

hospital cured. On the ninety-second day, however, he died of rupture of the aorta below the sac. This was filled with consolidated fibrinous clots. Loreta attributes the rupture to an ischæmia of the aortic tunics due to compression and to changes going on in the interior of the sac.

The last case published is that of W. Cayley,¹⁸ reported to the Royal Medical and Chirurgical Society, February 23, 1886. The patient was a man aged 48, with a pulsating tumor, rising about three inches into the neck behind the right sterno-clavicular articulation. The patient was unsuccessfully treated according to Tufnell's method, and given large doses of iodide of potassium. The tumor increased in size and it was evident that it must either soon burst externally or extravasate among the tissues of the neck. On June 24, Mr. Hulke introduced forty feet of steel wire. This caused no constitutional disturbance or local pain, and this portion of the aneurism became completely consolidated. Towards the middle of August, signs of the extension of the intra-thoracic portion of the tumor became more marked and there was an increase of pulsation behind the sternum and towards the left sterno-clavicular articulation. To anticipate fatal pressure on the trachea, Mr. Gould, in the absence of Mr. Hulke, introduced a canula just above the left sterno-clavicular joint, directing the instrument obliquely towards the middle line, and inserted thirty-four feet nine inches of wire. No constitutional disturbance followed, but no relief was given to the symptoms. The patient died in a paroxysm of dyspnœa on September 19. On post-mortem examination, a large aneurism was found springing from the ascending aorta and communicating with the vessel by a very large orifice; the whole of the upper portion was completely filled by a clot, imbedded in which was the wire. The lower portion of the sac caused compression and flattening of the trachea, just above its bifurcation. The first operation produced the desired result in preventing the imminent rupture of the aneurism. The size and connections of the sac rendered the second operation ineffectual.

In the discussion of this case Dr. J. Liston Paul¹⁹ reported a case of innominate aneurism under his care in 1874 which had been treated according to this method. The tumor bulged forward on the left side of the sternum. Into this fifteen feet of cleansed white horsehair were introduced. Slight pain and prickling over the tumor followed. In three days the tumor had grown larger and gave greater distress; on the fourth day the patient died in a convulsion. No search for emboli was made.

It is not remarkable that with such a record of failures the method under consideration has been pronounced "utterly useless" by so competent an authority as the late Dr. Gross, and that Agnew condemns it as "a rash if not criminal trifling with human life." The fourteen cases in which it has been tried terminated fatally, with the exception of Stimson's case in which the result was entirely negative. Still, analysis of the record tends to show that the criti-

cisms just quoted are undeservedly severe and that there are ample reasons for repeating the operation in suitable cases. In the first place, death has in no instance ensued during the operation, although after examining the specimen before us, the possibility of such an occurrence must be conceded. Again, considering the gravity of the disease, the insertion of foreign material into an internal aneurism is not particularly hazardous. In the third case of Bacelli, and in those of Moore, Levis and J. Liston Paul, death followed on or before the fifth day after the operation, so that in only 30 per cent. of the cases can death be attributed to the operation itself, while in the remainder it in no way depended upon the procedure.

In conclusion, the post-mortem reports that are available show that coagulation almost invariably took place in the sac, and when sufficient time elapsed before death, the clot was found laminated and often adherent to the sac wall. In some of these cases at least, progress was made towards a cure. The aneurismal wall was strengthened, the tumor as a rule decreased in size, life was made comfortable and even prolonged. This, I think, was accomplished in the first case of Bacelli, in those of Loreta and of Cayley and probably in the one above reported. In all these cases death was imminent from compression of vital structures or from threatened rupture of the sac. Life was sustained for periods varying from three weeks to three months from the date of the operation. In view of these facts and notwithstanding the failure of the method in effecting a cure, it appears to me that the practice is worthy of further trial. Of course, it should rarely if ever be resorted to in aneurisms of peripheral vessels, when so many safer methods are at our command. Nor is it admissible in intra-thoracic and abdominal aneurisms until all ordinary therapeutic measures have been fairly tried. Practised as a last resort in such cases, it has undoubtedly lengthened life, and it is far from improbable that, if often adopted, a permanent recovery will occasionally be obtained in cases that are hopeless without it.

DR. HERRICK, of Cleveland, asked the cause of aneurisms and whether we were justified in treating such cases on purely empirical grounds?

DR. RANSOHOFF, in answer, stated that the aneurism was traumatic in origin, that atheromatous degeneration would preclude such treatment, and that it was used only as a *dernier ressort*; but that the treatment was rational and not simply empirical.

AN OBSCURE CASE OF EXOPHTHALMOS.¹

BY J. H. THOMPSON, M.D.,

OF KANSAS CITY, MO.

In presenting this report of a case to the Section, I beg to apologize for its apparent insignificance, but inasmuch as I am at a loss to account for an extremely interesting condition, I am prompted to ac-

¹ Read in the Section of Ophthalmology, Otology and Laryngology, at the Thirty-seventh Annual Meeting of the American Medical Association.

