner in times gone by when a pair of spectacles rather than the "rod" would have rectified matters! The number of glasses prescribed this year has been 39, and of these there were 5 cases of myopia as follows: Myopic astigmatism, 3; myopia, 1; mixed astigmatism, 1.

In addition there were: Squints 8, of which 2 were right, 5 left, and 1 alternating. Other cases were: Spasm of accommodation, 2; nebulae, 1; blepharitis, 1; conjunctivitis, 3; corneal ulcer of strumous variety, 2; fundus disease (tuberculous), 1; and epicanthus, 1.

With regard to the treatment of squint, the best had to be done under the circumstances. Some eyes were hopelessly amblyopic, and others greatly improved with glasses and education by occluding the good eye. The improvement was noticed when the cases were inspected a year later. Except in a few of the younger children, atropine ointment was not given for home use. The majority of the children were over 8. The scheme has worked smoothly, and there has been very little opposition from the parents, who, as a whole, took an intelligent interest in the work and willingly paid for the glasses and treatment. The chairman, Mr. Beesly, usually attended when I went over to do the work, and ably assisted me.

A letter from Mr. Hugh Thompson in the BRITISH MEDICAL JOURNAL of April 16th, 1910, showed that school clinics have been carried on in Woolwich on similar lines. That school clinics can be carried on successfully for

ophthalmic cases I have no doubt, and they have much to recommend them for the country districts.

REFERENCE

¹ Bishop Harman, *Proceedings of the Royal Society of Medicine*, May, 1909.

SUBMUCOUS RESECTION OF THE SEPTUM NASI.

By T. JEFFERSON FAULDER, M.A., M.B.CANTAB.,
F.R.C.S.ENG.,

SURGEON TO THE THROAT HOSPITAL, GOLDEN SQUARE, AND CHIEF ASSISTANT, THROAT DEPARTMENT, ST. BARTHOLOMEW'S HOSPITAL.

SUBMUCOUS resection of the septum nasi is an operation of comparatively recent date, but is already in extensive use. Little information is as yet forthcoming as to the after-results. For example, does any regeneration of tissue take place in the septum after removal of the skeletal part? Opportunities of investigating this latter point do not often occur.

On July 2nd, 1910, amongst my other operations at the hospital was a man aged about 38, whom I had not myself previously seen. His complaint was nasal obstruction and "irritation," and the operation proposed was submucous resection of the septum. For this purpose his nose had been anaesthetized with cocaine and adrenalin hydrochloride in the ordinary way. On removing the packing

Fig. 1.

Fig. 2.

Fig. 3.

The thick black lines represent muco-perichondrium or muco-periosteum, the shaded areas bone or cartilage of the septum.

to make a beginning of the operation, I found a deviation of the cartilage to the left and a projection, also to the left, along the line of the ethmo-vomerine suture, preventing a good view of the interior of the nose on that side (see Fig. 1). The usual incision was made, and elevation of the muco-perichondrial flap begun and continued for about $\frac{1}{4}$ in. all along the wound. It was then seen that the cartilage was deficient, as though part of it had been removed at a previous operation, for the elevator was now between two layers of unresisting tissue (see Fig. 2), and also the appearance of the deep surface was not like that of cartilage. The separation was, however, continued as far back as the perpendicular plate of the ethmoid. After this separation, the most projecting part of the cartilage in front and above and the spine below were cut away and the wound closed. It seems clear that a partial resection had been done previously in this case. The patient stated that he had had several intranasal operations, and that after one of them, three years ago, he had worn a rubber splint in each nostril for some time. This latter operation must have been a resection of the septum. In that case