

An essay on the use of the atropa belladonna, or solanum lethale, and the solanum hortense : with practical observations on their effects in the cure of scirrhus, cancer, stricture, and various other complaints / by Powell Charles Blackett.

Contributors

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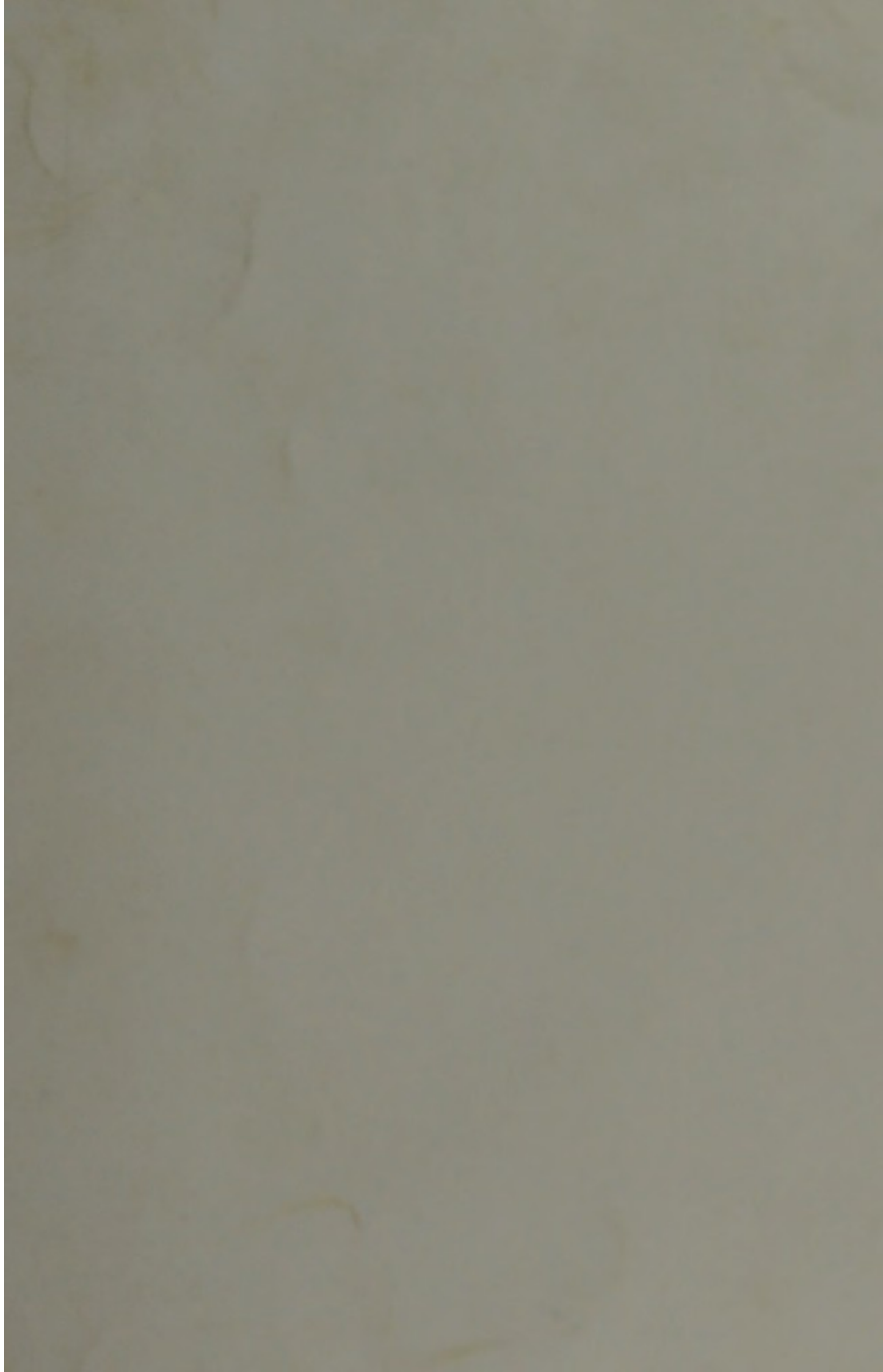
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AN
ESSAY
ON THE USE OF THE
ATROPA BELLADONNA,
OR
SOLANUM LETHALE,
AND
The Solanum Hortense ;
WITH
PRACTICAL OBSERVATIONS
ON
THEIR EFFECTS IN THE CURE OF
SCIRRHUS, CANCER, STRICTURE, AND VARIOUS
OTHER COMPLAINTS.

