during 1850-51 to 1 in 8·33, or about 12 per cent., and in 1851 it was only 11·86 per cent.

In 862 Dr. C. J. B. Williams, in one of the Lumleian Lectures delivered to the London College of Physicians, observes, that the experience of Louis and Laennec gave an average duration of two years' life in phthisis after it was decidedly developed, but that since cod-liver oil was introduced, he infers, from 7000 cases, that the average duration of life has been four years—that is, doubled.

My own conviction is, that innumerable cases which formerly would have died rapidly, now rally, live for years, and many of them ultimately recover. The hopelessness which used to seize upon many consumptive persons and on their friends is also now removed, and the resolution to combat the disease by appropriate diet, exercise, and other hygienic means, has added further success to our treatment.

I venture then to say, that in the same manner that in recent times we have diminished the mortality in cases of acute inflammation, so we have diminished the mortality and increased the duration of life in cases of tuberculosis, and more especially in that most fatal form of it—phthisis pulmonalis. In the one disease as in the other, this improvement can only justly be ascribed to the advance of physiology and pathology; to our superior knowledge of the nature of the disease, and, as a consequence, to our treatment of it on more scientific and successful principles.

NOTE IN REPLY TO DR. HICKS.

In the account which Dr. Hicks gives of his views as to the origin of vibriones, in THE LANCET of May 23rd, he overlooks, as it appears to me, a very important point,—namely, the different periods of time when a cell or a vibrio grows and generates. After quoting my remark, "If the molecules divide, how is it that filaments form at all?" he observes, "If both these properties be not granted to vegetable cells, and to these vibriones also, then of course I can proceed no further. We disagree completely on the premises, and our arguments would not bear upon each other." In truth, this is the question at issue between us, which, however, I will endeavour to show may yet admit of a correct explanation, on the basis of the molecular theory of organization.

When a plant consists of a single structural element, such as a cell or a tube, it will I think be admitted by Dr. Hicks that growth in the sense of increased bulk, and growth in the sense of multiplication of parts by division, do not proceed at the same moment of time. Every plant and animal follows in this respect the same law. Nutrition is carried on up to a certain point of maturity, and then, and not till then, does generation, or the separation of parts to form the new creature, take place. When plants and animals are complex in their structure, one organ or segment may be growing while another is disintegrating. But in individual organs there is a period for growth and reparation, and a period for division or separation.

Now in watching the development of vibriones, we first see the formation of a film composed of minute molecules. These gradually enlarge, and, I think, unite to form the longer vibratile bodies. After a time these may divide and break up, but this is the last and not the first stage of the process. Hence, it seems to me, I am correct in thinking that if at their first formation they possess the property of dividing, they cannot also at the same moment possess the property of elongating and forming filaments. The one function is subversive of the other. While, then, I agree with Dr. Hicks in attributing to a cell and to a vibrio the property both of growth and division, these two functions must be exercised at different periods of time; so that I still repeat, in reference to the early stage of formation, If the molecules divide, how is it that filaments form at all?

Should it be maintained that the different molecules possess different functions—that among the millions of those bodies that we observe in the field of the microscope at once, and which at that early period are all globular and resemble each other, some are dividing while others are developing into plants,—then it appears to me that neither observation nor correct reasoning supports such an hypothesis. A mass of vibrionic molecules is not a compound organism; it is a mere aggregation of similar simple elements. Each of these in passing through certain phases of development may be arrested, or reach maturity at various periods; so that we frequently see different forms present at one time. But that the same forms and the same stages of growth should exhibit directly opposite functions is surely not in accordance with physiological knowledge.

It is unnecessary to enter into the discussion as to the supposed origin of the molecules from pre-existing cells. It is for those who maintain such a theory to find those cells, and show how such masses of vibriones can be derived from them. For my own part, I have never observed in the infusions of flesh in which vibriones are readily formed any trace of cells whatsoever. I cannot therefore discover any ground for supposing such to be their origin, nor any reason for maintaining that their number is dependent on the constant division and multiplication of the primary molecules formed.

I shall be delighted if Dr. Hicks succeeds in establishing the truth of his opinion as to the contractility of the fibres of the unimpregnated uterus. All I can say on that topic is, that perhaps he will agree with me in thinking that stronger facts will be required in its support than those he has yet brought forward.

REPORT OF THE TRIAL OF

SARRACENIA PURPUREA, OR PITCHER PLANT, IN SMALL-POX.

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A COMMUNICATION, seemingly of great promise, from Mr. Chalmers Miles, of the Royal Artillery, was read some time since at a meeting of the Epidemiological Society on the use of Sarracenia purpurea in Small-pox. The specimens of the plant which accompanied the paper were submitted to me for trial at the Small-pox Hospital, the root being the part of the plant particularly recommended for use.

The public generally, and the profession, ought to feel very much obliged to Mr. Miles for the great trouble he took in bringing the subject before them; and although I shall not, unfortunately, be able to report favourably on the use of this plant in small-pox, I feel that Mr. Miles is just as deserving of our thanks for the great trouble he has taken, and for the expense I have no doubt he has been put to, in gaining the particulars stated in the communication in question, as if the remedy had succeeded ever so well.

