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ON THE BROMIDES IN EPILEPSY.

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What part of the therapeutic action belongs to the potassium, and what to the bromine? The action of the bromide of potassium on the organism has passed through strange vicissitudes. In the outset all the effects were ascribed to the potassa; after the labors of Traube the effects of the potassic salts became known, particularly of the nitrate on the heart, which, after a short period of excitement, suffered a certain degree of depression, with diminished blood pressure; and it was hence concluded that all the salts of potass, whatever might be the acid or the metalloid, possess true therapeutic properties; but experience soon showed the complete inertia of the chloride, the nitrate and the iodide of potassium in the treatment of epilepsy; it was then proved that potass in general, in whatever dose or combination, did not possess the least therapeutic influence over epilepsy.

This was the second phase of the bromide, diametrically opposite to the first. It is necessary to divide and separate the physiological action into two parts; on the one side, to discover its effects on the brain, the medulla and the skin, which represents its special nature; and, on the other side, its effects on the circulation, the respiration and the temperature, which would be those of its common or alkaline nature.

Here now we have the potass pretty well demonetised; but the physiologist limits himself to a few hours of observation on some animal whose intelligence he cannot penetrate, whilst the clinician sees and follows the cerebro-spinal phenomena for a long time, and does not hesitate to recognize

the pre-eminence of clinical medicine; it is this which teaches the therapeutic properties, and above all the cerebral action, of the bromides in general, and of the bromide of potassium in particular.

The latest investigations by Kroy, on man, show clearly that all the virtue resides in the bromine; yet, on the contrary, on animals, the excessive proportion of 67 per cent. of bromine against 33 of potass in the bromide passes, or may pass, through without producing the least effect.

The third vicissitude undergone by the bromide of potassium, not only despoiled it of its curative property, but transformed its action on the heart into a real intoxication of the organ; in this turn the disadvantages of bromism were imputed to the potass, which was regarded as decidedly lethal; and it was believed that it was merely necessary to replace it by some other alkaline base, in order to get clear of all the dangers of a drug which is prescribed through months and years. This gave birth to the bromide of sodium, the bromide of ammonium, and lastly to the mixture of these two with the inevitable bromide of potassium. The polybromides, perhaps for the very reason that their complex effects are unknown, are to-day much employed, as a consequence of the potassophobia; yet it is enough to know that the habitual dose of six grams of the bromide of potassium introduces into the system only two grams of potass. How has it happened that such a dose, taken into the stomach, has never produced the least inconvenience?

The ashes of alimentive vegetables represent 3 to 4 % of their entire mass; the mineral residues of the potato contain 60 % of potass, that is to say, more than a grain and a half for every 100 grams of the tuber, and yet neither its sedative virtue, nor the danger of its use, has ever been suspected. Lastly, it is easy to prove that in order to obtain the equivalent effects of 5 grams of the bromide of potassium, the dose of the bromide of sodium must be raised to 10 or 15 grams. So, in order to avoid a very uncertain danger, we inevitably, by this excessive dose of the bromine, fall into the grave inconveniences of bromism, as is proved by the convulsions caused by injections of the bromide of sodium, just as by those of the bromide of potassium, into the blood of animals. Rochefonte has demonstrated this by his investigations in my laboratory. The bromide of am-