DEDICATED BY PERMISSION TO
HIS ROYAL HIGHNESS THE DUKE OF CLARENCE.

BY
POWELL CHARLES BLACKETT,
MEMBER OF THE ROYAL COLLEGE OF SURGEONS IN LONDON, SURGEON
IN THE ROYAL NAVY, AND SURGEON EXTRAORDINARY TO
HIS ROYAL HIGHNESS THE DUKE OF CLARENCE, &c. &c. &c.

London :
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1826.

TO
HIS ROYAL HIGHNESS
WILLIAM HENRY, DUKE OF CLARENCE,
&c. &c. &c.

SIR,

IN availing myself of the permission YOUR ROYAL HIGHNESS has been graciously pleased to allow, of dedicating my Observations on such important and powerful agents as the Atropa Belladonna and Solanum Hortense, I humbly trust that what has fallen within my notice on subjects so essential in Medical Practice, may invite to a much more extended consideration of them, that their benefits may be effectually ascertained, duly appreciated, and finally established. If the result of the intervals in my practice should be introduced to the notice of the Profession and the public in general, through the approbation of YOUR ROYAL HIGHNESS, I shall be gratified in having attained the summit of my ambition.

I have the honour to be,

SIR,

With the most profound respect,

YOUR ROYAL HIGHNESS'S

Most obedient, grateful,

And humble servant,

POWELL CHARLES BLACKETT.

HIS ROYAL HIGHNESS

WILLIAM HENRY, DUKE OF CLARENCE

IN THE ROYAL CHAMBER

At St. James's

SIR,

I have the honor to acknowledge the receipt of your letter of the 14th inst. in relation to the petition of the Duke of Clarence, and in reply to inform you that the same has been forwarded to the proper authorities for their consideration. I am, Sir, very respectfully,
Your obedient servant,
J. H. B.

JOHN HENRY B. BLACKETT

INTRODUCTION.

IN this slight essay, it is far from my intention to attempt a regular treatise on the Deadly and Garden Nightshades ; but simply to throw together the results of my experience as connected with their uses, and to show how far that experience agrees or differs with pre-conceived opinions. Like many other remedies, these plants have had their days of fashion and their days of neglect ; at one time they have been extolled as a general cure, at another, decried as useless poisons ; if they have not merited such high praise, neither have they justly incurred such utter contempt. They are powerful remedies, and, like all other powerful remedies, extremely dangerous in unskilful hands ; but are they on that account to be thrown aside altogether ? The knife may take life as well as save life ; but who would deny the general utility of operations ? It is with a view that more attention should be turned to the actual, or at least the probable, benefits to be derived by a judicious application of these plants, the virtues of

which appear to me not to have been sufficiently appreciated, that I am induced to give publicity to what has fallen within my observation respecting them. If this essay should, in any degree, establish a more correct knowledge of their virtues, my point will be considered as amply gained.

The Nightshades have been long and well known for their fatal effects, both on man and animals; notwithstanding which, they have been extensively employed in ancient as well as modern practice. Theophrastus, Dioscorides, and Pliny, have all given an account of plants that cause intoxication, madness, and death. The Greeks knew of three species of the Nightshade: the Garden, which they deemed innocent; the Somniferous, which caused sleep; and the Furious, which caused madness and death. Here then we have the history of the Greek Strychnos; but not one of them agree either in description or effect with ours; as one grain of the Atropa or Hortense of this country appears to be equal to a scruple or more of theirs.

Mathiolus certainly was aware that the Deadly Nightshade was unknown to the Grecian physicians; and later authors are in doubt whether the Mandragora of Theophrastus or the *Στρυχνος μανιχος* of Dioscorides be really, in fact, the Belladonna. Although Dioscorides confounded

the Solanum Lethale with the Hortense, yet we must infer that he used the Garden Nightshade, and at the same time knew well the effects of his *Στρογγυλὸς Κηπάδος* which he applied, and that chiefly in various diseases of the skin and eyes, in erysipelas, in herpes, in inflammation, in parotidœa, &c. also as a refrigerant, a discutient, and an anodyne, employing it in various ways. Among the Arabians, the juice of the recent leaves was applied in burns, &c. as well as that disease, common to them, called the Bulæ.

Galen speaks highly of the Deadly Nightshade in cancer and ulcer. Paulus Ægenita mentions that an over dose will produce madness and death. Ætinger tried many experiments with it, and gave it in the time of Albertus, in infusion, in cancer, although it was then the opinion that not any of the faculty should have recourse to the use of this herb. For instance, Pultney, Haller, and Spielmann have proved its poisonous tendency. Heister exclaimed against it, and relates, that a person went mad on its being applied for cancer, and the disease remained incured.

