Albuminuric retinitis is said sometimes to recover. On this point, I think, some caution must be exercised. Hæmorrhage of course may be absorbed and disappear, whether due to granular kidney or not, but I have never seen the white patches of granular kidney disappear, though instances are recorded by good observers. It is of course possible where eye changes occur in the course of chronic parenchymatous nephritis, that if the primary disease get well, the eye changes also should disappear, but this is not so in granular kidney. The cases that are usually quoted are those which occur in pregnancy.

The significance of albuminuric retinitis is always grave, not only in respect of sight, but also of life. It is not possible to determine accurately the duration of albuminuric retinitis, or of life after its appearance, for albuminuric retinitis is not as a rule discovered in its early stages, either because the patients do not come under observation early enough, or because the eye is not examined with the ophthalmoscope until defects of vision are complained of. Speaking generally, the duration of life after albuminuric retinitis has been discovered is short.

Thus Miley¹² traced 45 cases, and found the average duration of life to be under four months from the time when the eye changes were first observed, and, though one of the patients lived eighteen months and two fourteen months, all the rest died within the year.

In 9 cases in which the first appearance of eye changes was noticed, the duration averaged less than six months, and in 2 cases it took a month for white patches to develop after the appearance of hæmorrhages.

Bull¹³ in 100 cases of albuminuric retinitis, found that 86 out of 103 died, 57 in the first year, 12 during the second, and 17 after a longer period. Of the 17 remaining cases that were still living at the time his paper was published, 14 had been seen only during the six months immediately before the paper was written, but 1 had been diagnosed seven years previously.

Where the patients are in a condition to take the best care of themselves, life may be prolonged for some time; thus the Baroness Possauer, in some observations at Zurich, found that within two years of the time of observation; among hospital patients all the men died, and 68 per cent. of the women; among private patients, of the men 59 per cent. only died, and of the women 53 per cent.

Instances, however, are recorded of considerable duration. Thus I have a patient of my own who has been under observation now for more than four years, and, except for a large hæmorrhage into the blind eye, she is still in much the same general condition as she was when she was first seen, and I have already referred to a case of Miley's in which the patient was known to have lived for more than seven years.

Anderson records some remarkable cases. One died twelve years after the albuminuric retinitis had been detected, and 2 others were living four and seven years afterwards respectively.

Cases such as these are quite exceptional, and, speaking generally, when patients are found to have albuminuric retinitis they have not many months to live.

NOTES AND REFERENCES.

¹ Virchow's Archiv, 1898. ² Zeit. f. klin. Med., xiii, 1, 1887. ³ BRITISH MEDICAL JOURNAL, May 17th, 1890. ⁴ Virchow's Jahrb., 1890, ii, 722. ⁵ These observations were made in Dr. Garrod's out-patient department in the Hospital for Sick Children, Great Ormond Street. ⁶ BRITISH MEDICAL JOURNAL, ii, 1879. ⁷ Ibid., May 10th, 1879. ⁸ Trans. Ophth. Soc., i, 44. ⁹ Ibid., xviii, 357. ¹⁰ Ibid., viii, 130. ¹¹ The Eye in General Diseases, p. 304. ¹² Trans. Ophth. Soc., viii, 130. ¹³ New York Medical Journal, 1886, ii, 119.

A CASE OF INVERSION OF UTERUS BY A FIBROID: ENUCLEATION OF FIBROID AND REPOSITION OF UTERUS.

BY

G. ERNEST HERMAN, and LESLIE DURNO,
M.B., F.R.C.P. M.D.

A PATIENT, single, aged 45, had been quite well, excepting the results of accidents, up to the age of 39. Then she began to have excessive bleeding when she menstruated, with severe pain and often diarrhoea and sickness. Dr. Durno was sent for two years and a-half ago, and found that the uterus was enlarged to the size of one four months pregnant. It gradually increased in size till it reached considerably above the umbilicus. The patient had two attacks of hemiplegia, from which she recovered. She had much pain and ten-

derness in the left side, and there was at times œdema of the left leg. About six months ago the patient began to have an offensive discharge, and the abdominal swelling was noticed to somewhat decrease. Several times she had retention of urine. The temperature was at times raised. Lately a mass was noticed protruding at the vulva, and the patient herself snipped a piece of it off with scissors.

On January 21st, 1899, the patient was anæsthetised. An abdominal swelling was felt reaching to the umbilicus. The vagina was filled with a mass having the characters of a fibroid, and which was decomposing at its lower part. With volsellæ and scissors this mass was pulled down, cut up, and removed in pieces. When the greater part of the tumour had been in this way removed, it became possible to explore the relation of the tumour to the uterus. It was found that the tumour was attached to the fundus uteri, which was inverted. The remainder of the tumour was peeled off the inverted uterus, and then the hand was passed into the vagina. The abdominal walls were very thin and relaxed, so that the ring formed by the cervix could be plainly felt through the abdominal wall, and the fingers could be pressed down into it. The fundus uteri was supported by the vaginal hand, and the cervix stretched open by the fingers pressed down into it through the abdominal wall. This done, taxis was made by the vagina, and the fundus uteri readily went up into its place. The patient recovered without a bad symptom. The tumour weighed 2 lbs. 4 ozs.

