OXYGEN GAS IN ACUTE RESPIRATORY AFFECTIONS.

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My experience of the effects of oxygen in the following case has convinced me that Drs. Lauder Brunton and Prickett have done good service in calling attention afresh to the therapeutic use of this gas. As in the instance which they describe, a fatal issue was not averted; but the effect was such as to indicate the probable value of oxygen under more favourable conditions.

Last October, Dr. Parsons, of Cotham, asked me to see in consultation with him a gentleman, aged 66, who for many years had suffered from bronchitis and emphysema. At that time there were no urgent symptoms, but the patient had advanced pulmonary emphysema, with secondary dilatation of the heart, and in consequence was always the subject of more or less dyspnoea.

On January 24th I saw him again in consultation with Dr. Parsons and Dr. Newman, of Bristol. His temperature was then 102.8°, and he was wandering; dyspnoea and cyanosis were very marked, and extensive bronchitis and broncho-pneumonia existed. Next day there was no improvement, and we therefore decided to administer oxygen. At 7 P.M., when the inhalations of the gas were begun, the pulse was rapidly failing, the surface was very dusky, and the patient was fast approaching his end. The immediate effect of the oxygen was most striking; the pulse improved wonderfully in tone, and the cyanosis completely disappeared; as the hands were watched the blue colour under the nails could be seen fading away and giving place to a healthy pink. The change was so marked that it was evident to all present. When the inhalation had ceased for a few minutes, however, the pulse again began to fail and the cyanosis to return—to be again removed by the fresh administration of the gas. This sequence recurred again and again, until at length the oxygen was given more or less continuously. Strychnine was also injected subcutaneously. In the early hours of the following morning, however, the effect began to be less marked, and the patient gradually sank and died about 9 A.M.

The influence of the oxygen in this case in removing cyanosis was extraordinary and altogether beyond doubt. The conditions under which it was given, however, were most unfavourable. The occurrence of extensive bronchitis and broncho-pneumonia upon long-standing and advanced emphysema with weakened heart made the outlook practically hopeless; but we were convinced that at all events life was prolonged by some hours, and Dr. MacCarthy, of Worcester, who was present during the night and kindly helped with the inhalations, concurred in this view. In my article in Cassell's *Year Book of Treatment for 1892* (p. 40, sec. 2) reference is made to a case of pneumonia reported by Dr. Blodgett, in the *Boston Medical and Surgical Journal*, in which the influence of oxygen is said to have been "almost as pronounced and evident as is that of ligature in hæmorrhage," and in the face of our experience this can hardly be considered an exaggeration. I have never seen such an extraordinary effect upon cyanosis produced by any other means, and for the future in any case of acute respiratory affection threatening to prove fatal I shall not consider that everything practicable has been done unless a fair trial has been given to oxygen.

The gas was obtained in cylinders from Brin's Oxygen Company, 34, Victoria Street, Westminster, and by the courtesy of the local agent, Mr. C. H. James, of 30, Broad Street, Bristol, it was received in Bristol within five hours of the despatch of the order. The company supply a simple apparatus, consisting of a rubber bag connected with the cylinder, and also with a tube to which a mouthpiece can be attached. The bag can be hung up above the level of the patient, so that the gas which enters it from the cylinder escapes slowly through the delivery tube by its own weight and the collapse of the bag.

When the inhalation was begun the patient was breathing through the mouth; but directly the end of the tube was put into his mouth he grasped it with his lips and breathed through the nose alone. The tube was therefore fitted into

an ordinary naso-oral celluloid inhaler, which answered well. No unpleasant effects were produced. It is better to use the bag rather than to give the gas direct from the cylinder, as it is contained in the latter under such pressure that it is difficult to regulate its escape.

Now that pneumonia and bronchitis are so prevalent and so fatal, the recognition of the value of oxygen in staving off asphyxia and stimulating the heart may lead to the saving of life in otherwise hopeless cases.

ON THE USE OF OXYGEN IN ASTHMA AND CONVALESCENCE.

By AUBREY BLAKISTON, L.R.C.P. AND S.ED.
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I READ with great interest the remarks of Dr. Brunton on the use of oxygen in pneumonia, published in the *BRITISH MEDICAL JOURNAL* of January 23rd, as also those of Mr. Langton on the use of oxygen in bronchitis the following week. I can corroborate the testimony of both these gentlemen as to the usefulness of oxygen in bad cases of pneumonia and bronchitis. I administered oxygen in three cases of pneumonia and one of acute bronchitis; all were unusually severe cases, and all recovered, and I firmly believe that life was saved in two of these cases by the use of the oxygen. I have also used oxygen in three cases of asthma. In all three cases Curschmann's spirals were present in the expectoration. The results in two of these cases were so satisfactory that I strongly recommend an extended trial of the treatment.

