

Report of the Ohio State Medical Committee on Cannabis Indica

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As chairman of the committee, appointed at the last session of the Ohio State Medical Society, to report upon Cannabis Indica, I have to say that no extended or adequate efforts have been made, either by myself or the other members of the committee, in soliciting the concurrence of the profession at large, with the view of ascertaining and collaborating the opinions entertained, or practical results observed, from the use of this remarkable and renowned exotic, and accordingly can offer but a partial and imperfect report at this time.

However, as the medicinal properties and therapeutical value of this abnegated and nearly obsolete agent has engaged much of my attention and inquiry for several years, and been somewhat frequently administered and attested by me, I feel too great an interest in the subject to allow so favorable an opportunity to pass without endeavoring to enlist a more general interest and co-operation in the further investigation of this peculiar, potent and misapprehended article.

I shall therefore only attempt to submit a brief historical sketch of the plant, with an abstract of its physiological effects, modes of preparation, therapeutical applications, reports of cases, and personal experience, derived from the very limited sources of information placed at my command, with the object of fulfilling my obligations to the Society, and adding whatever of consequence or certainty I can to the progress and perfection of the medical armamentarium.

Reprinted from the *Transactions of the Fifteenth Annual Meeting of the Ohio State Medical Society at Ohio White Sulphur Springs, June 12 to 14, 1860.* pp. 75-100.

History.

The Cannabis Indica, or Indian Hemp, is alleged to be one of the most ancient medicinal substances and Oriental luxuries on record, and was resorted to by the voluptuary for the production of pleasure, and by the valetudinarian for the palliation of pain. "Herodotus mentions the hemp plant, and states that the Scythians, who cultivated it, made themselves garments of it. He also adds, that they threw the seeds on red-hot stones, and used the perfumed vapor thereby obtained as a bath, which excited them to excess of exaltation. This is supposed to be produced by the intoxicating properties of its smoke." (*Pereira on Cannabis Indica.*) Dr. Royle mentions that the hemp might have been used as the assuager of grief, of which Homer speaks. Dr. Simpson says the anodyne, ecstatic and anaesthetic effects of Indian hemp, and the various preparations made from it, have long been known in Africa and Asia. He states that "Sir Joseph Banks says it is always taken in Barbary, when it can be procured, by criminals condemned to suffer amputation; and it is said to enable those wretches to bear the rough operations of an unfeeling executioner better than we Europeans can the keen knife of our most skillful surgeons." M. Julien lately pointed out to the French Academy an old Chinese work, proving that, 1500 years ago, a preparation of hemp was employed medicinally in China to annul the pain attendant upon cauterization and surgical operations. The wonderful power of endurance of the Hindu devotees, appears to have been sometimes produced by the influence of this powerful drug. Some high Biblical commentators maintain that the gall and vinegar, or myrrhed wine, offered to our Saviour immediately before his crucifixion, was in all probability a preparation of hemp, and even speak of its earlier use. (*Obstetric works.*) It is also alleged that during the Crusades it was frequently used by the Saracen warriors to stimulate them to the work of slaughter.

The botanical relations of the plant appear to have been somewhat involved in a confusion of the several varieties of its class; but it is at present conceded by most, if not all, distinguished botanists, to be identical with the Cannabis Sativa of Linnaeus. Pereira believes the differences to depend upon locality and cultivation, and cannot be considered specific. Dr. Wood remarks, in his work on Pharmacology, that the plant is a native of the interior of Asia, but

cultivated in many parts of the world, and to a considerable extent in our own Western States, but that it is only the product of the plant grown in the East Indies that is used medicinally; while Dr. Duglison states that the use of *Cannabis Indica* is unknown in Western Europe, and it is questionable whether the hemp of that region, or of this country, be possessed of the same properties. Dr. O'Shaughnessy, who has had the most ample opportunities of observation, from a long residence in this Indies, asserts that the extraordinary symptoms produced by the Oriental plant, depend upon a resinous secretion with which it abounds, and which seems to be wholly absent in the European plant. This absence of the resinous secretion, and consequent want of narcotic power, is ascribed to difference of climate. Messrs. Smith, of Edinburgh, satisfied themselves that the resin contained in itself the whole properties of the plant. Dr. Fronmueller says, the external appearances of Indian and European hemp are the same, as are their botanical characters. The differences described by many authors, are probably due to local causes only. The only real difference is the quantity of narcotic resin which is secreted by particular glands, like the lupulin in the hop plant. This resin is called in India, *churrus*. Its quantity increases with the southern direction.

Mr. Donovan made numerous experiments with hemp cultivated by himself, and was satisfied that the domestic hemp is quite destitute of the principle which renders the Indian plant so desirable to the voluptuous people of the East. To the impurity of the hemp, is to be attributed the diversity of opinion as to its operation and benefit in disease. An English author remarks that very little, if any, genuine hemp can be found in Europe; and the same fact will undoubtedly apply to this country. The active principles, according to Dr. Wood, consist in a volatile oil, and a peculiar resin called *cannabin*. "That the former has narcotic properties, is to be inferred from the effects of the odor of the plant. The latter is a neuter substance, having a somewhat fragrant odor, especially when heated, and a warm, bitterish *subacid* and balsamic taste. It is insoluble in water, but soluble in alcohol and ether, and from its alcoholic solution is precipitated white by water."

Physiological
Effects.

