

corporate authorities assume the duty of gathering them from the separate premises they are usually deposited in an aggregate of nastiness at some convenient spot on the outskirts, whence their exhalations vitiate the atmosphere for miles around, or, mixed with mineral rubbish of different kinds, are used by some contractor to fill in prospective building sites, for the gradual murder of future tenants. The common rustic makeshift of burying them in casual shallow pits handily contiguous to the domicile must in time overtax the disinfectant capacity of any soil, and is, as a rule, rather less advisable than the prevalent urban practice of throwing them into a neighbor's gutter or over the roadway. The best way to get rid of such things is, unquestionably, to burn them. Cremation is the manifest destiny of organic matter in all populated places. It means a rapid and innocuous, instead of a slow and possibly dangerous, process of oxidation. In either case organic substances are never destroyed, but their chemical compositions are changed and their elements are profitably recombined in nature's laboratory. In the most humble household the incineration of vegetable matters may be easily effected in a cooking stove or range, if they be put in a little at a time. An ingenious metallic pail with a water-sealed cover and a hinged grated bottom has been anonymously invented by a member of this Association, in which, when placed over one of the openings of a range, a considerable quantity of garbage can be inodorously dried to the point of combustibility and dropped into the fire. On a larger scale furnaces of different capacities are in common use abroad and to a less extent here, which cremate, without offense and at small expense, all private and public refuse, including slaughter-house offal, street sweepings, etc., from small villages up to great cities. One of the first of these, I believe, in this country has been for some time in successful operation on Governor's Island, in New York harbor, where the orderly in charge informed me that the only element of the garrison jetsam which was passingly malodorous was an occasional burnt-offering of old shoes. In some instances the mineral detritus, which forms a large percentage of city refuse, after being thus freed from organic admixture, is converted into a serviceable cement, as is notably the case in Leeds, where the outlay for maintaining the "destructor" is much lessened by the sale of the resulting product. But, aside from any actual pecuniary return, the economy of this plan of combustion, as compared with other methods of disposal, should commend it to every corporate government. In the notorious Whitechapel district of London, where it formerly cost from half a dollar to a dollar a load to cart away to a distance the household refuse and "dust," all the contents of the East End bins are reduced to a harmless mass

of clinker at about one-twelfth of the expense by means of a series of strong draught furnaces, which consume all gases generated during the process. The day is probably not far distant when this method of purification by fire will be adopted for organic waste substances wherever civilized men dwell together. Meanwhile it is the part of wisdom to prevent their accumulation either above or under ground.

If an apology be due for this brief presentation of rudimentary considerations before an assemblage principally composed of experts, my excuse must be a desire to remind a wider audience, through the publicity given to our proceedings, that the "dry methods," exclusively advocated by a few doctrinaires, are applicable to a very small part of our deleterious wastes; that sewage farming and other schemes for irrigation and filtration involve separate treatment of precipitated solids; that the best devised system of sewerage still leaves on our hands an enormous residuum which must be otherwise dealt with; and that no one method of refuse-disposal will satisfy the diverse needs of households and communities.

THE TREATMENT OF CYSTIC GOITRE BY ELECTROLYSIS.

Read in the Section of Laryngology and Otology at the Fortieth Annual Meeting of the American Medical Association, held at Newport, June, 1889.

BY E. FLETCHER INGALS, M.D.,
OF CHICAGO.

In a recent paper upon the treatment of cystic goitre,¹ Thomas M. Hovell, F.R.C.S.E., recommends Sir Morell Mackenzie's method, a description of which was first published in 1872.² He compares this plan of treatment with the methods advised by the authors of the leading English and American works on surgery, and unless he is too enthusiastic in his support of Mackenzie's treatment, it is a matter of surprise that a method so efficient and safe should have been nearly ignored by eminent surgeons, while operations of doubtful utility and much hazard have been given the preference. In Holmes' System of Surgery, 1883, Mackenzie's method is recommended as the best. However, Mr. Bryant³ apparently gives preference to simple tapping of the cyst, or injections of an alcoholic solution of iodine or of the perchloride of iron. In cysts of the isthmus he recommends incision into the cavity as a good and successful operation. With these recommendations Mr. Hovell takes issue on the ground that tapping is very rarely successful and that the irritating injections tend to cause inflammation, which may be excessive, without

¹ Wood's Med. and Surg. Monographs.

² London Lancet, May 11, 1872.

