

Thacher (Gas. R.)

Galvanism in diphtheritic

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## GALVANISM IN DIPHTHERITIC PARALYSIS.

BY JAMES K. THACHER, M.D.,

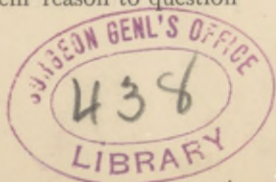
PROFESSOR OF PHYSIOLOGY IN YALE COLLEGE, ATTENDING PHYSICIAN AT  
THE NEW HAVEN HOSPITAL.

THE strong tendency of diphtheritic paralysis to recover makes it difficult to distinguish and estimate the effect of modes of treatment. In the case presented below the danger of the fallacy *post ergo propter* is considerably diminished by the making of the conclusions depend on a comparison between the arms.

A. S., æt. 17, in good health till September last, when he had an attack of diphtheria, and for three weeks was attended daily by a regular physician. The diphtheritic process in the throat was followed by inability to talk plainly, diplopia, and weakness and numbness in the extremities. The palatal and ocular paralysis reached a maximum before that of the limbs, and weakness was noticed in the arms earlier than in the legs.

When the patient came into my hands December 18, the paralysis had become almost entirely confined to his limbs. Both his arms and legs were quite weak, and showed partial reaction of degeneration.

There can be no doubt of the diphtheritic nature of the case, nor does there seem reason to question



that the paralysis was due to a multiple peripheral neuritis.

The legs were now treated with galvanism and massage, and the usual tonics ordered. The arms were reserved for experiment. The numbers given below indicate the strength of the hands as measured by an ordinary Tiemann's grip dynamometer.

*December 18.*—Right 31, left 29. Left arm galvanized, strong current, kathode labile, ten minutes daily for ten days. Right arm not treated.

*28th.*—Right 43, left 46. Right arm galvanized as above for seven days. Left not treated.

*January 4.*—Right 58, left 56. Left massaged for seven days. No galvanism. No treatment of right.

*11th.*—Right 69.4, left 64.3. Left galvanized, not massaged for seven days. Right not treated.

*14th.*—Right 70.3, left 71.7. Right faradized for seven days.

*25th.*—Right 74.6, left 75.8. The patient then, considering himself well, withdrew from observation.

It will thus be observed that in each of the three periods in which galvanism was used, applied to the weaker arm it reversed the order of strength; and this reversal did not take place with either faradism or massage in the single trials of these modes of treatment.

The gains under galvanism are exhibited as follows :

	Galvanized arm.	Untreated arm.
(1) Ten days to left arm . . . . .	17	12
(2) Seven days to right arm . . . . .	15	10
(3) Seven days to left arm . . . . .	7.4	0.9
Total . . . . .	39.4	22.9

That is, the galvanized arm made almost double the progress of the other (1 : 1.72).

The gains with faradism and massage were :

	Arm treated.	Arm untreated.
Massage . . . . .	8.3	11.4
Faradism . . . . .	4.3	4.1

So that here there appears to be essentially no difference produced by the faradism, while the massage seems to have been the reverse of successful. The conclusion that the massage was injurious can, however, hardly be drawn from a single seven days' trial.