Degner used it in cancer with success. Junker particularly mentions two cases of cancer cured by it, and recommends it strongly. Munich employed the roots and leaves of the Deadly Nightshade in rabies canina. Mayerne also in-

timates that a decoction of the berries* was supposed to be a specific against canine madness. Munnich is said to have cured both men and animals of this dreadful malady.

Bergius, Evers, and Greding used the remedy, particularly in obstinate jaundice, from infarction of the liver, in epilepsy, chorea, and other convulsive disorders, as well as in palsy, in mania, and in hydrophobia. Buchhave upon this instituted a variety of experiments in cases of the class neuroses, particularly tussis convulsiva. He employed the root only, and notes as follows: that "Adults had dryness of fauces
" and nose for three or four hours, impeded deglutition, indistinct articulation, and that acids,
" held only in the mouth, were sufficient to
" remove these unpleasant sensations; that all
" kinds of drink were useless; that the urine
" was profuse; that the pulse was full and quick;
" that vertigo, congestion of the vessels of the
" head, flushings, dulness of the eyes, drunkenness, and dilated pupils, &c. were the consequence. But that children had but few of
" these symptoms, and they were always more
" slight, shewing the effect only by increased
" heat and swelling of the cheeks." Yet he

* But now the *berries* are omitted from the list of the *Materia Medica*, as the *leaves* are more effectual.

says, "If the child be over dosed, uncommon
 "loquacity, staring of the eyes similar to that of
 "epileptics, deep sleep with profuse perspira-
 "tions, would soon take place, and the patient
 "would then awake quite free from the late
 "mentioned symptoms." And he further adds,
 that "Those who were accustomed to take the
 "remedy, in general, were not in the least af-
 "fected. The dose generally was—from eight
 "to nine months old, half a grain—to two years
 "old, one grain—to eight years old, two grains
 "—to twenty years old, four grains—twice a
 "day ; and he seldom went beyond."

Gesner used it as a soporiferous and anodyne
 medicine to remove pain, and in dysentery. The
 Danes were accustomed to employ the berries
 either in wine or beer ; also in dysentery, the
 gout, and wandering gout.

Lambergen (who was the cause of the Bella-
 donna being first used in this country,) applied
 it in cancer, both internally and externally, with
 success. He tried it on himself, in the propor-
 tion of a scruple of the leaves or root to ten
 cups of water, infused for a night, taking a cup-
 ful for a dose. It produced slight vertigo and
 unusual thirst, with increased arterial action.
 His case, which caused a great sensation in the
 medical world, was declared by Dubois, Winter,
 and Van Arum, to be true carcinoma. De Haën

also used it in cancer ; but without success, Cullen, with success, in scirrhus, in cancer, and in ill-conditioned ulcers. Graham, in ill-conditioned ulcers and various tumours. Mayer, also in cancer.

Münch says it possesses great discutient and resolvent powers ; has seen large scirrhusities removed by it ; that he himself was relieved from a large submaxillary tumour after the measles in which *Cicuta* and other remedies proved useless ; mentions also, that Murray of Gottingen used it and removed obstinate jaundice. Münch continues by saying, “ Besides
 “ its being a narcotic, it acts as a speedy diuretic,
 “ sialogogue, aperient, and sudorific ; highly
 “ useful in retrocedent exanthemata, controlling
 “ the morbid matter ; thinks its resolvent powers
 “ renders it useful in melancholy, epilepsy, &c.
 “ arising from visceral obstruction.” And again,
 “ its narcotic powers useful, from its control
 “ over the nervous system ; useful in painful
 “ epilepsy, and in derangements, where the aberration is of a peculiar cast.” Finally, he considers “ It should be always used where other
 “ remedies have failed. He effected the cure of
 “ many cases of melancholia, epilepsia, and
 “ mania.” He says, however, “ That even
 “ small doses have produced mania where none
 “ existed.”

Retcher instituted several experiments with this plant, especially in hydrophobia; and in many cases with success.

Gataker used both the Deadly and the Garden Nightshades; but gave the preference to the latter. It will also be found that the Swedes applied the Garden Nightshade in paronychia, &c. externally, and gave it internally in inflammations of the viscera and cases of stone, &c. Cirillo also used it with success in dropsy. He advised from six to eight leaves to be infused in a pint of water, and that quantity to be taken daily. It always affected the kidneys and bladder, and caused a great discharge of urine. The use of this plant in dropsy will also be found in Baldinger.

