sarily prolonged it. The abdominal walls were free from fat and very thin, which made the tumor readily accessible, which was found to consist of three large cysts and several smaller ones, the walls of each thick and tough, and contents of each unlike. The large cyst in front and below was filled with thin fluid and readily emptied; the second with colloid contents and slowly flowed through the canula; the third had adhesions to the abdominal wall posteriorly, and contents so thick and dense that they would not flow through the tube and the wall had to be punctured with the scalpel and the semi-solid contents scooped out with the hand. The adhesions were broken up with the hand, the emptied cyst walls were brought through the incision. The tumor was found to grow from the left broad ligament, with a long, broad pedicle, which was tied with the Staffordshire knot.

The difficulty in evacuating the two latter cysts made the operation a long one. There was no hæmorrhage requiring ligature, the condition was one of anæmia. The abdominal organs were forced, by pressure, from their normal positions and did not occupy that place when the tumor was removed. The uterus and ovaries were small and healthy and were not disturbed. At the close of the operation the radial pulse was barely perceptible. The shock was great. After the anæsthesia passed off there were indications that she might rally, but she died two hours after the operation.

There is nothing unique or unusual about the above cases; they are given in detail as we think they teach a lesson. The life of the young girl was a sacrifice to her fear and dread of an operative ordeal. They teach us the utter inefficiency of a cure by medication; that the removal of the cystic tumor is her only hope and safety; that tapping is but temporary relief, a false hope, and complicates removal as a means of cure. The woman who has an abdominal cystic tumor should be told by the physician that its early removal while it is small and free from complications is almost free from danger, and warned of the danger of delay. Then will cystotomy be shorn of its terrors and the per cent. of recoveries in this country nearer approach that of Great Britain and Continental operators. Other cases have been seen by us that have been tapped again and again, and died. Others have passed away without even this temporary relief, and successful cases coming under our observation, operated on early, are not detailed here as they would be void of interest and extend this paper beyond its intended limits.

May, 1888.

THE BERLIN SEWAGE FARMS now yield a profit of two per cent. on the capital invested—a very favorable result, considering all things.

RETINITIS HÆMORRHAGICA FOLLOWED BY GLAUCOMA.

BY KENT K. WHEELOCK, M.D.,

PROFESSOR OF OPHTHALMOLOGY AND OTOLGY IN THE
FT. WAYNE COLLEGE OF MEDICINE.

March 19, 1888, Mrs. Esther Smith, æt. 71 years, widow, consulted me on account of an eye trouble. She stated that her vision had been somewhat obscured in her left eye for a few days, and that at the time of her visit she was quite unable to distinguish objects on account of everything being clothed in a deep purple color. Upon examination I found R.E.V. = $\frac{2}{3}$: + 1D. V. = $\frac{2}{3}$. L. E. V. = perception of form.

Ophthalmoscopic examination showed a large number of circular red spots in all parts of the fundus, macula especially presenting the appearance as seen in embolism of central artery of retina, except the hæmorrhage was not defined, but shaded off into other hæmorrhages. Tension normal. Patient well preserved, and gave no evidence of heart changes or vascular degenerations which I could detect. Fundus and vitreous hazy in certain strata. I prescribed sol. muriate of pilocarpine one-fourth per cent., teaspoonful to be taken every hour till sweating was induced. This was followed by amelioration of the distressing chromatic changes and by improvement of the vision, so that fingers could be counted in the temporal field. Pot. iodide was then ordered, with ungt. hydrargyri, lanoline as a base, rubbed over brow and temple. No especial change occurred subjectively beyond the gradual fading out of the purple color which before surrounded all objects. Objectively the hæmorrhagic spots faded and brightened with the usual persistency.

Finally, about the middle of May, tension began to increase slightly and a pinkish red blush stole over the sclerotic and circumcorneal area. Eserine was promptly applied, but acted badly. I advised operative procedure, but the patient was timid and could not consent.

On June 20, after an unusually bad night and intense circumorbital pain, the patient consented to an operation. Having grave doubts as to the success of any operative interference save enucleation, which the patient would not consent to except as a last resort, and fearing the possible extrusion of the ciliary body, vitreous, etc., if an iridectomy were done, by reason of sudden relief of the corneal counter-pressure, I elected to do a sclerotomy. As long as there was a fistulous opening in the line of the incision, which was not completed above, a small bridge being left for support, pain was not experienced. When this fistula closed the trouble returned with increased force, and the pain was less bearable by reason of the patient being reduced in nervous force. Seven days after the sclerotomy it was evident that another operation must follow. Seeing no evidence

of undue pressure from behind following the sclerotomy, I did a large iridectomy downwards. Patient experienced complete relief of pain, and now, nearly three weeks after the operation, the eyeball is soft and has regained its normal appearance.