Dr. John Bell, of New Hampshire, published an able and somewhat elaborate article in the Boston *Medical and Surgical Journal*, of the effects of the drug, experimentally produced upon himself, by taking a moderately large dose of Tilden & Co.'s extract, and can consequently be cited as a reliable exposition of personal and professional experience.*

Dr. Fronmueller states that physiological experiments on healthy persons, instituted by Lanslerer, Beron, Rech, Wolff, Indee, Schroff, and himself and others, show more or less a disturbance in the digestive tract, affection of the nervous system, with convulsive movements and sudden shocks, congestions of the brain, confused ideas, excited imagination, with frequently changing pictures, torpor and sleep, the cerebral symptoms being more constant, while the others vary to a great extent, sometimes nothing being mentioned but a few confused ideas, followed by sleep.

Bayard Taylor, the ubiquitous traveler and popular writer, in a work entitled "The Lands of the Saracen," gives a highly ornate and exquisite delineation of the physical sensations and mental phantasmagoria produced by an extreme dose of the Oriental preparation of the drug. The experiment was made by himself and two friends, while sojourning at Damascus. He had, on a previous occasion, in Egypt, subjected himself to a very moderate influence of the same article, which, he states, after "provoking a wonderfully keen perception of the ludicrous in the most simple and familiar objects," as gradually subsided as it came, overcoming the senses with a soft and pleasant drowsiness, eventuating in deep and refreshing sleep. The description of his second trial is too poetically and elaborately depicted to be introduced in a report of this character, but a summary of the prominent phenomena will serve to show the striking analogy, as portrayed in the account given by Drs. Bell and Fronmueller, already referred to. The same rapid scintillations of thought, brilliant coruscations of light, shifting adumbrations of scenery, and transient flashes of lucid intervals, eddying through the brain in inextricable confusion, are observed and illustrated in both cases. He states, they commenced by taking a teaspoonful each of the mixture, procured by a servant. As this was about the quantity taken in Egypt, and the effect then had been so slight, they had no fears of its being an overdose. He says, "The strength of the drug,

however, must have been far greater in this instance, for whereas I could in the former case distinguish no flavor but that of sugar and rose-leaves, I now found the taste intensely bitter and repulsive to the palate. We allowed the paste to dissolve slowly on our tongues, and sat sometime quietly waiting the result. But, having been taken on a full stomach, its operation was hindered, and after the lapse of nearly an hour, we could not detect the least change in our feelings. My friends loudly expressed their conviction of the humbug of hasheesh, but I, unwilling to give up the experiment at this point, proposed that we should take an additional half spoonful, and follow it with a cup of hot tea, which, if there were really any virtue in the preparation, could not fail to call it into action. This was done, though not without some misgivings, as we were all ignorant of the precise quantity which constituted a dose, and the limits within which the drug could be taken with safety." This last portion was taken at ten o'clock at night. Soon after he became sensible of its operation by experiencing a nervous thrill suddenly shooting through the system, accompanied with a burning sensation at the pit of the stomach. Among the many and remarkable illusions and sensations he so vividly and minutely describes, the following striking condition of the perceptive faculties is worthy of notice and consideration: He says, "I was conscious of two distinct conditions of being in the same moment; yet, singular as it may seem, neither conflicted with the other. My enjoyment of the visions was complete and absolute-undisturbed by the faintest doubt of their reality; while in some other chamber of my brain, Reason sat coolly watching them, and heaping the liveliest ridicule on their fantastic features-one set of nerves was thrilled with the bliss of the gods, while another was convulsed with unquenchable laughter at that very bliss." About midnight, the influence of the drug had reached the acme of its power; and about three o'clock in the morning, he sank into stupor-rather more than five hours after the hasheesh began to take effect. He lay thus all the following day and night, only once arousing sufficiently to drink two cups of coffee and making an attempt to dress himself, of which he did not retain the least knowledge. On the morning of the second day, after a sleep of thirty hours, he awoke, as he remarks, "with a system utterly prostrate and unstrung, and a brain clouded with the

lingering images of my visions.” He states that he subsequently learned that he had taken a sufficient quantity for six men. One of his companions, as soon as the drug took effect, was suddenly metamorphosed into a locomotive; which impression continued, and kept him in a violent state of imitative exertion, until overcome by the somniferic or stupefactive influences of the narcotic. This circumstance and singular vagary, I shall have cause to refer to hereafter, when treating of its therapeutical application. The other individual, an Englishman, retired, on the first intimation of its action, immediately to his room, where he remained, in company with his wife, during its operation, and refused ever after to make any disclosure of his conduct; in consequence of which it might be inferred, from the reputed properties of the drug, to have been of an aphrodisiacal character.

Dr. O’Shaughnessy, to whom is entitled the honor of having first brought the article before the notice of the profession as a remedy, in the various experiments made upon himself and upon animals, observes that the general effects on man are, usually, alleviation of pain, remarkable augmentation of appetite, aphrodisia, and great mental cheerfulness.

Modes of
Preparation.

