

of the tubuli; its serum flows into the tubuli, mingles with the urine, and renders it albuminous, while the colouring matter and fibrine coagulate in the tubuli, and afterwards escape in the form of cylindrical moulds or casts, in which epithelial cells are commonly entangled. We do not know if Dr Johnston's rationale of acute albuminuria will pass the ordeal of a rigorous criticism in all its details; but it certainly contains the elements of important truth, and gives encouraging promise of future discoveries. One practical inference seems to be clear,—that to stimulate the kidneys with powerful diuretics in this disease, at least in the earlier stages, must be contrary to sound principles of pathology and therapeutics. The organ is already oppressed and labouring, and seems to be doing its utmost to eliminate a poison from the blood. Should we not endeavour to relieve it, by promoting as much as possible the functions of the skin, and also by increasing the solid excreta from the large intestines which Liebig calls the chimney of the organism? Local bleeding in the lumbar region is also clearly indicated; and the frequent application of cupping-glasses will probably be useful when no more blood can be spared.

The tincture of the muriate of iron was prescribed in four of the cases after the febrile symptoms had subsided. It seemed to be indicated by the anæmic state of the patients; and being a mild diuretic, I hoped that the kidney, having partly resumed its proper function, might be assisted by it in clearing the loaded tubuli and getting rid of the fibrinous casts. Right or wrong in theory, the practice appeared to be useful. In the last case, I was encouraged to prescribe the tincture during the persistence of acute febrile symptoms, partly by the recommendation of Dr Begbie, who had seen it useful in a case of hæmaturia, and partly by the interesting paper lately presented to this Society by Mr Hamilton Bell and his brother on the treatment of erysipelas. The benefit apparently derived from it was remarkable. May there not be a closer analogy than we suppose betwixt the two affections, at least in so far as regards the condition of the capillary vessels?

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**ARTICLE III.**—*On the Natural History, Action, and Uses of Indian Hemp.* By ALEXANDER CHRISTISON, M.D., Edin., Annual President of the Medical Society of Edinburgh.—(Continued from p. 45.)

INDIAN hemp appears to possess a remarkable power of increasing the force of uterine contraction during labour, and as I have not observed any special remarks on the subject, the following instances of its employment may be interesting. It was given in a few cases in the Maternity Hospital of Edinburgh, and the following short remarks appear in the Case-book of November 1849:—

One woman, in her first confinement, had forty minims of the tincture of cannabis one hour before the birth of the child. The os uteri was then of the size of a shilling, the parts very tender, with indurations around the os uteri. The pains quickly became very strong, so much so as to burst the membranes, and project the liquor amnii to some distance, and soon the head was born. The uterus subsequently contracted well.

Another, in her first confinement, had one drachm of the tincture, when the os uteri was rigid, and of the size of a half-crown; from this the labour became very rapid.

Another, in her first confinement, had also one drachm of the tincture, when the os uteri was of the size of a half-crown. Labour advanced very rapidly, and the child was born in an hour and a-half. There were severe after-pains.

A fourth had  $\text{zij}$ . of the tincture, in divided doses, which much accelerated and increased the pains. She had then chloroform for six hours.—[I have since been informed, that the severity of the pains was so great as to cause some alarm, and chloroform became necessary to produce insensibility.]

Shortly afterwards, having directed my particular attention to this action of hemp, I gave it in several cases in the Maternity Hospital, and observed whether it had any effect upon the duration of the pains or intervals. The following tables are examples of the way in which the observations were made, being similar to those of Dr Simpson in his experiments upon the effects of galvanism on the uterus; but I shall not give that of each case, as I am not inclined to attribute much importance to this part of the experiment. The observation was made in the following way:—The duration of several pains and intervals was observed, then the tincture of Mr Robertson's extract of hemp, of the strength of three grains to the drachm, was administered, and after a few minutes the duration of the pains and intervals was again observed. In the tables the time is shown in minutes and seconds.

## CASE I.

BEFORE HEMP.		AFTER HEMP.	
Pains.	Intervals.	Pains.	Intervals.
65"		8 drops given.	
		50"	4' 45"
		1' 45"	5' 45"
		12 drops after half an hour.	
		1' 45"	4'
		2' 45"	4'
		1'	—

## CASE II.

BEFORE HEMP.		AFTER HEMP.	
Pains.	Intervals.	Pains.	Intervals.
50"	3' 20"	17 drops given.	
57"	1' 50"	1' 15"	15"
57"	2' 32"	20"	1' 58"

CASE I.—Was a natural labour, and eighth pregnancy. The first stage was not completed till twenty-four hours after the woman was seized. Hemp was given four hours before its completion. After the first dose of eight drops, little effect was observed; but after the second of twelve drops, the duration of the pains was increased, and the interval shortened; and it was very obvious that the intensity of the pains, counting from the second pain after the hemp was given was increased; by the fourth or fifth pain the effect wore off, and hemp was not again given.

CASE II.—This was a second pregnancy. Seventeen drops of hemp were given in the second stage. The second pain, after the hemp was taken, was lengthened, and the interval shortened; this was not the case with the third pain; but the intensity of the pains was much increased, and the woman was speedily delivered.