¹⁸ Brit. Med. Jour., Feb. 27, 1886.

¹⁹ Ibid.

quaint you with it, that I may secure information which will aid me in the future.

A little boy 5 years old received a slight cut across the face from a whip in the hands of a playmate. The eye was not injured. The only manifest result was a slight scratch on the bridge of the nose. From all accounts he was not sufficiently hurt to cry, and did not complain afterwards. I may here state that there was mumps in the neighborhood, but at this time the child was in perfect health, and as far as I could learn, had never suffered from any serious complaint. Some two weeks after the receipt of the injury, and after all traces of the blow were off the face, he began to complain, at night, of pain in his head. It was paroxysmal, for he would start up from a sound sleep, cry a moment, say that the side of his head and eye hurt him, and as quickly fall asleep again. This would happen three or four times during the night. At other times there were no indications of trouble. These attacks came on during several nights, when the family physician was consulted.

At first, after a careful examination he could find no cause for the pain, but afterwards he thought he could see that the right eye protruded, and he called me in consultation. When I saw the child he had a well-marked exophthalmos of the right side. That was all I could discern. The eye projected about one-half inch forwards, but not so far that the lids could not be closed. It was forced outwards in the axis of the orbit; was slightly movable in all directions, but could not be pushed back into the socket by moderate pressure. There was no swelling of the lids, nor any congestion or œdema of the conjunctiva. In fine, the external eye and its surroundings were normal. I searched carefully for evidences of periostitis and cellulitis, but found none. The internal eye, other than a slight clouding of the disc, perhaps some swelling, and an enlargement of the veins, was normal. Vision was good.

Inasmuch as I could not find a cause for the exophthalmos I called in consultation one of the leading surgeons of Kansas City. Again we examined carefully for retro-bulbar trouble, but in vain. Under an anæsthetic the orbit was explored both with the finger and the hypodermic needle. A small drop of serum was the result; certainly not more or different in kind than could be drawn from any tissue similar to that behind the eye. Under ether we attempted to replace the eye, but could not. It seemed as if the orbit was filled with some hard substance.

We could not make a diagnosis, nor could either of us suggest a line of treatment. However, the patient was placed upon tartar emetic and saline cathartics, with the hope that if there was a serous effusion absorption might take place. After three days' trial, the medicine did no good, but made the patient utterly miserable. The eye remained the same, if not a little worse as far as the displacement was concerned. On my own responsibility I withdrew all internal medication, prescribed a simple belladonna and white precipitate ointment for the forehead, tied a silk handkerchief over the deformed parts, and turned the child out to play with his com-

panions. In one week he was well, the eye returned to its normal position. I afterwards examined it with an ophthalmoscope, but could not find that it had been damaged in the least. During all the time there was no quickening of the pulse, and no elevation of temperature.

THE BEST SUBSTITUTE FOR MOTHER'S MILK.¹

BY SELDEN B. SPERRY, M.D.,

OF DELAFIELD, WISCONSIN.

If it were not for the immense importance of this subject I should feel like apologizing to this learned body for presenting a paper upon a subject so thoroughly written upon by learned practitioners and specialists of this and other countries. Yet on the other hand, we have but to glance at the innumerable preparations as recommended by physicians, and the overwhelming number of proprietary articles, to realize that the substitute for mother's milk has not been found. It then becomes the duty of the general practitioner to add his experience to that of the specialist, that his position may be strengthened. This I say because this paper presents nothing original, yet having given the subject some attention, I would add my experience to the general stock, as I feel it very desirable that we reach some conclusions on the all-important subject.

Having found, as I think, a substitute which is all that can be desired in the way of an artificial food, I purpose in this paper, in a very brief manner, to discuss its preparation and some of the reasons of failure in its use. I take it for granted that all present, like myself, believe that as a basis for an infant food cow's milk is the proper and by all means the best substitute for the mother's. It seems hardly necessary to present any arguments in favor of this statement. At the same time, you all know that cow's milk presents some differences in composition to that of human milk, and for that reason has been rejected after a short trial when found to disagree, without properly inquiring into the means of overcoming these obstacles.

What are these differences? Cow's milk contains more caseine and less sugar than human milk, and is slightly *acid*, while human milk is slightly *alkaline*. If these points of difference can be bridged it is very evident that we will find the substitute for mother's milk. And I think it can be done. But how?

First of all, to insure the coöperation of both mother and nurse in our efforts, it will be all-important that we exert the utmost patience in telling the "whys" and "wherefores" of what is done. It is also necessary that the process of preparing the food be as simple as is possible; that the mother and nurse be carefully instructed in the physiology of infant digestion and things pertaining to it; and of the importance of *cleanliness* and *precision* in the preparation and care of infant food.

In the March, 1883, number of the *American Journal of Obstetrics*, I gave a formula for preparing

¹ Read in the Section on Diseases of Women and Children, at the Thirty-Seventh Annual Meeting of the American Medical Association.