The defective pharmaceutical processes employed by the inhabitants of its native countries, render its preparations of very different strength, and admixtures of various foreign substances make its effects uncertain. A specimen obtained from Damascus, contained about twenty-five percent of opium, a considerable quantity of camphor and spices, and nearly half was a mixture of rancid butter and extract of hemp. The substance widely known in in this country under the Arabic name of *Hasheesh*, is obtained by boiling the leaves and flowers of the plant with butter, and when pure and carefully prepared, is said to be a very active preparation. The extracts prepared in this country from the Indian plant, contain all the properties of the hasheesh, and are every way preferable to it. The U.S. Pharmacopeia recognizes only an alcoholic extract, under the name of Extract of Hemp, or Extractum Cannabis. The Tincture of Hemp may be made by dissolving six drachms of the extract in a pint of officinal alcohol (sp. gr. 0.835). The dose equivalent to one grain of extract is about 20 minims, or 40 drops. Dr. O’Shaughnessy

gave 10 drops of the tincture every half hour in cholera, and a fl. drachm as often in tetanus, until effects were produced (Wood). Tilden & Co.'s Fluid Extract is probably most frequently used in this country at the present time, but so far as my experience extends, it has proved ineffective, if not entirely inutile, in almost any quantity. I have ever preferred, in my own practice, the alcoholic extract (Herring's), and have never been disappointed in obtaining its peculiar effects. The best forms of preparation or combination I consider to be that of the tincture, or pills of the extract, rolled in a powder of the hemp. Sometimes I have dissolved it in ether and water, or chloroform. In cases of children, I have incorporated it in simple syrup, or the aromatic Syrup Rhei, or Syrup Aurantii. In this affection, three grains of the extract, dissolved in one ounce of proof spirits, one drachm of which is to be given every half hour, until the patient be brought under its influence. For its beneficial effects upon this direful disease, he refers to fourteen cases, nine of which recovered.

Professor Miller, of Edinburgh, says, "My own experience speaks loudly in favor of the hemp in tetanus." He believes it valueless as an anodyne, as well as hypnotic, in ordinary circumstances, but thinks its virtues consist in a power of controlling inordinate muscular spasm.

Dr. Duncan says he used the hemp in 1846, in the Royal Infirmary in Edinburgh, as a calmative and hypnotic. The object was in general obtained, and no evil results followed. Hemp was given in other wards of the Infirmary for a like purpose, and with like results.

Mr. Donovan was convinced of the beneficial effects of hemp, particularly in neuralgia, in his own case as well as in that of others.

Dr. Christison has administered hemp in many instances, and has observed that it produces sleep, and that its power over uterine contraction is very marked and powerful in many instances.

Dr. Simpson states that he had been induced to try hemp, in consequence of Dr. Churchill stating that it possessed powers similar to those of ergot of rye, in arresting hemorrhage from the uterus. In the few cases of labor in which he tried it, parturient action seemed to be very marked and distinctly increased.

Dr. Gregor gave the hemp in sixteen cases of labor, in seven of which it succeeded well.

Dr. West says the hemp is extremely serviceable in controlling neuralgic pain, and recommends it, combined with camphor, in dysmenorrhoea and in flexions of the uterus, when there is excessive menstruation, in connection with pain. Its power in checking uterine hemorrhage is favorably spoken of by many, and in some cases in which it would not do to give the ergot of rye.

Dr. J. P. Willis, of Royalston, from whose communication, in the Boston *Medical and Surgical Journal*, the foregoing therapeutical facts are chiefly abstracted, says, "I have used the Indian hemp for some time and in many diseases, especially in those connected with the womb, in neuralgic dysmenorrhoea, in menorrhagia, in cessation of menstruation, where the red discharge alternates with uterine leucorrhoea of long continuance, in repeated attacks of uterine hemorrhage, in all cases of nervous excitability, and in tedious labor, where there is restlessness of the patient, with ineffectual propulsive action of the uterus." He further remarks, "Authors generally attribute puerperal convulsions to some irritation caused by the uterus, coming on during gestation or after delivery. From these statements, I was led to the use of hemp in puerperal convulsions, having also seen its beneficial effects in convulsions in general, after all the common remedies had been tried without relief. I made use of it in chorea, more particularly in that form connected with hysteria, or partaking of the character of both; in delirium tremens, both in the period of excitement and after the delirium subsides, and where long-continued watchfulness and great mental excitement continue; in mania, where there is watchfulness and excitement; in shaking palsy; in whooping-cough, and all coughs of a spasmodic character. In phthisis, and other lung diseases, it may be given, especially where opium has ceased to procure sleep."

The late Dr. E. Dresbach, of Tiffin, made use of the article as early as 1847, and was the first to administer it in practice, so far as I am able to ascertain, in this region of country; and as I remember from familiar converse with him, was favorably impressed with its curative powers, especially in diseases of a nervous character. My first experience with the remedy was its recommendation by him in an inveterate case of

infantile convulsions, in which he was consulted, and where it acted most promptly and effectively, after everything else had failed to afford any relief. This interesting case, together with three others of a similar nature, in which it had proved equally successful, were communicated by me and published in the June number of the *Western Lancet* (Vol. xvii., 1856). Dr. Dresbach, at this time, expressed an undoubted confidence in its efficacy in general nervous disorders, particularly of a persistent or paroxysmal character. However, Dr. J. A. McFarland, of the same place, and for many years his immediate confrere and intimate friend, in reply to inquiries made by me in February last, says, "My experience with the article is confined to a single case (nervous irritability), in which it was suggested by our old friend, Dr. Dresbach, but in which its effects were not very decided. It was for a time frequently employed by Dr. Dresbach, especially in derangements of the nervous system, and I am not sure that his confidence in the remedy was increased in proportion to his experience. My impression is that the contrary is true."