The root was said to be the part of the plant that, when made into a decoction, afforded the best form of giving the medicine. There was about enough for three persons only in the canister transmitted by Mr. Miles to this country from Nova Scotia, and given to me. I had therefore to make up my mind what were the most desirable cases of small-pox in which to test its efficacy. I fixed on, first, a malignant case—one of those attended with hæmorrhage from the mucous surfaces; second, a severely confluent case, such as my experience has taught me usually dies, owing to the great amount of eruption; and, third, if possible, a corymbose case—one of those rather rare and nearly always fatal cases of small-pox.

To give the remedy a fair trial, it was necessary to have the case on which to try it in the early stage of the disease, during the first few days of eruption. There was but little small-pox in London at the time the plant was first submitted to me for trial, and, although I was on the watch for such cases as I have mentioned, several months elapsed before I had a suitable opportunity of trying the efficacy of the alleged remedy. Of course, I wished to meet with the cases I had fixed on free from any suspicion of their having been vaccinated. This was absolutely necessary, because vaccination has a great influence in modifying what may be called the normal course of small-pox. After several disappointments, unnecessary further to detail, small-pox became epidemic in the autumn of last year, and the opportunities of trying the sarracenia became numerous. About the same time Mr. Miles returned to this country, and he was good enough to write to me and place at my disposal any amount of the sarracenia I might require, to be forwarded through the agency of Messrs. Savory and Moore.

I tried the decoction of sarracenia made from the root by simmering an ounce in a pint and a half of water for four hours, until reduced to a pint; and a quarter part was usually given for a dose twice a day, for two days or more. I also gave in some cases the liquor sarraceniæ supplied by the same firm. In all fifteen patients have been treated with the sarracenia; selected for their severity, as I have described—such cases as I believed would not get well under ordinary treatment. They have all died.

The cases were selected on admission in the early stage of

the disease on account of the severe symptoms manifested, and because I felt it was of no use to try the efficacy of the sarracenia on mild cases or vaccinated cases, which I knew very well would recover without anything being done for them beyond the exhibition of ordinary care, the giving of salines if required, occasional aperients, suitable diet, &c.

I cannot say that the sarracenia had any effect whatever. It did not save life; it did not modify in the least the eruption of small-pox; it did not influence any of the secretions; it did not increase the secretion of urine; in only one instance did it seem to act on the bowels, and this seeming effect might easily have been from other causes. The particulars of the fifteen cases taken daily at the time of the trial of the sarracenia are appended to the report.

Two cases have been admitted into the hospital that had taken a decoction of the leaves and stems of the sarracenia before admission. The first, a very mild case, having four vaccine cicatrices, was highly modified, I believe, by the vac cination. The second case was confluent, was without vaccination, not severely confluent, and was wholly unmodified. They both recovered. The recovery might, perhaps, by some be attributed to the sarracenia; but I believe it had nothing to do with it. The vaccinated case was, as I have said, very mild, due, I believe, to the vaccination. As to the second case, about half our confluent unvaccinated cases recover with ordinary treatment.

In conclusion, I may state, that had I found the sarracenia do any good, I should have taken an earlier opportunity of reporting the fact to the profession. As it failed I thought it well to defer this report that others might, without bias, try the plant during the present epidemic of small-pox, and favour us with their opinion of its reputed power of controlling the course of the disease in its severe forms.

APPENDIX.

Cases of Small pox treated with Sarracenia (1862).

1. Margaret C——, eighteen years of age; small-pox, confluent, with menorrhagia; unvaccinated. Was admitted into the Small-pox Hospital Oct. 8th, 1862; fourth day of illness, second of eruption. Took a quarter of a pint of the decoction of sarracenia at one o'clock at night Oct. 8th, and a quarter of a pint, in two doses, the following day. She would not afterwards take any more, and died Oct. 12th.

2. Mary Ann B——, eleven years; small-pox, malignant; unvaccinated. Admitted Oct. 22nd; fourth day of illness, second of eruption. Took two ounces of the decoction of sarracenia, made from that sent by Messrs. Butler and M'Culloch, every six hours until the pint was consumed, beginning on the day of admission. Died Oct. 25th, in the evening, seventh day of illness, fifth of eruption.

3. John M——, eleven years; small-pox, confluent; unvaccinated. Admitted Oct. 22nd; fifth day of illness, second of eruption. Took the same evening two ounces of the decoction of sarracenia, (Butler and M'Culloch,) and continued it every six hours until the pint was consumed. Died Oct. 28th, eleventh day of illness, eighth of eruption.

4. Elias H. F——, forty-eight years, a machinist from Massachusetts; small-pox, confluent; unvaccinated. Admitted Nov. 6th; eighth day of illness, fifth of eruption. Took the decoction of sarracenia—that sent by Mr. Miles—in quarter-pint doses, beginning the day of admission, twice the following day, and one dose the succeeding day. Died Nov. 13th, fifteenth day of illness, and twelfth of eruption.

