grasped and removed, would in itself be so full of danger to the eyeball that it should not be attempted save in the last extremity. Probably the time will come when such a proceeding would be indicated, but at the present moment it does not appear to me justifiable. At a later stage there may be a more promising prospect for an operation; but if the eye should become painful, and the safety of the other eye be threatened, it is open to question whether the better plan would not be the enucleation of the entire globe.

LEEDS GENERAL INFIRMARY.

CASES OF CHOREA; VIOLENT MOVEMENTS; TREATMENT WITH LARGE DOSES OF SUCCUS CONII.

(Under the care of Drs. CLIFFORD ALLBUTT, EDDISON, and CHURTON.

FOR the following notes we are indebted to Mr. J. F. W. Silk, house-physician.

CASE 1. (Under the care of Dr. Clifford Allbutt; from the notes of Dr. A. G. Barrs, late house-physician.)—Joseph W—, aged sixteen, admitted on Feb. 15th, 1882. Has had acute rheumatism four times, each attack being followed by chorea. The last attack of acute rheumatism was in December, 1881, and the present choreic condition is of three weeks' duration. The patient is a well-grown, well-nourished lad, the subject of movements of a typically choreic character, affecting the limbs and face, and not more marked on one side of the body than the other.—21st: Has been getting rapidly worse; the movements are now most violent; he cannot be kept in bed; the skin over the bony prominences is becoming chafed; there is slight lividity of the lips; much emotional disturbance, and he has to be fed with nutrient suppositories.

March 1st: Since the administration of the conium on the 21st a steady and uninterrupted amelioration of the condition has set in, but the emotional character continues.

April 25th: Discharged, vastly improved in every respect; the movements, except on excitement, only slight, but he is easily excited. The heart sounds throughout have remained clear.

Between February 15th and 20th the solution of arsenic was prescribed, increased up to thirteen minims every four hours, and, in addition, on the 19th, chloral hydrate (fifteen grains) three times during the day. On February 20th, between 9.30 A.M. and 11.45 P.M. four doses of one-third of a grain of morphia were injected hypodermically. He was somewhat quieter after each of these and subsequent injections, but the improvement was only transitory. On February 21st, between 3 A.M. and 9 P.M., two doses of one-third of a grain of morphia and two of half a grain were exhibited. At 11 A.M. he commenced taking half an ounce of the succus conii every three hours. On the 22nd, between 5.30 A.M. and 9 P.M., three injections of half a grain of morphia were given. The hemlock was continued in the same dose, half an ounce, throughout the day, and was discontinued on the morning of February 23rd. From February 28th to April 20th he took the solution of arsenic up to twelve minims three times a day. This lad was readmitted with a return of the chorea on January 15th, 1883, but it was of a much milder type and yielded to ten-minim doses of solution of arsenic.

CASE 2. (Under the care of Dr. Eddison; from the notes of Mr. J. H. Naylor, medical assistant.)—Sarah G—, aged nineteen, a servant, admitted Feb. 23rd, 1883, had rheumatic fever six years ago, and again two years ago. After the first attack she had severe general chorea, from which she has never since been entirely free, but which has been more marked during the last month, probably on account of exposure and want of food. The patient was an anæmic, ill-nourished girl. Choreic movements very violent, affecting the arms, legs, face, and body universally. Speech blurred and indistinct; peculiar spasmodic guttural sounds, uttered involuntarily every few minutes. Loud blowing systolic bruit heard over apex of heart, and conducted towards the axilla. Other heart-sounds normal. Amenorrhœa for two months.

March 4th: The patient is getting much more violent; clothes cannot be kept on her bed; she is constantly springing up with an expression of abject terror; has hallucina-

tions about her sister; is fed with difficulty; and sleeps only a few minutes at a time. At 5 P.M., 10.30 P.M., and 2 A.M. of the 5th, one-sixth of a grain of morphia was injected hypodermically, but improvement only slight and transitory.—5th: She commenced taking succus conii in doses of one drachm every hour. After the fourth dose, as no improvement was noticed, it was increased to two drachms, and twenty grains of bromide of potassium added, to be taken every two hours. Some slight improvement followed, and she slept for some few hours at a time; but the movements were still very violent.—8th: At 12.30 P.M., half an ounce of succus conii was given by itself; she fell asleep almost immediately, and slept well and quietly until 6.30 P.M., when the dose was repeated, and she fell asleep again until 5.30 A.M. the following morning. No toxic symptoms were observed, and the drug was continued at intervals until 12.30 P.M. on March 10th; a dose being given whenever the movements showed the slightest tendency to become violent. In all she took six doses of half an ounce each between 12.30 P.M. March 7th and 12.30 P.M. March 10th, when solution of arsenic was substituted.—16th: Movements becoming violent again, half ounce doses of conium every four hours.—24th: In the evening very noisy; movements violent; hallucinations. Conium to be given every two instead of every four hours; immediate improvement.

April 10th: Movements hardly perceptible; has been taking conium (half an ounce) three times a day since March 29th, and is going out in the course of a day or two. Is now menstruating.

CASE 3. (Under the care of Dr. Churton; from the notes of Mr. J. H. Naylor, medical assistant.)—Emily W—, aged twenty-two, weaver, admitted March 9th, 1883. No history of acute rheumatism or other severe illness, and there is no discoverable cause for the present condition. Choreic movements commenced in her left hand at the age of eight, and rapidly extended to the whole of her left side. Between the ages of eight and twenty the chorea was confined to the left side, she was never quite free, but the movements increased during the summer and became much less during the winter months. From the age of twenty until the commencement of the present attack a fortnight ago has been quite free from spasmodic twitchings of any kind. Can think of no determining cause for the present attack, but she knows, and has associated with, Case 2. Is a robust and well-nourished girl of powerful but coarse build. Choreic movements, well marked and universal, of about the same intensity as in Case 2. Muscles of speech and deglutition likewise affected; there is also some reddening and slight excoriation of the skin over the bony prominences. Heart sounds, menstrual, and other functions, normal.

March 13th: Movements were violent. Succus conii, one drachm, every hour for four doses, then increased to two drachms, twenty grains of bromide of potassium added, and given every four hours.—17th: No improvement, if anything, worse. Since midday of 15th has been taking two drachms of conium by itself every two hours, fourteen doses in all. At 9.30 A.M. dose increased to half an ounce every four hours, and at 10 P.M. every two hours. After the dose at midnight she slept well, and on the following morning the movements had been greatly reduced. The drug was given every two hours during the day (18th), and by the evening the movements were hardly appreciable. The improvement was most marked.

April 3rd: Took conium every two hours during the day time until March 25th, when it was taken every four hours; on the 27th reduced to three times a day, and this morning iron and arsenic were substituted. No toxic effects were ever noticed.—10th: Seen as an out-patient, there is hardly a vestige of any choreic movement left.

Remarks.—These are good examples of the class of cases occasionally met with, in which the choreic movements become so violent as to endanger life. Their chief interest, however, centres upon the use of succus conii, these cases seem to show: 1. That the drug, to be of any service, must be given in large doses. 2. That its action must be sustained by frequent repetitions of the dose at short intervals. The uncertainty of the action of given specimens of succus conii necessitates great care in its administration, and militates against its general adoption. But cases in which neither chloral nor morphia have any effect may arise, and in which, as in the above, succus conii may prove efficacious.