Gataker employed the *Solanum Hortense* in cancer, in foul and painful ulcers, in obstinate pains, in scorbutic eruptions, and in other common disorders. His dose in general of either of the Nightshades was one grain of the leaves in a cup of water, which he would increase according to circumstances. He observed, in using them, that purging, head-aches, profuse sweats, and copious discharges of urine followed. In some instances, he recommended half a grain; increasing and diminishing according to symptoms. He distinguished three kinds of the Nightshades: the Garden, the *Dulcamara* or Woody, and the *Belladonna*. The first, he says, is commonly used,

and that the third was recommended by Willoughby, Tragus, and Ray, and that Cæsalpinus mentions that the Garden Nightshade was commonly used by physicians internally in many cases, as in inflammations of the stomach and bowels, for heat of urine, and for stone. Gataker also says, that it is mild and palliative in carcinoma; to be used with great caution; and he strenuously advises purgatives conjointly; yet, should the dose be increased to five or six grains, and not excite the secretions more than usual, he recommends it to be omitted altogether.

He relates a case of a female labouring under hemiplegia being cured by the *Solanum Hortense*, and concludes by stating, that it is more useful in dropsy than in other complaints, on account of its acting both by the skin and kidneys.

Broomfield used both the Garden and the Deadly Nightshades in ulcers, in gutta rosacea, in hemiplegia, &c. and he says, "the rest of the gentlemen of the faculty who attended St. George's Hospital have given the leaves of the *Solanum Lethale* and the *Solanum Hortense* in infusion to several patients, viz. in epileptic, in paralytic, in rheumatic, in dropsical, in scorbutic, in scrophulous, and in cancerous complaints; to some who had foul ulcers; and to others with disorders of the joints."

Willoughby softened and removed hardness

as well as cancerous tumours of the mammæ, by applying the fresh-gathered leaves to the part.

Böcler applied it externally in hæmorrhoids, in cancer, in gangrene, and in cancerous ulcers. Even in the Electorate of Hanover, the old women of the different villages were accustomed to use it internally and externally in induration of the glands, in scirrhus, and in cancer of the mammæ.

Brummen, of Sweden, employed the root in cancer; Spaeth and Juncker followed his example; and then Degner became interested in the subject, and communicated his experience to Timmermann. Degner prepared an infusion of one leaf of the Belladonna in four cups of boiling water, and gave it in scirrhus of the tongue: the dose was a cupful every morning. Lambergen dissipated an obstinate scirrhus in twenty-two months; and he also removed an inveterate cancer of the breast by fomentation and by the decoction internally. Marteau was also successful; but he used it in tincture.

Block also removed occult cancer of the mammæ; and Ziegler was successful by its use in cancerous ulcers and tumours of the hand, as well as in scirrhusities of the tongue, and where they had begun to suppurate; also in scirrhus of various parts of the body, and nodes or tumours of the shin.

Although the elder Münch, as well as his

sons, were successful in the various complaints in which they employed the Belladonna, still we have those who have used it without the least benefit, and, in general, condemn it as a virulent poison.

De Haën, Heister, Van Doevern, Timmermann the younger, Haller, Bayle, who failed five times, Zeigler, Schmucher, and Schmalz, have all failed in the application of this plant in the true cancer. When it had arrived at the last stage, or that of inveterate ulceration, they appear, by their writings or opinions, to be all disappointed, without considering the inutility, in such cases, of hoping for a cure. Yet, if they had applied the medicine properly, their patients would soon have been aware of the palliative effects, which would have convinced them in future to be satisfied with that alone. Lentin mentions that it has been used with success in obstinate indurations of the mammæ, after child-birth, when the milk had flown too freely.

Münch, Ritcher, Mayerne, Buchholz, Neimeke, have all witnessed the good effects of the Belladonna in rabies canina, in patients when they have become morose, vitiated in their minds, shuddered at food or drink, excessively convulsed, &c. yet they have been successful enough to have witnessed them recovered, after a short time, to perfect health.

Münch also mentions that it has been of great service in the plague. Hufeland employed it in convulsions from scrophulous irritation, and in ulcers by sprinkling the powder of the leaves over them.

Andrée applied it in stricture of the urethra, and was the first that employed it for the cure or palliation of this disease.

Bailey also used it in *tic douloureux*, especially in neuralgic affection. He has published his success, and is certainly the first we have on record who employed this medicine in such disorders.

Hahmeman applied the Belladonna as a preventive of scarlatina; Kouff also followed his example: their practice is confirmed by Meglin.