5. John H——, eighteen years, baker; small-pox, confluent; unvaccinated. Admitted Nov. 18th; fifth day of illness, second of eruption. Began the decoction of sarracenia the following day; took two quarter-pints one day, and two quarter-pints the following day. Died Nov. 25th, twelfth day of illness, ninth of eruption.

6. Geo. D——, twenty-five years, labourer; small-pox, confluent; unvaccinated. Admitted Dec. 2nd; fifth day of illness, third of eruption. Began the decoction of sarracenia same day; took one quarter-pint dose, two doses the following day, and one the next. Died Dec. 10th, thirteenth day of illness, eleventh of eruption.

7. Wm. B——, seventeen, baker; small-pox, confluent; unvaccinated. Admitted Dec. 3rd; fifth day of illness, second of eruption. Began the decoction of sarracenia next day; took two quarter-pint doses, and the remainder the following day. Died Dec. 20th, twenty-second day of illness, and nineteenth of eruption.

8. Charles B——, nineteen, footman; small-pox, confluent; unvaccinated. Admitted Dec. 11th; fourth day of illness, second of eruption. Began the decoction of sarracenia Dec. 12th, and took the pint on that and following day; continued it through another pint, and died Dec. 21st, fourteenth day of illness, and twelfth of eruption.

9. John J——, twenty-five years, draper's assistant; small-pox, confluent; vaccinated in South Wales in infancy; no cicatrix. Admitted Dec. 11th; seventh day of illn ss, fifth of eruption. Began the decoction of sarracenia the following day; took the pint during the two days, Dec. 12th and 13th, and continued it through another pint. Died Dec. 15th, eleventh day of illness, ninth of eruption.

10. John Z ——, thirty-three, confectioner; small-pox, confluent; vaccinated near Como; one indifferent cicatrix. Admitted Dec. 11th, second day of eruption. Began the decoction of sarracenia Dec. 14th, and continued it to a double dose, two pints. Died Dec. 18th, eleventh day of illness, ninth of eruption.

11. James H——, twenty-one, labourer; small-pox, confluent; unvaccinated. Admitted Dec. 19th; sixth day of illness, fourth of eruption. Began decoction of sarracenia same day; died Dec. 28th, fifteenth day of illness, thirteenth of eruption.

12. Thos. U. J——, twenty-two, draper's assistant; small-pox, confluent; unvaccinated (cut twice for cow-pox in Essex without effect). Admitted Jan. 19th, 1863; eighth day of illness, sixth of eruption. Began, on the day of admission, one drachm of liquor sarraceniæ every four or five hours—one drachm being stated to be a full dose; took three bottles, in all an ounce and a half, of the liquor sarraceniæ; no effect. Died Jan. 24th, thirteenth day of illness, eleventh of eruption.

13. Ann O——, thirty, barmaid; small-pox, confluent, hæmorrhagic; vaccinated at Lymington, two indifferent cicatrices. Admitted Jan. 24th; fifth day of illness, third of eruption. Began the following day with one drachm of liquor sarraceniæ every four or five hours; took an ounce and a half of the liquor; no effect. Died Jan. 28th, being the ninth day of illness, and seventh of eruption.

14. Thos. C——, thirty-five, stone sawyer; small pox, confluent; unvaccinated. Admitted Jan. 31st, 1863; eighth day of illness, sixth of eruption. Began with the liquor sarraceniæ on the day of admission; one drachm for a dose every five or six hours; took six drachms. Died Feb. 5th.

15. James U——, thirty-nine, labourer; small-pox, confluent; unvaccinated. Admitted Jan. 31st; sixth day of illness, fourth of eruption. Began liquor sarraceniæ, same day; took six drachms. Died Feb. 5th.

Note.—The patients in Cases 2 and 3 only took the decoction of sarracenia supplied by Messrs. Butler and M'Culloch—a mixture of root, stalkes, and leaves. All the rest of the cases took the sarracenia first sent by Mr. Miles, or that supplied at his request by Messrs. Savory and Moore.

SEVERE CASE OF POISONING OF A GIRL, AGED TWELVE YEARS, BY THREE-QUARTERS OF AN OUNCE OF CHLOROFORMIC ANODYNE.

COLD AFFUSION TO THE HEAD; ULTIMATE RECOVERY AFTER NEARLY FIFTY-FOUR HOURS' NARCOTISM.

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THE following case possesses several points of interest:—1st. The novelty of the poison. 2nd. The peculiarity of its symptoms. 3rd. The recovery after so large a dose. 4th. The mode of treatment.

On January 10th, 1862, at eleven o'clock A.M., Mary Anne M'G—— had given to her by mistake for a black draught, six drachms of a new remedy called chloroformic anodyne. She immediately felt sick, and vomited. Before ten minutes had elapsed from the time she took the medicine stupor supervened, and so suddenly indeed, that her head dropped into the basin into which she was vomiting. Mr. Kitelee was at once sent for, and on his arrival he found the patient perfectly insensible, the pupils contracted, the face livid, and the breathing stertorous. With the aid of Mr. Simpson (who was also called to the case) he applied the stomach-pump, and ejected the remainder of the poison about two hours after it had been swallowed. As, notwithstanding the treatment, the patient became worse, and appeared to be sinking, Mr. Kitelee requested me to meet him in