The oxygen was administered through an inhaler connected with Brin's cylinder, and given at the commencement of an attack. After some half-dozen inhalations the inspiration became longer, and the patient was less distressed. In two of the cases a few more inhalations sufficed to cut short the paroxysm. In the third—of twenty-years' standing—the relief did not pass beyond the first stage, that is to say, diminished distress and prolonged inspirations, but in one of the others the paroxysms became much less frequent (about half) than they were before the treatment commenced, and less oxygen was required during subsequent paroxysms, while in the other the dose had to be increased each time. I found the benefit to be much greater and quicker when the oxygen was given warm.

I have also given oxygen in convalescence from long illness, combined with massage. One patient told me that after he had inhaled the oxygen and been massaged he "felt as if he had been a six-mile walk and breathed sea air."

In oxygen I believe we have a remedy of great therapeutic value, not solely confined to the treatment of diseases of the respiratory organs. If we only consider for one moment its importance to us in its natural state in the air, and think how many of our patients, especially those in London and other large towns, fail to get their due proportion of it in its native state, it is only natural that it should be so.

In massage and electricity combined with the administration of oxygen we have one of the best substitutes to the convalescent and debilitated constitution for change, exercise, and sea air.

SIGMOIDOSTOMY SIMPLIFIED.

By F. MARSH, F.R.C.S.,
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MR. H. A. REEVES is quite right in surmising that he may have been anticipated in the performance of "sigmoidostomy" described by him in the *BRITISH MEDICAL JOURNAL* of January 9th, 1892. To M. Maydl, Vienna, is due the credit of originating the method, and to M. Reclus, Paris, the credit of simplifying it. Maydl's first operation dates February 4th, 1884, and his method was referred to by Albert in the *Lehrbuch der Chirurgie*, 3rd edition, vol. iii, p. 145, 1885, and was described by Maydl himself in the *Centralblatt für Chirurgie*, 1888, No. 24, p. 433.

The following are briefly the salient points in his method. The sigmoid flexure is drawn out until the mesocolon is seen;

a rigid rod is then pushed through this, and rests on the abdominal walls; the sides of the bowel are then sutured to each other below the rod. If it is necessary to complete the operation at once, the bowel is sutured to the edges of the wound, and a transverse opening made. If there is no necessity to complete in one stage, the bowel is not sutured to the edges of the wound, but simply left for from four to six days, and then opened with the thermo-cautery. On the fourteenth day, all the superfluous bowel above the rod is removed with the thermo-cautery, and the edges of the mucous membrane are sutured to the skin.

M. Reclus, in the *Bulletins et Mémoires de la Société de Chirurgie de Paris*, February, 1890, describes his modification of this method. He simply passes a rigid aseptic rod through the mesocolon, omits all sutures, opens the bowel about the fourth day, and about the tenth day removes superfluous bowel, all with the thermo-cautery.

On July 21st, 1890, I first employed this method of Reclus, and exhibited the patient to several visitors at the annual meeting of the British Medical Association, held in August, 1890, in Birmingham. So simple was the procedure, and so satisfactory the result, that I have since adopted it in all suitable cases, with however one or two slight modifications in the *technique* of the operation.

1. The incision through the abdominal wall should be about two instead of the usual two and a-half inches, and the peritoneal opening should be of the same length, so that the bowel may have as wide a surface as possible for attachment, and that there may be no need to suture the upper and lower angles of the wound; not a suture should be used.

2. The sigmoid colon having been found, and a loop drawn out, it should be passed on through the fingers until the upper end is taut enough just to allow the loop to rest easily in the wound; the rod should be so passed through the mesocolon that it lies across the wound considerably nearer the lower than the upper angle, in order that subsequently the upper opening may be larger than the lower. The rod I now use is made of glass (a suggestion made to me by Mr. Greig Smith, who saw my first case), 4 inches long, round, with the ends made square to prevent rotation and slipping.