Dr. C. E. Buckingham reports, in the Boston *Medical and Surgical Journal* (Vol. Iviii. March number, 1858), a case of acute rheumatism, in which he had experimentally used the medicine. In the discussion that ensued before the Boston Society for Medical Observation, the following facts were elicited: Dr. B. stated that he had been making numerous experiments of late with this drug, as to its powers of relieving pain, and it had answered so well in other cases that he wished to use it in this. He thought that opium might perhaps have relieved the pain more quickly, but having bad results in other cases with opium, he felt disinclined to use it. As to Cannabis Indica, Dr. Buckingham said that he thought the activity of the medicine depended very much upon the parcel from which it was taken. When used in five-grain doses, he thought it a good substitute for opium. He was first led to use it from results obtained by Dr. Jno. C. Dalton, Jr., who took it in doses, commencing at 20 drops of the tincture, three times daily, increasing the amount to 100 drops three times daily. The use of it in the latter dose induced a peculiar, prolonged and agreeable sleep.

Dr. Cabot said that he had employed it, and never saw any result obtained from less than three-grain doses.

Dr. Clarke asked if any peculiar mental effect was produced. Dr. Buckingham had not seen any; he had never given the medicine in over five-grain doses at a time. He commonly orders one or two grains every hour, till the pain is relieved. The apothecaries commonly consider three grains as the maximum dose. He had not found it to produce any peculiar effect on the skin, nor to act as a diuretic.

Dr. Clarke said that of late the *Cannabis Indica* was much used in the treatment of the insane, and that it had been found to be exceedingly variable in its effects.

Dr. Buckingham remarked, that as prepared by one or two London chemists, the drug was very even and powerful; generally it was not so. The best of it only dissolves in chloroform, ether, or the strongest alcohol. The best way of making a mixture, was to dissolve the drug in chloroform, and then add to its simple syrup. In about twenty-four hours it will settle to the bottom, but it may readily be shaken up again.

Dr. H. J. Donahoo, of Sandusky, Ohio, read a paper on the use of *Cannabis Indica* before the Eric County Medical Society, in August, 1857, in which he details a full history of two interesting cases, where he had used the medicine with decided effect and complete success. The following is a copy of his paper, as read:

“B.O., a bookbinder, says he has been troubled with an obscure affection of the stomach for the past year, and had submitted to almost every kind of treatment, without any marked improvement in his general health. Morphine had given him more relief than anything else, and he was fast getting into the habit of keeping himself under its influence. The case seemed to me to be one of gastrodynia. I accordingly ordered anodynes and anti-spasmodics, with very little relief. Finally this attack subsided, and he enjoyed a respite of some ten days from the attack of his enemy. He usually had warning of an attack some hours before it became fully developed. Damp, rainy weather scarcely ever failed to bring with it an attack of his disease. Being conscious of an approaching attack, he sent for me. I advised him to abandon the use of morphia; for, as I stated before, he was not only contracting the habit of using it constantly, but it was

deranging the entire economy, by locking up the secretions of the liver and producing a jaundiced condition, with constipation. I prescribed a laxative, combined with extract of cicuta and hyosciamus, and instructed him to procure some charcoal, and take a dessert-spoonful, in case he should have an attack, and to repeat it, if necessary.

“As anticipated, he was seized with a most terrible attack. I was sent for in the night, and found my patient suffering as much, one would think, as mortal flesh could bear. His friends said they would much rather see him die than be compelled to witness a continuance of such agony. I administered chloroform by inhalation, until he was brought fully under its influence, but he soon came out of its anaesthetic influence. It was repeated, but the effect soon subsided. I instructed his nurse how to administer it, and left the patient. Next morning, much to my surprise, I found he had suffered so much that he had been kept almost constantly under the influence of the chloroform. His countenance looked care-worn and haggard, his pulse was feeble, and the heat of the body was below the normal standard. As a kind of dernier resort, I prescribed the ‘Tincture of Cannabis Indica,’ dose twenty drops every three hours. In one hour after the first dose was taken, his pains grew easy, and before the time arrived for him to take the second dose, he was almost entirely free from pain. He took the second dose, however, but did not find it necessary to take any more. I instructed him to take a dose of the Cannabis, in case he should have any premonitions of a return of his trouble. He remained here some six weeks after his last attack, and had succeeded in preventing a recurrence of his disease by following the above course. The action of his bowels became regular, and his general health improved as rapidly as himself, his friends, or his physician could have desired.

“On Sept. 24th, 1857, I was requested to visit Col. McK., in consultation with Dr. Austin, the attending physician. He was suffering very severely from an attack of spasmodic asthma. We prescribed the smoking of stramonium, but this, contrary to our expectations, gave

