

spastic rigidity returned in the course of half an hour, when the chloroform was re-applied, with the same apparently beneficial results. After both these exhibitions of this agent, the pulse fell from 160 to 140, and became softer and less jerking.

12½ p.m.—Little variation in the symptoms; pulse, now under the influence of the chloroform, 140. I made two free incisions on each side the wound on the nates, to which a poultice was applied; very little bleeding followed.

4½ p.m.—Met in consultation. Pulse smaller and weaker, 140. He appears evidently worse. The spasms recur more frequently; the effects of the chloroform have become more evanescent; it has been necessary to apply it almost every ten minutes. The opisthotonos more marked, and the abdominal muscles more rigid. Still sensible during the interval of anæsthesia. Has made no water to-day. Replied in the affirmative to a request to make it, and desired to be raised for the purpose. He passed it in quantity and of normal appearance. Finding the chloroform, of which 3iss. had been used, of now but doubtful efficacy, ether was substituted for it, and 1½ grains of the Alcoholic Extract of Cannabis Indica ordered to be given every half hour. Feeling considerable relief after the warm bath of yesterday evening, he requested another. It was accordingly administered. The left arm was now noticed to be spasmodically affected, although not to the same extent as the back or jaw.

8½ p.m.—In consultation. The ether has been assiduously applied; the anæsthesia *pro tempore* not so complete as in the case of the chloroform. The patient is still sensible; he appears calmer, and the spasms less frequent. Pulse 168, fuller and stronger. A spasm coming on, the ether was administered, and the pulse immediately fell to 138, but was more jerking. The relaxation appeared equally as perfect as with the chloroform.

16th, 9 a.m.—In consultation. Has passed a bad night. The symptoms not altered in character or intensity. During the night the pulse ranged between 132 and 140. The chloroform and ether were both exhibited alternately every half hour, according to the recurrence of the spasms. The Indian hemp has been faithfully persevered in. To this period he has taken 36 grains of this medicine, and has used 3ij. of chloroform, and 3ij. of sulphuric ether, the former in 40m doses, the latter in 3ij. doses. During the night he micturated freely again; and about 4 a.m., at his own request, was put into a warm bath, from which he stated that he derived considerable comfort on a previous occasion. He still complains of pain at the ensiform cartilage, nape of neck, and between shoulders. The pulse is now variable, ranging between 160 and 172. After the inhalation of ether, *pro re nata*, no reduction in the frequency of the pulse, appeared to be effected. The Cannabis was ordered to be continued, and to be alternated every half hour with the Alcoholic Extract of Aconite, in doses of 1½ grains. The ether to be discontinued, and chloroform to be alone used as before. Brandy punch was ordered also *ad libitum*, and an injection of beef tea for the double purpose of nutrition and alvine evacuation.

12, noon.—Pulse 144, small and weak. The blistered surface was now dressed with the Ungt. Hyd. Biniod, (gr. xx @ 3i.)

1 p.m.—In consultation. Pulse 144, variable but maintaining same character; 3ij. of brandy mixed with warm water were introduced into the stomach by an esophagus tube. The tube was allowed to remain, and an injection of strong beef tea was given per anum. In the course of three quarters of an hour the pulse becoming smaller, weaker and more irregular, with every appearance of sinking, 3ij. more of brandy, with water, were introduced into the stomach, and the tube was withdrawn.

3 p.m.—The patient appears to be in a state of narcotism, occasioned probably by the brandy, some of which was rejected. He looks more composed. The pulse continues the same.

5 p.m.—Pulse 140; the same character; the effects of the brandy being observed to be going off, chloroform had been administered about half an hour previously; an enema of beef tea had also been given. On examining the back, no effect was perceptible from the Iodide of Mercury ointment. As before, when the anæsthetic influence of the chloroform went off, the spasm of the neck returned, together with the opisthotonos. Between 9 a.m. and 1½ p.m., he has taken three pills of the Cannabis, and three of the Aconite. They were discontinued in consequence of the supervention of the narcotic symptoms after the exhibition of the brandy. At 5hrs. 40min., the spasms returned, with moaning, and the chloroform was again administered.

From about 9 o'clock to 4 a.m., the little patient continued in much the same state, although more tranquil; sensibility continued unimpaired to the last. He died about 4½ o'clock, a.m.

The above case is placed on record for the double purpose of exhibiting the intractability of the disease, and the unsuccessful employment of powerful sedatives, most freely and faithfully administered. In the short space of about thirty hours, the little patient had inhaled about 3ij. of chloroform, and as much of sulphuric ether; and had taken internally, 41 grains of the cannabis, and 4½ grains of the extract of aconite. There could be no question of the genuineness of the extracts administered, and of the fidelity with which the remedial measures were applied. This case is an additional one to the long catalogue of fatal issues under the disease in question, and is chiefly valuable as indicating the futility of the line of practice adopted.

Montreal, May 1, 1849.

#### ART. XIV.—ON MINERALOGICAL SYSTEMS.

Translated from the German of BERZELIUS, by HENRY CROFT, Esq., Prof. Chemistry, King's College, Toronto.

In the following paper I will endeavor to bring forward certain considerations which appear to me to be deserving of attention in constructing a system of mineralogy, more especially as the different opinions respecting the basis on which such a system must be founded have not yet enabled us to arrive at any conclusion as to which of the various groundworks that