CASE III.—First pregnancy. Hemp was given in the second stage of labour, and the chief fact observed was increased intensity of the pains; the duration of the pains was slightly increased, and the intervals decidedly shortened, after the second dose of hemp. Twenty drops were first given, and after twenty minutes thirty drops more. Twenty-four hours after, twelve drops were given, and after-pains were induced, which the woman said were "quite as bad as when she took in labour first."

CASE IV.—First pregnancy. Twenty-five drops of the tincture were given at the completion of the first stage; after this, both the pains and the intervals were shortened, and the intensity of the pains increased. After one or two pains the effect wore off, and thirty drops more were given at the end of half an hour. The third pain after this became very intense; and pain succeeded pain without intermission for several hours. As there was deformity of the pelvis, chloroform was administered, and delivery accomplished by the forceps.

CASE V.—First pregnancy. Hemp was given during the second stage. First thirty drops, and then thirty-five drops after half an

hour, and the patient was delivered during its action. The effect of the first dose was chiefly shortening of the interval at first, and prolongation of the pain; but the effect on the interval was more marked after the second dose. The pains were described by the patient as more intense, and by examination it was ascertained that the head of the foetus was more forcibly propelled.

CASE VI.—First pregnancy. Thirty drops of hemp were given in the second stage, and the effect was very decided. Previous to the administration of the hemp there had been no progress for an hour, the patient was nervous and excited, and though she complained much of the pains, the contractions of the uterus were felt to be feeble, and the child's head did not move; but on the second pain after the cannabis the contractions became very strong, forcing down the head, and the child was expelled ten minutes after the hemp was given. At the same time there was no decided effect on the duration of the pains and intervals.

CASE VII.—Sixth pregnancy, with the first stage not completed. Thirty-two drops were given, and the action was well marked; the woman said, the second pain after it was the strongest she ever had. After an hour and a-half, forty drops were given, but the action was not attended to; and in an hour and a quarter fifty drops were given, but there was no action on the pains; they became irregular, and the intervals were very long; the case was then allowed to proceed naturally. There seemed to be a tolerance of the remedy; for though 120 drops had been taken, no physiological effect of any kind was induced.

In these cases, then, it does not appear that the duration of the pains or of the intervals was materially affected in all; but in Cases I., II., IV., prolongation of the pain and shortening of the interval were most obvious; while in Case V. a shortening of the interval corresponding to each dose of hemp was observed. Shortening of the interval was in general a more conspicuous phenomenon than prolongation of the pain. Upon the whole, however, I am not inclined to lay much weight upon these results. But there can be no doubt that the *intensity* of the pains was greatly augmented by the hemp, except in the last case, where, after the effects of the first dose passed off, no action followed the repetition of it. This case was an exception to all the others.

It is worthy of remark, that in none of these cases were the ordinary physiological effects produced; there was no excitement or intoxicating action, and there did not seem to be the least tendency to sleep in any of them.

In conclusion, I may state what appears to be the most obvious difference between the action of ergot of rye, and that of Indian hemp. First,—While the effect of ergot does not come on for some considerable time, that of hemp, if it is to appear, is observed within two or three minutes. Secondly,—The action of ergot is of a lasting character, that of hemp is confined to a few pains shortly after

its administration. Thirdly,—The action of hemp is more energetic, and perhaps more certainly induced, than that of ergot.

There appears little doubt, then, that Indian hemp may often prove of essential service in promoting uterine contraction in tedious labours.

More extended experience will show how far these effects may be depended on, and to what cases hemp is most applicable.

#### MODE OF ADMINISTRATION.

Indian hemp may be administered in several ways. The extract, in the form of pill, produces the most gradual effect, and the disagreeable taste of the solution is avoided; but its action in this form is very uncertain. The following emulsion has been recommended:—A scruple of the extract rubbed in a warm mortar with a drachm of olive oil, to which are added half an ounce of mucilage, and seven ounces and a half of distilled water (Bromfield). But the simplest method is to use the tincture, which should be dropped into a little water, and immediately swallowed. The water may be sweetened with sugar; or an aromatic, as compound tincture of cardamom, may be added. The usual strength of the tincture is three grains of the extract to a drachm of rectified spirit.

The extract may be given in doses of one to six grains; the tincture in doses of ten to thirty drops, for ordinary purposes. Less than thirty drops is of little service in promoting uterine contractions; and greatly larger doses, as much as one or two drachms repeatedly, must be used in the treatment of tetanus, in which disease there is very great tolerance of the remedy.

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ARTICLE IV.—*Case of Hysteria; with Albumen, and subsequently Xanthic Oxide, in the Urine.* By DOUGLAS MACLAGAN, M.D., F.R.S.E.

THE nervous affections classified under the convenient and comprehensive name of hysteria, are notoriously so varied in their phenomena, that every practitioner meets with individual examples of the disease, differing in their course of symptoms from any thing which he can find recorded. Few medical men think it worth their while to publish isolated cases, as they are generally more curious than instructive, and seldom lead to any important deductions either in pathology or therapeutics. I should, on these grounds, have hesitated to record the following as a mere instance of hysteria, but for the interest which attaches to the morbid states of the urine which presented themselves in the course of it. This will, I hope, be accepted as my apology for the somewhat lengthy narrative of the case.