no relief. We then ordered equal quantities of Hoffman's anodyne and comp. tinct. opii, dose one teaspoonful every hour. This gave him much relief, but it soon lost its magic power; and we found that something else must be tried. I advised the use of the Cannabis Indica; the doctor acquiesced, and we accordingly gave one grain of the extract every three hours. Its effects were almost magical; the patient became quiet, breathed easily, and assured us, next morning, that he had never been so happy, the same length of time, as while under the influence of the Cannabis; to use his own words, 'he was in Heaven all night.' With a view to excite expectoration and correct existing hepatic derangement, we ordered a pill composed of submur-hydrarg, Doveri and ipecac. This prescription relieved him somewhat, produced nausea and vomiting, and finally acted upon the bowels. Towards evening he grew restless, and was ordered to resume the use of the Cannabis, in connection with the above pills. With these instructions, we left the patient for the night. About one o'clock in the morning, I was sent for in great haste. I found the patient suffering from a most terrible spasm. His features wore a sharp, pinched and cadaverous appearance. The inquiry was made, with much alarm, if I could relieve him. I responded in the affirmative, and immediately proceeded to administer a pill of the extract Cannabis Indica (one grain to the pill); repeated the pill in one hour. This relieved the spasms, and by giving one of the pills every two hours, I succeeded in keeping up the effect, so that he not only breathed well, but slept tranquilly until morning. He afterwards occasionally took a pill of the Cannabis, but, with the exception of a little comp. tinct. opii, to relieve some pain of the bowels, caused by a slight bilious diarrhoea, he required no further treatment. I am not aware of the Cannabis having before been used in asthma, having in vain searched for authority for using it in his disease. If the Cannabis proves as useful in other hands as it has in mine, asthmatics will bless the hand that administered it. I have likewise frequently prescribed the hemp in cases of hysteria, and have always been pleased with its effects.

Dr. Robert Andrews, of North New Salem, communicates the history of an interesting case to Dr. J. P. Willis, in which the latter had recommended the use of the hemp, with evident success, and was published by him in the *Boston Medical and Surgical Journal* of Sept., 1859. The case was one of placenta praevia, and after a great loss of blood by hemorrhage, was delivered by a resort to podalic version, and the hemorrhage subsequently controlled by the use of a swathe and compress, cold applications, rest, etc. On the third day after delivery, he found her doing well, and dismissed her. Ten days afterwards, he remarks as follows:

I was again called, July 28th, and found her with headache and nervous excitement, which I thought were caused by her having taken cold, and permitting her milk to dry up too soon. I gave her a cathartic and some powders of camphor, nitre and valerian. I heard no more from her till August 2d, when I was called to visit her in the night, and found her delirious, crying 'fire,' 'murder,' etc. From this time to August 19th, I saw her every second or third day, and used the ordinary remedies in such cases, with little if any mitigation of her symptoms. August 20th she was moved from Freysville to her father's, in Orange. I there saw her almost every day till August 27th, when you were called in consultation. You undoubtedly recollect the peculiar, restless condition in which you and D. C. found her at that time. She had actually worn the flesh from her elbows and hips by the constant rubbing of them together. She had gnawed her finger nails and the ends of her fingers till they bled. She refused to take anything which she suspected was medicine, or from any one whom she thought was a doctor. Her bowels were torpid. Under these circumstances, the 'hemp' which you prescribed, had a wonderful effect in quieting the nervous system, and the dose was so small that we succeeded in getting it down in her food. The torpid condition of the liver and bowels was removed by small doses of podophyllin, administered daily in the same manner as the hemp. The hemp was given in doses sufficient to keep her quiet. Some days one dose was sufficient; other days it would be necessary to repeat the dose once or twice. Under the above

treatment she gradually improved till Sept. 12th, when she was dismissed permanently cured.

Dr. M. D. Mooney, of Georgia, reports that he has used the following prescription in four cases of gonorrhoea, and was successful in every case in from five to seven days:

℞ Sugar of milk, ʒss.

Extr. Cannabis Indica, xx grs.

Mix well and divide in 60 powders.

One to be taken every three or four hours.

This prescription, he says, will relieve the most obstinate cases in a short time.

Dr. O. C. Kendricks, Superintendent of the Northern Lunatic Asylum, in the fifth annual report of that institution, says: "We have made brief trial of the Cannabis Indica (Herring's Extract), in the cases to which it seemed applicable, but as yet with indifferent success."

The following case of hysterical insanity, which came under my care in February, 1859, I introduce as being one in which the patient was under no medical influences whatever, and on which the hemp acted with almost magical power, and with complete success.

Daniel Van F---, an unsophisticated and eccentric nondescript of the genus "homo," became infatuated, at a rather mature age, with the idea that he possessed extraordinary talents and ingenuity as a mechanician. He accordingly abandoned his trade of carpenter and joiner, and concentrated all the energies of his mind in designing the model of an invention of his, to supersede the popular patterns in use at the time, as planning-machines. After long and arduous labor, and repeated failures, to satisfactorily consummate his project, he subsequently irretrievably involved his property and impoverished his family, by the expenses incurred in obtaining a patent-right for what he conceived to be the most important discovery of the day, while the golden dreams that filled his imagination knew no bounds. But, after many sore and heart-sickening disappointments and overwhelming misfortunes, together with the upbraidings and bitter taunts of an unsympathizing family and unfeeling public, his already overtaxed intellect began to stagger, and his spirits to sink under the weight of his heavy sorrows. At this time he was seized with symptoms of pneumonic inflammation, which his

wife had treated with considerable skill and success. But becoming alarmed from the debility that ensued, and an unusual display of irascibility of temper and incoherency of language, I was requested to visit him.

