

A peripheral lesion can be eliminated, as the nystagmus was fair from the horizontal canals, the left hand always past pointed to the right, and the auditory reactions were normal. The past pointing and falling reactions indicate a lesion at the crossing of the superior cerebellar peduncles and involvement of the left cerebellar cortex, while the nystagmus reveals a pons lesion involving the vertical canal fibers. All this suggests multiple foci.

On further investigation the patient gave a history of yellow fever at the age of 10, measles at 15, and typhoid at 16. At 18 he had left facial paralysis and difficulty in swallowing and breathing, with partial recovery. Later he had dizziness and stomach trouble, and was operated on for chronic appendicitis. Two years later he was able to resume his studies, but was not well. He is now unable to continue his work as a stenographer on account of dizziness and stomach trouble.

The patient was of fairly healthy appearance. There was an intention tremor of the hands, and weakness of the mimic muscles of the left side of the face. There was no plantar nor abdominal reflex. On the left shoulder and the abdomen there were semianesthetic spots. The patellar reflex was overactive; there was slight spasticity. The corneal reflex was subnormal. There was loss of taste over the left half and posterior right third of the tongue. The patient was very nervous.

All laboratory reports were negative, including roentgenoscopy after test meals.

The manifestations indicated a slowly progressive lesion of weak destructive quality, involving chiefly the region indicated by the Bárány tests. Careful consideration of a detailed history justified the diagnosis of multiple sclerosis.

CONCLUSIONS

1. A more general use of the tests is indicated when dizziness is encountered.
2. A closer cooperation of the otologist with the neurologist is necessary in this work.

TREATMENT OF FACIAL ERYSIPELAS AT CAMP CODY, N. M.

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CAMP CODY, DEMING, N. M.

Between Nov. 6, 1917, and May 15, 1918, 104 cases of erysipelas were treated at the base hospital at Camp Cody. Most of these began on the face. The disease followed drainage of the mastoid in seven cases, abscess of the scalp in three cases, demonstrable ulcer in the nose in three cases, hordeolum in one case, and burns of the face in one case. The remaining ninety cases were called "idiopathic." On certain occasions an influx of such cases was noted after a period of high winds and dust storms, such as characterize this place and favor the development of inflammations of the mucous membranes of the head generally.

Although only one patient died as the result of erysipelas, the disease was responsible for a total of 2,497 hospital days, making it a matter of some importance to determine the best method of management and establishing it as a routine.

TREATMENT

Most of the methods known to the profession have been tested, including a sensitized streptococcus vaccine prepared here from the mastoid cases by Captain

Lamb, chief of the laboratory service. Until about March 1, 1918, none of the methods tried showed any marked superiority over certain others; but at this time, Lieutenant Avata began a systematic employment of the method of collodion circumscription, first described in 1892 by Niehans. The results have been striking. Before March 1, the cases treated by all other methods averaged 8.1 days of fever and 30.4 days in hospital. (The patients were discharged when redness, swelling and desquamation were all gone.) All patients treated after March 1 by collodion circumscription averaged 3.5 days of fever and 15 days in hospital, a cut of 50 per cent. in the number of days spent in hospital by the average case of erysipelas.



Fig. 1.—Erysipelas beginning about the right eye. The disease having extended to the bridge of the nose, the collodion line is made to include the nose and both eyes.

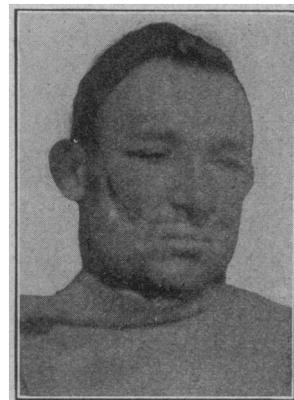


Fig. 2.—A case similar to that shown in Figure 1, front view.

The method is not a new one, but it would appear that it is not so commonly used as it might be to advantage, and that frequently it is not carried out in such a way as to give the full results of which it is capable. The following details of the method as used at Camp Cody, by Lieutenant Avata, are, therefore, recorded.

Collodion, U. S. P. (nonflexible), is painted with a cotton swab or brush to form a stripe half an inch wide and from half an inch to an inch in advance of the line of induration, in such a way that the diseased area is completely circumscribed. The collodion stripe is painted over repeatedly until, when dry, it makes a deeply constricted furrow not broken or imperfect at any point. On the following days the collodion line is inspected for breaks, cracks or inadequate constriction at any point; if found, these are repaired by further coats of collodion. When enough collodion is used to produce a continuous and sufficiently deep (from half to three quarters of an inch) linear constriction of the skin, the erysipelatous induration advances to the collodion, but not beyond it. The collodion is left in place until the temperature and swelling have wholly subsided. If there is a break in the collodion line or if the skin constriction is too shallow, the disease may pass through or under it. Presumably a successful result depends on a complete constriction of the lymphatics of the skin through which the infection travels.