³ Practice of Surgery, 1884.

providing for checking of hæmorrhage when iodine is used, or for the escape of pus in either case.

Mr. Bryant's recommendation for incision of a cyst of the isthmus, or free incision of any cyst as soon as it has suppurated, is objected to as being unnecessarily severe and dangerous.

Mr. Erichsen⁴ recommends tapping, or injection of tincture of iodine, and refers briefly to Mackenzie's method.

The late Prof. Gross⁵ enumerates six methods of treatment of cystic goitre, viz: the seaton, puncture, injections of iodine, incision, excision, and electrolysis, and states that all are more or less serviceable but not free from danger.

Mr. Hovell agrees with Mr. Bryant that the treatment by seaton is dangerous, and cites Billroth, who twelve years ago spoke unfavorably of incisions, but reported thirty-five cases treated by injections of iodine, with twenty-nine cures and one death. Billroth had operated eleven times by von Brun's method, *i. e.* incision of the sac and stitching its walls to the skin, but of these three had died.

Mr. Hovell considers excision a very serious operation; thus from his comparison it appears that Sir Morell Mackenzie's operation is far superior to any other; however, he does not consider electrolysis. Without informing us as to the actual results of Mackenzie's method, except in two cases treated by himself, he leads us to infer that it is practically free from danger and may be expected to cure the case in from three weeks to four months, and that in the majority of cases the duration of treatment will not exceed eight weeks.

Sir Morell Mackenzie's treatment consists in tapping the cyst with a trochar, the canula of which corresponds in size to a 7, 8 or 9 English catheter. After the contents have escaped, he injects into the cyst a solution of perchloride of iron (3j. to aq. 3j.), which is allowed to remain three days, the canula having been corked and kept in position by a tape passed about the neck. At the end of this time the plug is removed, and if suppuration has taken place the cavity is treated like a chronic abscess; but if suppuration has not occurred the injection is repeated and managed as before. After suppuration takes place poultices are applied and the cavity washed out through the canula several times a day with some antiseptic solution.

This method seems to have been followed by most excellent results, but my personal experience with electrolysis, in two cases, leads me to believe that it sometimes cures more rapidly than, and is at the same time devoid of many of the inconveniences of, the treatment just described.

Case 1.—Mrs. S. consulted me in 1884 on ac-

count of a cystic goitre of the right lobe, which I found to be an inch and a half in diameter. I aspirated this two or three times and drew off at each about an ounce of dark, thin blood or bloody serum. This would be immediately followed by the escape of clear, red blood if the aspiration was not at once discontinued. About one-third of the tumor was found to be of a solid character. Finally I introduced an electrolysis needle into the sac, and placing the opposite pole over the tumor, passed through it for about ten minutes an electric current from six to ten La Clanché cells. This operation was repeated three or four times, when the sac was found not to refill. About three years afterward I found the parts in the same condition. The solid portion of the tumor remained but had not increased in size, and the cystic portion had been entirely cured.

Case 2.—G. L. J., cystic goitre of several years' duration. Patient came to me in the middle of January, 1889, with a history of having had the cyst tapped and injected with iodine and other substances several times during the past two years; also of having had it laid open, and of having worn a seaton in it for several months. I found a cyst in the right lobe of the thyroid gland about two and one-half inches in diameter, which was found to contain three ounces of thin, dark blood. I aspirated the cyst and injected it with carbolic acid several times, as follows:

January 19—3ss of 5 per cent. aqueous solution, which was drawn off and followed by 3j of a 20 per cent. solution in glycerine.

January 26—℥xl of a 30 per cent. sol. in glycerine.

February 2—℥xxx of a 30 per cent. sol. in glycerine.

February 9—℥xxx of a 60 per cent. sol. in glycerine.

February 16—℥xv of the 95 per cent. acid, full strength.

The treatment proved of little or no benefit, for on the 23d of February I found the cyst about the same size as at the beginning. I then introduced two platinum needles into the cyst about an inch and a half apart, and passed through them for twenty minutes the current from four diamond carbon cells (similar to La Clanché).

March 2—Cyst much smaller; repeated the treatment.

March 9—Cyst still smaller; repeated the treatment.

March 16—Repeated the electrolysis in the solid portion of the tumor, the cyst being imperceptible.

March 23—Cyst has not reappeared, and is believed to have been cured.

Thus the cyst that had resisted for many months various other forms of treatment, was completely eradicated by electrolysis in less than

⁴ Science of Surgery, 1884.