I found him a good deal prostrated, pulse soft and excited, expectoration free and favorable, tongue somewhat coated, surface moist and pliable, respiration as full, easy and unobstructed as would be anticipated. His mind was morbidly active, occasionally inconsistent, and evidently, from his manner and expressions that escaped him, impressed with suspicions of nefarious designs on the part of his family. He had been, for several nights, unable to sleep and extremely restless. I prescribed Dover's powder and hyosciamus in combination, to meet the above indications, and decoction of senega to facilitate expectoration. I was then formally dismissed, and assured that I would be duly notified if further assistance should be required. I did not again hear from him for ten days, when his wife waited upon me, and informed me that his cough had about disappeared, but that his mental disquietude had constantly increased, and at present he appeared to be wholly insane. He remained resolutely in bed, persisted in covering his head and face with the bedclothes, and obstinately refused to see me or any other physician, asserting that we were all in league with the rest of community to encompass his death—that the Lord had visited him in person, and warned him of the conspiracy. He refused to take any nourishment, and but rarely a drink of water. He had sent for a Methodist exhorter, of about his own calibre and character, to read the Bible; while they both sang hymns and prayed without ceasing. I accompanied her home. He received me coolly but not unkindly, and watched me closely but furtively. All my efforts at flattery and familiarity failed to secure his confidence, to persuade him to partake of food, or to convince him of the fallacy of his fears. The influence of his spiritual adviser and the importunities of his wife had no avail. I then attempted a variety of subterfuges, to secure the introduction of a saline cathartic, as he had become very constipated, but without success; and, as a dernier resort, assumed a determined and dictatorial manner, threatened and even exercised some force; but he maintained the same stoical, silent and imperturbable indifference. After the lapse of near forty-eight hours, he became so exhausted and feeble

that some fluids were forced down him, together with a mixture of senna and salts, after the operation of which, I succeeded in administering a drachm of laudanum, with an equal quantity of tinct. valerian in brandy. This failed to procure sleep or have any other beneficial effect, but only produced a dull unnatural expression of the countenance. I then attempted to bring him under the influence of chloroform; but he so stoutly resisted its application, and avoided its inhalation, that no decided impression could be obtained. His features began to assume a haggard, contracted, and sallow hue, his hands affected with tremor, his eyes injected and their nictation spasmodic, and his whole frame greatly emaciated. He now imagined himself to be a steam-engine, and began to work both his upper and lower extremities alternately and constantly, in imitation of his fancied congener. This he continued almost without a moment's cessation for one whole night, and without a particle of sustenance. We then resorted to a concerted deception, by all present feeling his pulse and declaring the water in his boiler to be about exhausted, and expressing great fears of an approaching explosion. This, to our gratification, had the desired effect; and he blew off steam with loud and forcible expirations, and came to a stand-still, his whole body bathed in a profuse perspiration, while great drops of sweat' beaded and rolled from his brow. I was prepared with one drachm of the tinct. of Cannabis Indica, which was administered in a cup of diluted coffee. He then gradually let on steam, and resumed his locomotive operations. I then left and returned in about three hours, and found him perfectly quiescent, with a relaxed and placid countenance, dilated pupils and a fixed, dreamy expression of the eye. He was obviously in a state of complete inebriation, and I remained to watch its further developments. He made no movement whatever, but would smile with his eyes fixed on vacancy, and subsequently broke out in sudden exclamations of surprise, then laugh loud and immoderately. After some hours, he sank into a deep and sonorous slumber. He awoke from an interrupted rest of six hours quite rational, but somewhat confused and extremely exhausted. A milk and brandy punch was given, and he again slept; afterwards chicken broth, some simple tonic, and he recovered without any relapse or further remedies.

Upon reading the effects of hasheesh, as described by Bayard Taylor, in which his friend was affected with a similar hallucination, as heretofore stated, I was agreeably surprised with the striking analogy of the two cases, produced by the hemp in one, and induced by disease in the other.

The *modus operandi* of the hemp in the above case, would appear to be that of substitution, the existing disorders of the cerebral and nervous centres being displaced or extinguished by the powerful and persistent impression made by the medicine upon the sentient economy of the same system. I have also derived decided benefit from the use of the hemp in a case of laryngismus stridulus, which was reported by me and published in the *Cincinnati Lancet and Observer* (Vol. ii. No. 8, August, **1859**).

In a variety of forms of nervous rheumatism, I have also been very successful with the following combination of the hemp, first recommended, I believe, by Dr. Atlee of Philadelphia, and find it preferable in many cases to the preparations of opium, especially where constipated habits contra-indicated their use :

℞ Etherial Tinct. Guaiacum fl ʒj.
 Etherial Tinct. Colchicum fl ʒvj.
 Etherial Tinct. **Cannab. Indica** fl ʒij.
 M-Dose 25 to 30 drops every 3 to 4 hours on sugar.

In all forms of bronchitis, I have frequently found it one of the best adjuvants, in combination with any of the ordinary expectorant mixtures, used in that affection.

Dr. A. P. Dutcher, of Enon Valley, Pa., reports an interesting case in the *Cincinnati Lancet and Observer* (Vol. ii. No. 5, May, **1859**). The patient had been afflicted with bronchitis for five years; had at this time but recovered from an aggravation of the disease, complicated with a degree of pneumonic inflammation; after the subsidence of which, he states, "that the cough and expectoration were now about the same as they had been for the last five years—troublesome and unmanageable. As she had taken every therapeutical agent known to have any power in the cure of bronchitis, and been the rounds of quackdom, I concluded, as a last resort, to try the following:

℞ Extr. Cannabis Indica	fl. 3 ss.
Alcohol	fl. ℥iv.

