

machine show signs of electricity; and as these signs, when examined, appear to be different in the chain, and in the machine, and the globe having, as he supposes, drawn from the machine part of its natural or common quantity of electricity, and given it to the chain, he calls the electricity appearing in the chain, electricity *by excess*; and the electricity appearing in the machine, electricity *by defect*; which answer to our terms of *positive* and *negative* electricity, or electricity *plus* and *minus*. And thus his expressions, *electrifying by the chain*, and *electrifying by the machine*, are to be understood, electrifying *positively*, and electrifying *negatively*.

LI. *An uncommon Case of an Hæmoptysis;*
by Erasmus Darwin, M. D.

*To the very Honourable and Learned the President,
and Members of the Royal Society.*

Gentlemen,

Read Feb. 14, 1760. **T**HE following case of a discharge of blood from the pulmonary artery, appears to have been owing to a cause different from any mentioned amongst the writers of medicine: and as, from the knowledge of that cause, the cure was so easily deduced, I flatter myself, you will not esteem it unworthy your attention.

A gentleman, residing near this place, between forty and fifty years of age, of a pale and meagre habit, has been daily afflicted with violent head-achs
for

for several years past; and, about four years ago, after having taken a considerable quantity of Peruvian bark, became suddenly paralytic. The use, however, of his right limbs was so much restored, as only to remain weaker than the other; when, upon suddenly awaking from his sleep about two o'clock in the morning, (May 7, 1759), he spit up four or five ounces of florid blood.

He immediately lost twelve or fourteen ounces from the arm, had elixir of vitriol given him, and in the evening had a glyster, and lost blood again to about ten ounces.

On the 8th, about the same hour, he again suddenly awaked, and spit about the same quantity of blood as before. He was now advised to increase the quantity of elixir of vitriol, had a bolus of *extractum Campechense* every six hours, and had a leech applied to a blind pile, that had long appeared after going to stool.

On the 9th, at the same hour, he had again the same discharge as before. That these hæmorrhages were from the pulmonary artery, rather than the bronchial, appears from the sudden exspuition, the quantity, the floridity, and from the discharge being without pain, and unmixed with phlegm.

As he had no feverish symptoms, either when he first awaked, or during the day, no more blood was taken from him; and as he constantly slept profoundly from ten o'clock till two, when the complaint seized him, he was now advised to be awakened, and rise out of his bed, at one in the morning, and remain awake till three, omitting all medicines.

He

He continued to rise from bed for a week, and has ever since used himself to awake at the same time; and has not only been entirely free from this complaint, and that without any further discharge from the hæmorrhoidal vessels; but has got more flesh, and his head-achs are become even inconsiderable.

I ought not here to omit, that he had a vomit given him on the 12th, and twice repeated, at the intervals of three or four days.

As the patient, from a former hæmiplagia, had, in all probability, many parts of his body rendered less irritable than is natural; and as he constantly slept profoundly, and the hæmoptoe always awaked him after four hours sleep; I was led to conclude, that, during this sleep, the lungs were not sufficiently sensible to push forwards the whole circulation; and and that hence the blood, gradually accumulated, ruptured some minute branches of the pulmonary artery, before the uneasiness became great enough to awake the patient. And, as much as the evidence of a single case in medicine may be estimated, the successful cure would seem to evince the truth of this doctrine.

I have only to add, that the anxiety, with which patients reduced to great weakness awake from their sleep, and the hurried pulse, have, by others, been observed to be owing to an accumulation of blood in the lungs, during their state of decreased sensibility: And how detrimental, in these cases, might be the administration of opium, or nitre; whilst the want of sleep, or the recurring hæmorrhage, might seem, to the unwary practitioner, to need their assistance.

After a few days, observing some cough remain, it seemed adviseable to give two or three vomits; as, from late experience, they do not endanger a renewal of the discharge, and must promote the expectoration of the eschar, or any extravasated blood; which otherwise, by its delay acquiring a putrid acrimony, perhaps most frequently erodes the contiguous vessels, and, forming new ulcerations, becomes the general cause of consumptions, subsequent to accidental spitings of blood.

I am, Gentlemen,

Your very humble servant,

Lichfield, Dec. 17. 1759.

Erasmus Darwin.

LII. *An Account of the late Earthquakes in Syria: In a Letter from Dr. Patrick Ruffell, to his Brother, Alexander Ruffell, M. D. F. R. S.*

Aleppo, Dec. 2, 1759.

Read Feb. 21,
1760.

AS I recollect nothing in the way of business, which I have not already wrote you about; and as I know not when this letter may get away, I shall, in the mean time, give you some account of the earthquakes here, which have thrown the people into a terrible consternation.

The spring of this year was unusually dry, the summer temperate, and the autumn, though the rains came on towards the end of September, might be