Ft. Wayne, Ind., July 16, 1888.

ABSTRACT OF PAPER ON THE HISTORY AND TRUE VALUE OF THOSE AIDS TO HEARING USU- ALLY TERMED ARTIFICIAL TYMPANIC MEMBRANES.

*Read before the Section of Otology of the British Medical Association,
August 10, 1888.*

BY LAWRENCE TURNBULL, M.D., PH.G.,
AURAL SURGEON TO THE JEFFERSON MEDICAL COLLEGE HOSPITAL,
ETC., PHILADELPHIA, PA.

I have endeavored to give a full history of the use and application of the various agents employed in the place of the natural membrana tympani. By this time we have arrived at some certain definite ideas as to the true value of these aids to hearing:

First, their importance to the health of the ear, by preventing dryness, and the general danger to the hearing from the want of the protecting power of the natural membrane.

Second, we can hear to a certain degree without the membrana tympani; but we cannot have perfect hearing without it.

Third, we have in the various agencies which have been employed not only the means of protecting and preventing the drying effects of the air, but also the prevention of the passage into the middle ear of injurious foreign agents, the prevention of disease from cold air or water, so apt to set up acute inflammation, followed by abscess in the mastoid or brain.

There are certain agents that we have individually found to perform the offices we have described, with the least injury to the ear, and still retain bone contact, make a certain amount of pressure, protect diseased parts and tend to the healing of the perforation. Satisfactory results have been obtained from the cotton ball, or pellets of "Yearsley." The objection to this was the tendency, which the ordinary cotton had to cause irritation, by bearing in its fibres bacteria and micrococci, also other foreign matters. Again, it sometimes fits so closely, owing to discharge or mucus on its surface, as to make a shut sac, and absolutely prevent the vibrations of the membrane, thus acting as a damper. These difficulties are overcome by employing corrosive sublimate solutions with "sublimate cotton," or a disk of sublimate gauze, moistened with fluid cosmoline, so as to make it more adhesive. When water with glycerine is employed the mixture will soon ferment in the ear and become irri-

tating, and causes inflammation. By treatment we can much sooner employ the artificial membrane, even when there is a slight suppurative process going on. The solution of the sublimate should not exceed in strength, one to four thousand, if stronger it gives pain. The patient is supplied with a dozen or two of these cotton pellets, attached to threads which have also been soaked in the solution. The fluid cosmoline or vaseline is to moisten the pellet, when about to be introduced if the parts are dry. The pellets are placed in position by means of the ordinary forceps, called tweezers, such as are found in every lady's work-basket, the thread must be cut off close, so as not to be seen. The second form is the india-rubber disk, cut out with the apparatus of Gruber, and introduced with the forceps, as seen illustrated in the writer's work.¹

We have discarded all the forms of apparatus which have any metallic spring, handle, etc., having found them always irritating and injurious, even our own modification, the stem of which we had carefully covered with rubber. We find the rubber curls up, and is destroyed, leaving the metal exposed.

We apply a disk of what is known in this country, as "Mead's adhesive plaster," which is found to be perfectly pliable and antiseptic, or the same make of "boric-acid-plaster." Its mode of use and report of cases, will be found in the writer's work, p. 491. Even since the issue of the last edition, 1887, we have had reports from almost every case of its success in relieving deafness, assisting the perforation in closing, the plaster being retained for months, and in one case two years, with but little irritation.

Dr. C. M. Thomas, of this City, informs me that he has found the "oil-silk," such as is employed in antiseptic dressing, a very successful artificial membrane, looking and acting like the natural one. He cuts them the size required, leaving a small opening in the center. In some two cases he has found the hearing of the patient much improved even after their removal. Dr. C. S. Turnbull, my son, also of this City, employs with success, a pledget of antiseptic wool placed near to, but external to, the annulus tympanicus.

MEDICAL PROGRESS.

TRANSPLANTATION OF MUCOUS GRAFTS.—At the meeting of the XVII Congress of German Surgeons WÖLFER, of Gratz, read a paper on this subject. He restores the continuity of the mucous membranes after excision of neoplasms or cicatrices by transplanting strips of mucous membranes to the uncovered places. The grafts were

¹ Clinical Manual of Diseases of the Ear, 2d ed., 1887, p. 489. J. B. Lippincott & Co., Philadelphia.