“A teaspoonful of the above was to be taken, three times a day, in a wine-glassful of simple syrup. From this time she recovered rapidly, and in six weeks her cough disappeared entirely, and up to the present time (Feb. 26th, 1859), a period of nine months, there has been no return, and her general health is better than it has been for six years.” He concludes the article as follows: “The happy result, in this case, by the use of Cannabis, I regard as a little remarkable; for it is not often that bronchitis is cured after it has run so long, particularly in a person as old as my patient (60 years). From the trials that I have made with the article, in chronic pulmonary affections, I am favorably impressed with its virtues. It may be given in all cases to allay cough and produce sleep, as a substitute for opium, especially where this latter is contraindicated by its effects upon the brain, and by its property of checking mucous secretion.”

Dr. Fronmueller, of Fuerth, makes the following remarks as the sum of his experience with the hemp:

I have used hemp many hundred times to relieve local pains of an inflammatory as well as neuralgic nature, and judging from these experiments, I have to assign to the Indian hemp a place among the so called hypnotic medicines next to opium; its effects are less intense, and the secretions are not so much suppressed by it. Digestion is not disturbed; the appetite rather increased; sickness of the stomach seldom induced; congestion never. Hemp may consequently be employed in inflammatory conditions. It disturbs the expectoration far less than opium; the nervous system is also not so much affected. The whole effect of hemp being less violent, and producing a more natural sleep, without interfering with the actions of the internal organs, it is certainly often preferable to opium, although it is not equal to that drug in strength and reliability. An alternating course of opium and Indian hemp seems particularly adapted to those cases where opium alone fails in producing the desired effect. The best form is small pills, made from the spirituous extract, with a little of

the powdered leaves. The smallest dose may be set down at eight grains; a rapid increase is frequently required.

I would here introduce and direct attention to the interesting report furnished me by Dr. W. P. Kincaid, of Neville, associated with me on this subject, and whose experience with the medicine has been of a most direct and practical character. (See report of Dr. Kincaid.)

In conclusion, I would state as the result of my own experience and observation, in addition to the cases already reported and referred to, that I am fully convinced of the peculiar efficacy and pertinency of the remedy to certain pathological conditions, occupying or involving the nervous system. In those mixed and indefinable paroxysms of an hysterical nature, I have found no remedy to control or curtail them with equal promptness and permanency. In the protean and painful conditions connected with uterine disorder, I have ever found it an admirable adjuvant in their treatment, as an anodyne ingredient, in a variety of combinations. In sleeplessness, where opium is contraindicated, it is an excellent substitute. In two cases of nervous spasmodic cough, it proved efficacious, where a number of anti-spasmodics failed to afford any relief. In a violent case of puerperal mania, it acted most happily and beneficially in controlling the fury of the patient and in securing sleep. As a calmative and hypnotic, in all forms of nervous inquietude and cerebral excitement, it will be found an invaluable agent, as it produces none of those functional derangements or sequences that render many of the more customary remedies objectionable.

Neville, Ohio, Feb. 21, 1860

Report of
W. P. Kincaid, M.D.

R. R. McMeens, M.D., Chairman Committee on Can. Ind.:

Dear Sir:

Yours of the 5th has just come to hand, and as you are now engaged in making up your report, I will, without delay, very briefly give you some of my observations upon the action of *Cannabis Indica*.

My attention was first directed to this medicinal agent by yourself, at the meeting of the Ohio State Medical Society, held at Sandusky, in June, 1857.

Since that time, while engaged in the practice of medicine,

I have embraced every opportunity to test its virtues in such cases as I thought it applicable.

The diseases in which I have prescribed it, and to which my observations have especially been directed, are, laryngismus stridulus, epilepsy, tetanus, hysteria and mania-a-potu.

By laryngismus stridulus, I mean spasm of the glottis, recurring at irregular intervals of from a few minutes to any period of time, either in children or adults.

My design in the use of this article has been to test its effects, separate and apart from any other medicine, given at the same time, as far as it was consistent to rely only upon one remedy.

In several instances where the symptoms were imminent, I used chloroform in conjunction with the hemp, and in those cases am unable to say whether the effects produced were the combined action of the two, or of one or the other separately, but am inclined to the opinion that they were the result of the two acting in harmony.

In one case of laryngismus stridulus, infant, aged seven and a half months (case published in the Transactions of the Oh. St. Med. Soc. of 1858), I gave the two combined for the first twenty-four hours, with marked improvement; then discontinued the chloroform, and increased the quantity of hemp, with entire cessation of the spasms after the second dose. The spasms in this case had recurred at intervals of **10** or **15** minutes for 95 days.

On the 9th of the present month, I was called some distance back into Kentucky, to see a Miss Conly, aged **18** years, of sanguine temperament, unmarried, a patient of Dr. Boner's of that State. Found her laboring under spasm of the glottis, with slight spasm of fingers and toes. These paroxysms recurred at intervals of five or six minutes, and were, in duration, from three quarters of a minute to a minute and a half. There was entire suspension of respiration during the spasm. Her pulse was very small, moderately frequent and irregular, and, while in the paroxysm, imperceptible. Extremities cold, surface pallid, pupils dilated to double their normal size, voice entirely extinct.

Her friends had encircled her bed for the previous twelve hours, momentarily expecting her exit.

The physician assured me the symptoms now, and frequency of the paroxysms, were about the same as they had

been for the past twelve hours.

Her mother informed me, she had formerly enjoyed as good health as other girls in the neighborhood, except that she suffered rather more than usual at her catamenial periods, and about that time was very nervous.

She had taken nothing in the way of medicine or nourishment during these twelve hours, owing perhaps to the fact that all were of the impression that an effort to swallow brought on the spasms.