SUPRARENAL GLAND EXTRACT AS A HÆMOSTATIC.

By E. A. LERMITTE, M.B., B.S., M.R.C.S., L.R.C.P.,
London.

In 1896 Dor, and subsequently Darier, made use of an extract of suprarenal gland in ophthalmic practice. Their object was to reduce hyperæmia of the conjunctiva in cases where operation was urgent, but in which, owing to local congestion, it was difficult to obtain anæsthesia with cocaine alone. Marked success attended these trials, and suggested its further employment in cases of conjunctivitis, keratitis, and iritis. It was found that a single drop of a watery extract was sufficient to render the bulbar conjunctiva anæmic, and under its use, in conjunction with cocaine, iridectomies were performed.

In 1897 Velich confirmed these statements, and affirmed that a watery extract, when dropped into the eye, caused a marked vascular constriction, and so relieved conjunctival hyperæmia, however caused. Velich also investigated the action of suprarenal extract on the vessels lying under the unbroken skin, and found that the normal pink colour quickly disappeared under its application. The same vaso-constrictor action was noticed when the extract was applied to eczematous skin, nævi, and even sarcomata.

In 1898 J. A. Mullen reported the results he had obtained from the use of suprarenal extract in nasal surgery. He, like his predecessors, made use of it for the purposes of operation only, and claimed for it that it not only prevented primary but also secondary hæmorrhage, and increased the anæsthetic effect of cocaine to so marked a degree that the cautery could be carried down to the periosteum with the greatest confidence.

In the light of these results I determined to endeavour to carry the investigations into the hæmostatic qualities of suprarenal gland a step further, and to widen the scope of its utility by treating actual hæmorrhage with it. A suitable case for this purpose presented itself early in August of last year.

The patient, a boy, aged 6, was brought to me with the following history. He had a severe attack of diphtheria in 1804, and during the stage of convalescence had repeated attacks of epistaxis. These had persisted up to that time in spite of every form of treatment adopted. The treatment had been entirely constitutional, not local. For one year before I saw him he had been taking a mixture containing potass. chloras., gr. iii., and tinc. ferri perchlor., m.v. three times a day with more or less persistence, but without any effect in diminishing the bleeding from the nose. These attacks of hæmorrhage occurred at all hours of the day and night, often without apparent cause, but sometimes they followed on any unusual exertion. The attacks varied in intensity and duration, often lasted a considerable time (an hour or longer), and the loss of blood was always great. At times he would have three or four attacks on three suc-

cessive days, and then would follow an interval of a fortnight without an attack. On the whole they averaged three or four a week. During the attacks the child was laid prone, and cold compresses, generally of vinegar and water, applied to the forehead.

On examination of the nasal cavities the only abnormality present was a dilated and angiomatic condition of the vessels. The site of the hæmorrhage could not be detected. Constitutionally the boy was in a weak state and had enlarged glands in the neck and right groin, probably tuberculous. The lungs, heart, and kidneys (urine normal) were apparently healthy.

At first I ordered a nasal douche containing ext. hamamelidis liq. to be given every night and morning. This was continued for one month without success. On September 17th, 1898, I commenced treating the nose locally by inserting a pledget of cotton wool soaked in a 5 per cent. solution of cocaine into each nostril and leaving them *in situ* for five minutes. On withdrawing these similar pledgets soaked in a saturated solution of boric acid containing 5 grains of dried extract of suprarenal gland to the ounce were inserted and left in for the same length of time. These applications were made on alternate days till October 7th (three weeks); then on every third day till October 31st (three weeks), and afterwards on every fourth day up to November 22nd; making in all twenty-four applications.

The immediate result on the nasal mucous membrane was to produce a condition of ischæmia and the effect on the epistaxis was to cause its cessation. Up to the time of writing there have been no attacks of hæmorrhage since the first application was made.

That there was no hæmorrhagic diathesis present I had occasion to prove on November 28th, when I removed the enlarged cervical glands. There was nothing more than a very moderate amount of bleeding at the time of the operation and no subsequent oozing, the scar having healed perfectly by the sixth day.

I hasten to report this case in the hope that others may be induced to use suprarenal gland extract in the treatment of hæmorrhage due to various causes, as I am led to the conclusion that in this, one of the latest additions to our armamentaria derived from the animal kingdom, we possess a very powerful hæmostatic whose use, unlike some others, is attended by no unpleasant effects either at the time of its application or subsequently.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

DEATH UNDER CHLOROFORM.

A. L., aged 11, an apparently healthy child, was admitted for the removal of a rectal polypus. She was prepared for chloroform in the usual way, and the night before the operation her heart sounds were noted as normal except for an occasional reduplication of the second sound in the mitral area.