⁵ System of Surgery, 1882.

four weeks. The strength of the current employed was regulated by the patient's ability to stand the pain it caused. A month later, when the patient was last seen, he continued well.

Throughout the treatment I was assisted by Dr. J. E. Rhodes.

No. 70 State street.

NOTES ON THE PARASITIC THEORY OF ALOPECIA AREATA.

Read in the Section of Dermatology and Syphilography, at the Fortieth Annual Meeting of the American Medical Association, June, 1889.

BY LEWIS WICKHAM,

INTERNE TO THE HÔPITAL ST. LOUIS, PARIS.

So long as a specific parasite for alopecia areata remains undiscovered or is not proven beyond a doubt, so long will the parasitic theory as applied to this affection encounter many adversaries. In favor of this theory in default of the parasite itself there are certain facts of contagion which are definitely proven, and which cannot be regarded as simple coincidences. Among the cases of alopecia which we have had occasion to study in the wards of the St. Louis in the services of Drs. Hallopeau and Vidal, we have noted different ways of transmission from one individual to another of variable degrees of importance.

Here are certain examples of the first order of facts which we are able to see quite frequently:

First. A small girl is affected with alopecia; her sister sleeping in the same bed is ere long attacked with the same disease.

Second. Three children of the same family are attacked with alopecia at short intervals from each other.

Third. A small girl living in the country came to pass a few days with her relatives in town, where a child has alopecia. One month after the child from the country presents plaques of alopecia.

It is to be especially understood that the facts we report in this communication are determined by histological examination. Other instances of the same nature might be cited, but it is unnecessary, as we do not claim that the facts herein cited are rare. The adversaries of the theory may insist that the cases cited are those of simple coincidence, or occurring in members of a family under the same predisposing influences. But we have here two examples of a second series of facts which give a more clearly defined manner of contagion.

First. A young man seeks advice for a plaque of alopecia situated over the right temple, a place which was rubbed by the rim of his helmet, and which had existed for a month. He informed us that about two months previously he had worn the helmet of a friend who was affected with alopecia. This is not all. The plaque was not cir-

cular, but its invasion followed the part marked by the border of the helmet, and actually formed a line of alopecia from 2 to 3 centimetres broad in front, and from 8 to 10 centimetres behind, which corresponded precisely to the part rubbed by the edge of the helmet.

We now come to an observation of transmission which is clearly marked, which we have made quite recently.

Second. Four printers presented themselves at M. Vidal's clinic for diseases of the scalp, April 10, 1889. They were afflicted with alopecia and worked side by side in the room. They, themselves, were convinced that the disease was mutually contagious and came to obtain prophylactic measures for their fellow workmen as well as to get relief for themselves. Investigation revealed the following facts: F., æt. 25, perceived a plaque of alopecia on the vertex about the size of a 25-cent piece in July, 1888. Some time after he noticed another of the same dimensions on the right temple. In September, 1888, L., æt. 42, who worked at the side of F., noticed a plaque of alopecia on the nape of the neck. In October and December C., æt. 40, and D., æt. 35, became affected, the former on the nape of the neck, while the latter presented a plaque on the chin.

We investigated as to the presence of nervous complication with a negative result. On the other hand, in both instances the lesions developed quickly. In these cases it seems to us little doubt can exist of their transmission. These journeymen, thirty in number, working side by side in a small room, often exchanging caps, which served, it seems to us, as agents of transmission. Furthermore, these workmen take but little care of their scalps, which we believe greatly assisted in the transmission of the malady.

Would one still attribute the basis upon which these facts are founded to coincidence alone, or to similar conditions of life?

But the parasitic theory is further favored from a clinical standpoint as cited in some of the classic works on dermatology, the most conspicuous of which are the cases of transmission spoken of by Hallier.

It is in France principally that the most striking observations have been made. One can recall to mind the epidemic of alopecia areata in the school of Nogent, in which thirty pupils were attacked in succession. The diagnosis was confirmed by M. Besnier. Still more recently this learned dermatologist of the St. Louis has brought out in a report on alopecia areata which was presented to the Academy of Medicine July 31, 1888, two observations of value which of themselves might well serve as a basis upon which to found the theory of contagion. The first is taken from the report of M. Leon Cohn in May, 1888, on the consecutive occurrence during the month of twenty cases of alopecia in the Regiment Sapeurs-pompi-