I suggested to Dr. Boner that this was a choice case in which to test the Can. Ind., but when I came to examine my saddle-bags, to my great disappointment and chagrin, I had none with me, and was at a distance of six or eight miles from where it could be procured.

It being a case of emergency, I could not, with prudence, wait until a messenger could go that distance and return with the hemp. I therefore put her upon chloroform and corn. tinct. opii, aa ʒss, to be repeated every two hours until the Can. Ind. was obtained. Directed sinapisms to the extremities, and epispastics to the cervical and dorsal spine.

I am reliably informed there was slight improvement, the spasms being rather less frequent before the medicine arrived. On the return of the messenger, she took tinct. of the ext. ʒss, to be repeated every three hours.

After she had taken the third portion of hemp, and one additional portion of chloroform (given through a misunderstanding), the spasms ceased, and she slept well for nine hours.

When she roused up, she was again in possession of her voice, and having, from joy, talked too much, the spasms returned, but in a milder form, and soon yielded to the same prescription.

The spasms recurred, at two or three irregular periods, within the next four or five days, but soon yielded under the action of the Can. Ind., given as before.

This lady is now convalescent, it being twelve days since I first saw her, and owes, most likely, her present existence to the action of Can. Ind., or the combined effects of it and chloroform.

I have treated four cases of epilepsy with the hemp; two were permanently benefited (at least to the present time); one temporarily, and one not at all.

I will give one case in detail, and compare the others with it, for the sake of brevity, being fully satisfied that your report will be full and comprehensive within itself.

Case 1. Mr. J. K., aged 40 years; unmarried; of lymphatic temperament, and rather feeble constitution; had been subject to epilepsy for twenty years; called upon me in July, 1858, to treat him for, as he said, those "falling spells" he was subject to. He informed me they came on him at irregular intervals. Sometimes he would not have any for two or three weeks; then he would have one or two a day, or every alternate or third day, for a week or two. He was so much afflicted with them he was unable to attend to ordinary business, or go from home alone.

I put him on the *tinct.* Can. Ind. ʒss twice a day for two weeks, then three times a day for two weeks, when it was suspended for one week.

During the first week of treatment he had two fits, one in the second, and none in the third or fourth.

About the last of the fifth week, he had another fit, when he was again put on the hemp twice a day for five weeks; then reduced to once a day for five weeks. In these ten weeks he had no "falling spell," neither did he have any for a month after that, although he was taking nothing the last four weeks.

In December, 1858, they returned on him; and as I was not engaged in the practice of my profession that winter, I lost sight of his case until May, 1859.

He informed me, on my return to professional duties in the spring of 18.59, that he had had a few of his "old spells" during the winter, but nothing like so frequent as before he took the hemp. He has only been taking the medicine occasionally the past season, as he had become tired taking it, and not having a fit more than once in three months, which did not greatly interfere with his ordinary engagements, he concluded to rest for a time, unless his "spells" got worse on him.

Case 2. Male; aged 46 years; of sanguine or bilious temperament; rather plethoric habit; married; has been subject to epilepsy for five years, recurring at intervals of about four weeks. Sometimes he had only one fit at the recurring period, and at others from two to seven.

He was put on the use of the Can. Ind. in September,

1858; given the same as in case 1, with even better results.

He has had but one fit in the past nine months; has taken no hemp for four or five months; considers himself cured. Whether he permanently cured or not, the future only will demonstrate.

Case 3. Male; aged 35 years; married; of nervous temperament; subject to fits for 17 years.

He has sometimes two or three fits a day; then will miss three or four days, and again recur upon him.

I am informed by his wife that for the past five years he has had, on an average, about fifty per year.

He took the hemp for three months without any marked improvement, when it was discontinued.

Case 4 Male; aged 38 years; married; of nervous temperament; subject to epilepsy for ten years, recurring at intervals of four or five weeks.

Treated as cases 1 and 2, with slight improvement. This patient has been taking the hemp for two and a half months, and is still under treatment.

I have given the Can. Ind. in two cases of tetanus: one idiopathic, the other traumatic. In the former I gave \mathfrak{ss} every three hours for six hours; then every two hours, with chloroform, for eight or ten hours, but could produce no impression upon the disease. Patient died.

In the traumatic case, its beneficial effects were very visible. The frequency and force of the paroxysms were lessened just in proportion to its constitutional effects upon the patient.

This lady took half a drachm (*tinct.*) every three hours, until there was dilatation of the pupils, and that peculiar expression of countenance attending the exhilarating effects of stimulus, when the spasms ceased. They returned at two or three irregular periods before convalescence, but were each time controlled by the hemp.

This was a case in which the **tetanic** spasms continued after the amputation of the diseased limb. The hemp was not given before the amputation. Tetanus was the result of mortification of the hand.

I have given the Can. Ind. in a few cases of hysteria, and am much pleased with its action, especially in those cases of a spasmodic character.

I have not had an opportunity of testing its effects in

delirium tremens to the extent I had desired, but so far as my observations were carried, it did not meet my expectations. It seemed to exalt the nervous excitement already present, rather than calm it; but such is the case in many instances, even with morphine.

As to its action in *chorea*, I have had no good opportunity of testing it, but should anticipate good results from the persevering use of it in that disease.

In conclusion, I would remark, that I regard the hemp as an excellent nervous stimulant, applicable in all diseases of a purely nervous character.

Yours, very respectfully,

W. P. Kincaid