On the 10th instant chloroform was administered by the drop method on a single fold of towel by the chloroform clerk supervised by the house-surgeon. The inhalation was gradually increased, the towel being held at first a good way off as the child was a little nervous. In about five minutes she seemed ready. I looked at her, and seeing nothing amiss had her put in the perineal position, and began to stretch the sphincter. She winced, and received three or four more whiffs. After this no more chloroform was given. After the sphincter was stretched and the polypus drawn down the house-surgeon noticed that she was breathing in an irregular and spasmodic way, and that there was some laryngeal inspiratory crowing. The chin was drawn forward, and as she then seemed to be breathing freely I ligatured the pedicle of the polypus and removed it. This took, perhaps, about a minute, and by this time her breathing, which still continued, had again become somewhat irregular and unsatisfactory, although the air passages were free. Her face was pale, pupils dilated, and her pulse was imperceptible; her muscles were relaxed. The head of the operating table was at once lowered, and artificial respiration was begun and continued for about three-quarters of an hour in all. Strychnine was injected, hot cloths applied over the heart, and as a last resort about half an ounce of blood was withdrawn with an aspirating needle from the right auricle, but all without avail.

Her face, although pale at first, rapidly became of a livid hue, although never intensely so, and the veins at the root of the neck were not distended. Once or twice, as I intermitted

the artificial respiration for a few seconds, we could see that voluntary movements of respiration went on. This was quite evident to all present, but after one or two breaths the movements became feebler, and we began artificial respiration again. As time went on these voluntary movements became less and less perceptible, then one or two spasmodic gasps were recognisable while the artificial respiration continued, and after that all signs of life ceased. Once or twice at first her colour improved for a few seconds and her pupils contracted slightly, but the improvement rapidly faded away again. Her pulse was never re-established.

From the beginning of the anæsthesia to the first alarm was about seven minutes, and from that to the full alarm was about three minutes, that is, ten minutes in all. Unfortunately, no *post-mortem* examination was obtained.

I am quite convinced that the heart in this case failed before the respiration, and I have recorded the observations which were made at the time in order that others may know the grounds on which this conviction is based. I may, perhaps, be allowed to add that the chloroform was most carefully administered. The same bottle of chloroform was used in two operations on children immediately before this one. Each operation lasted about half an hour, and in neither did the anæsthesia give any anxiety.

Edinburgh.

CHARLES W. CATHCART.

THE OPEN-AIR TREATMENT OF CONSUMPTION.

BEFORE building too extravagant hopes upon the results of this new departure in the treatment of consumption, it would be well to consider one or two physiological facts that appear to have been somewhat overlooked when estimating the value of the open-air factor of the cure. Nature has arranged that the air we breathe shall be both warmed and moistened. This end she has attained through the adaptations to that purpose of the nasal cavity. When tracheotomy has been performed, one of the risks to be guarded against is pneumonia caused by breathing cold and dry air, and this calamity is guarded against by artificially warming and moistening the air the patient breathes. Now it can hardly be maintained without a degree of hardihood that crippled and diseased lungs need less protection than healthy ones; and when one sees patients suffering from consumption exposed to cold and rimy air till quite late in our winter afternoons or still later, one cannot but feel that the value of the open-air factor is unduly estimated to the disadvantage of the patient and the discredit of the new treatment.

The average vital capacity of the lungs of a healthy Englishman is taken as 230 cubic ins. The amount of air that he is unable to expire from his lungs, the residual air, is somewhere between 80 and 130 cubic ins. As, of course, in ordinary breathing, the lungs are not filled to their fullest extent, but from 100 to 130 cubic ins. less than this, we must deduct say 130 cubic ins. from the vital capacity and add the remainder, say 100 cubic ins., to the residual air to enable us to arrive at the amount of air the lungs normally contain. Taking the residual air at 130 cubic ins. this gives us 230 cubic ins. Then the tidal air, or the amount breathed in and expired in ordinary respiration, is variously estimated between 20 and 30 cubic ins. We therefore find that in ordinary breathing a $\frac{1}{3}$ or a little more of fresh air is added to the $\frac{2}{3}$, or a little less, of air contained by the lungs.

Now the air in an ordinarily pure atmosphere contains rather less than 4 parts in 10,000 of carbonic acid; but what is the condition of the atmosphere of the lungs? It contains (Landois and Stirling) 4.38 per cent. of carbonic acid, or 438 parts in 10,000. Well, in ordinary breathing we add about $\frac{1}{3}$ of air containing less than 4 parts in 10,000 to about $\frac{2}{3}$ of air in the lungs containing carbonic acid to the extent of 438 parts in 10,000. This is a very important consideration, for it affects our estimate of the advantages likely to be conferred upon a patient by enabling him to mix fresh air containing carbonic acid to the extent of less than 4 parts per 10,000 and in the proportion of 1 part to 9, with his $\frac{2}{3}$ of impure air contained in his lungs (438 parts of carbonic acid in 10,000), at the cost of some personal discomfort and in some cases at all events of considerable risk, when in a well ventilated room that could be made comfortably warm, he could without risk of chill take into his lungs his 20 to 30 cub'c ins. of air containing perhaps