Some ingenuity may be exercised in laying out the line on which the collodion is applied when dealing with erysipelas involving different parts and expanses of the face, head, neck, etc. In cases beginning about the ear it has been found feasible to clip the hair

and encircle the ear; with unilateral involvements of the cheek or face which have already approached one eye but have not involved the nose, the line may be drawn up the nose between the eyes and around the lesion, leaving one eye within the circumscribed area, but saving the other, etc., as in the accompanying illustrations.

Within the circumscribed area the inflamed skin swells intensely, at first appearances more intensely than in noncircumscribed cases; but this is mainly an appearance due to the contrast between the swollen area and the line of depression caused by the collodion, as may be noted in the illustrations. Patients have not complained more of discomfort or the sensation of tightness, when so treated, than those not circumscribed. On the contrary, the control patients complained that they were not given the benefit of circumscription. The latter do not become so toxic as those in which the disease is permitted to involve wide areas of skin (Table 2).

TABLE 1.—COMPARATIVE RESULTS OF THE TREATMENT

Total cases from Nov. 6, 1917, to May 15, 1918.....	104	
Cases treated by collodion circumscription.....	23	
Cases treated by all other methods.....	81	
	Collodion Cases	All Others
Average stay in hospital	15 days	30.4 days
Average febrile period	3.5 days	8.1 days
Average maximum temperature	103 F.	104.5 F.
Incidence of complications	0.0 per cent.	15.3 per cent.

The collodion treatment is supplemented by the continuous application of cold compresses wet with a saturated solution of magnesium sulphate and by general measures, such as are rational in any febrile condition.

RESULTS

Of the twenty-three erysipelas patients treated by collodion circumscription, all but one entered the hospital after Feb. 1, 1918, whereas most of the others

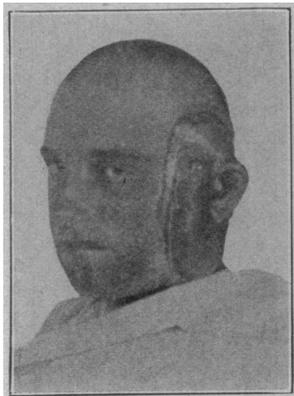


Fig. 3.—Circumaural erysipelas; intense swelling, stopping abruptly at collodion line.



Fig. 4.—Method of sparing one eye when the disease has not yet involved the bridge of the nose.

were admitted before that date and after Nov. 6, 1917. The question could be raised, therefore, as to whether the marked improvement in results was influenced by other factors besides the treatment, as for instance, a natural decline in the virulence of the infecting organism, an increased resistance on the part of the seasoned troops, differing practices with reference to the date of release, etc. After the middle of April, to control this point, circumscription was employed only in alternate cases, while the controls were treated simply with cold compresses of saturated magnesium sulphate solution. The results are given in Table 2.

TABLE 2.—RESULTS IN FOUR CASES TREATED WITH AND FOUR WITHOUT COLLODION CIRCUMSCRIPTION

	Case No.	In Hospital, Days.	Febrile, Days.	Highest Temperature.	Highest White Blood Count.	Complications.
Circumscription Cases.	1	12	3	102.0		None
	2	20	3	104.4		None
	3	21	5	101.4	16,000	None
	4	22	2	99.4	8,000	None
	Average	18.75	3.25	101.8	12,000	None
Controls	1	33	7	104.6	Abscess
	2	34	8	104.0	Abscess
	3	16*	11	104.0	23,000	None
	4	22	14	105.4	22,000	None
	Average	26.25	10	104.5	22,500	40%

*This patient had erysipelas six days before admission to the hospital.

CONCLUSION

The method of treating erysipelas by collodion circumscription as described above has led to a marked reduction in the time spent in hospital by such patients. It also markedly shortens the length and the height of the fever curve, lessens the toxic symptoms generally, and in facial erysipelas reduces the frequency of abscess formation almost to nothing, since abscess seldom occurs with erysipelas confined to the face. No comparable results having been obtained by any other method, the collodion circumscription method has been established as a routine.

OCULOMOTOR REACTION TO LABYRINTH STIMULATION

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The testing of thousands of young men for the aviation service will give a wonderful stimulus and interest to the question of the physiology of the semi-circular canals and their reactions. In the consideration of this subject there is one method of approach which has not been used, and yet which seems to me to present a promising field for investigation. I mean a consideration in a more careful way of the actual anatomic position of the canals, and their physiologic relations to the movements of the head on the body. A comparison of these planes and directions, as well as of the motion of the head with the different conjugate movements of the eyes, is also interesting. To simplify matters, this subject should be considered mainly with the position of the body vertical and immobile.

The movements of the head and eyes and the position of the canals will be considered in three planes, horizontal, longitudinal and transverse. The last two positions, that is, the longitudinal and the transverse, are generally termed in anatomic descriptions of the skull as sagittal and frontal, but I have chosen longitudinal and transverse as being more descriptive of these positions and directions of movement. These positions can be better understood if the skull is considered in the status of the living subject standing upright, with the head erect. An exact vertical anterior posterior median section of the skull would now represent a basic longitudinal plane and any longitudinal plane would be a plane parallel to this section. The term sagittal is used by anatomists instead of the term longitudinal for this direction.

A vertical section made across the skull at right angles to the foregoing would form the basic direction for transverse planes and any plane parallel to such