3. The bowel may be opened in a few hours in urgent cases, or left three or four days without causing any discomfort in those cases where, practically, no obstruction exists. I generally make a transverse opening about the third day, and at the end of a week remove superfluous bowel with the thermo-cautery, and burn through the remaining circumference of the bowel over the glass rod, so that it may be lifted out. A double-barrel opening is thus left, the openings diverging rather than converging, so that it is impossible for any faeces to pass onwards. For opening the bowel I have used both scissors and the cautery, and prefer the latter. With the former the resulting hæmorrhage is occasionally very troublesome, whilst with the latter there is practically none, and if the skin around is protected with collodion no pain is felt by the patient during the process, unless the mesocolon is touched, and very little even then.

With regard to the objection that the intestines may be forced through the wound by vomiting, etc., prior to adhesion taking place, no such accident had occurred to Maydl, Verneuil, or Reclus, up to the date of the latter's paper, nor do I think it likely to happen if the smaller incision be adopted, and ordinary care exercised in applying the dressings and binder.

The method is not applicable to every case—no one method is. The old inguinal (Littre's) is preferable, if the opening is to fulfil a temporary purpose, Madelung's, if the colotomy is performed as a preliminary to an extensive excision of the rectum; possibly the lumbar if the patient is emaciated and the colon greatly distended.

In some cases it is impracticable: the mesocolon may be too short, from induration or other causes, to admit of a loop being drawn out—Verneuil relates one such case: or the colon may be too distended; but Mr. Mayo Robson's method of emptying the bowel will probably prove a means of overcoming this difficulty.

In the majority of cases, however, it is applicable, and especially so in those where a prolonged operation, or even an anæsthetic, would be a serious matter. The time occu-

ried is so short, if the colon is in its normal situation, that local anæsthesia could very well be employed.

The diminution of risk to the patient is the great advantage, and as that must be the chief consideration in what is often more or less an operation of election, the method will, I believe, largely replace the more complicated ones now in vogue.

In conclusion, I would suggest that the term "iliac colotomy" should be retained in preference to the more correct, but formidable-looking, "sigmoidostomy."

Since writing the above I find that other surgeons in the provinces have for some time practised, and evidently believe in, this method of Reclus. In the fourth edition of his *Abdominal Surgery*, Mr. Greig Smith gives a full account of the operation, and this is how he speaks of it in comparison with other methods of transperitoneal colotomy (p. 484): "The operation of election is, in my opinion, that of Reclus. It is by far the simplest, provides a perfect spur, and leaves an anus surrounded by muscular fibres. Where it is out of court, it is difficult to see what other method of colio-colotomy can compete with it; then it would be best to perform lumbo-colotomy."

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

METATARSO-TARSAL DISLOCATION IN A CHILD.

MR. CHAYTOR WHITE's interesting paper¹ brings to mind the following instructive dislocation which came under my notice when house-surgeon in Edinburgh Royal Infirmary. On September 28th, 1887, M. L., aged about 7 years, came complaining that a vehicle had run over her foot. On examination, a mark of bruising was visible on the back of the leg, midway between the lower end of the calf and the ankle-joint, the foot having been doubled upon itself in an antero-posterior direction. There were also on the dorsum of the foot, in the metatarso-tarsal region, two swellings in the region of that joint. This was not a bruise, and on examination proved to be a dislocation of the first, third, and fourth metatarsals on to the dorsum of the tarsal bones. The facets were easily distinguishable. The second and fifth metatarsals were not dislocated, dislocation of the second metatarsal being saved from the peculiarly strong position of that joint. The third metatarsal was inclined abnormally outwards. There was no crepitus. I took a cast of the dislocation, which showed the features of the dislocation with clearness, and then under chloroform reduced each metatarsal separately, the method being pressure with the thumb downwards while using extension. The fourth metatarsal required a pad to keep it in position after reduction of the dislocation, the reason here being due to the more or less wedge-like form of its proximal extremity antero-posteriorly.

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CASE OF DIVISION OF EXTENSOR TENDON OF FINGER SUTURED SUCCESSFULLY AFTER TWO MONTHS.

A PRIVATE soldier, aged 22, in the course of a field day during September, 1891, had a stone of about 30 lbs. weight rolled down upon his hand while he was lying on the ground at the foot of a declivity. A point of the stone made a contused punctured wound an inch from the distal end of the middle metacarpal bone of the right hand, and completely divided the extensor tendon; the finger dropped and was useless from that moment. There was no fracture, but the nature of the injury was unmistakable. The wound was cleansed and dressed antiseptically, and the finger and its fellows were put upon a straight splint in an extended position. The wound healed in ten days, but though strict rest was maintained no union of the tendon had taken place at the end of two months. There was a gap of nearly $\frac{3}{4}$ inch between the

¹ BRITISH MEDICAL JOURNAL, January 2nd, 1892, p. 15.