If any more examples be necessary on this subject, I must recommend those that require further information to apply to Timmermann, Faber, Davies, Baldinger, Gataker, Broomfield, the Münchs, Murray, Wilmer, Withering, &c.

It appears, from the effects of these medicines upon the animal economy, and what is conceived to be the correct pathology of disease, that they are remedies of more general application than hitherto has been assigned to them. Certainly their effects, when not judiciously administered, or when taken accidentally, are alarming; nay, even fatal. For instance, a child gathers a few of

the berries of the Belladonna or Garden Nightshade, deluded by their beautiful appearance and sweetish taste, and eats them. In the course, I may say, of a few minutes, the distressing symptoms commence; such as dryness of the mouth and the nose, trembling of the tongue, dilatation of the pupils, excessive thirst, difficulty of breathing and of swallowing, attempts to vomit, with great anxiety about the præcordia; then come on delirium, with gnashing of the teeth, and convulsions with the epileptic stare. The countenance soon becomes tumid, and of a dark red colour; the jaws are fixed; during all this, inflammation principally attacks the œsophagus, the stomach, and the intestines, extending sometimes to the mesentery, the lungs and the liver, the kidneys and the bladder, accompanied with violent pains in the abdomen; all parts are insensible to stimulus; general relaxation takes place, with palsy, especially of the lower extremities; then vertigo, blindness, coma;—and death at last closes the awful scene.

Camerarius apud Wepfer mentions that three children were poisoned by taking the berries of the Garden Nightshade; but, after the use of evacuations, &c. they all recovered: and he also relates the case of a boy poisoned by the berries of the Belladonna, who also recovered by the speedy application of evacuants, &c.

Lambert also gives an account of two boys poisoned by eating the berries of the Deadly Nightshade; yet they recovered, as usual, after evacuations.

Cullen mentions a case of a person using the infusion of the Belladonna at a distance, and without communicating with him, in cancer of the lip, and that dryness and stricture of the œsophagus came on, and he suddenly died by a very copious throwing up of blood.

Van Swieten relates a case where a lady applied a Belladonna leaf to an ulcer beneath the eye, suspected to be cancerous. In a few hours the pupil was dilated, even when exposed to a strong light. The nightshade was removed, and vision returned. The experiment was repeated several times, and Ray was a witness to it.

But this alarming description of the effects of the Nightshades should not tend to prevent their general introduction into practice. It is a medicine (I must again mention,) that has long been known for its narcotic and deleterious powers, diminishing sensibility and irritability, acting directly on the nervous and sanguiferous system, remarkable for inducing the cessation of sense and motion, and forming one of that class of substances called poisonous. Therefore, from these powers, it is sufficiently probable that it is an efficacious remedy, and, under proper manage-

ment, may become an excellent medicine. Besides their narcotic powers, &c. they promote all the excretions; yet their exhibition requires the greatest caution; for it is apt, when continued for a long time, suddenly to cause dryness of the mouth and tension of the throat and neighbouring parts, with vertigo, dimness of sight, and temporary blindness. When these symptoms appear, its use must be suspended for a time, and resumed in smaller doses. They have been used in febrile diseases, in intermittents, and in the plague; in inflammatory complaints, such as gout, rheumatic gout, rheumatism, and exanthemata; in comatose diseases, in palsy, and loss of speech, in apoplexy, &c.; in spasmodic and nervous disorders, in chorea, in epilepsy, in hysteria, in pertussis, in tetanus, in tic douloureux, in hydrophobia, melancholy, mania, &c.; in cachectic complaints, in dropsies, in obstinate jaundice, in stone, &c.; in local affections, in amaurosis, in ophthalmia, in scirrhus, in cancer, in syphilis, in scrofula, in scurvy, and various ill-conditioned ulcers, &c. &c.

The roots and leaves of the Belladonna and Garden Nightshade, in powder, in infusion, or the extract, have been employed. Münch gave the powdered root every second morning, from one to five grains to children, and from fourteen to fifteen grains to adults.

The watery infusion was also a powerful preparation; twenty grains of the dried leaves being infused in ten ounces of boiling water, and strained after cooling. At first, two ounces were given daily to adults, and gradually increased until tension of the throat showed that it was imprudent to continue it. This watery extract was not a judicious preparation. Externally, the powdered leaves were applied as an anodyne to diminish pain in cancer and ill-conditioned ulcers, &c. I am not in the least surprised that Gataker and others should give the decided preference to the Garden Nightshade, especially as they were in the habit of giving the same quantity of these plants for a dose. They did not, at the same time, consider separately the individual powers of these plants; therefore, for the sake of safety, used the less potent.

Professor Reimarus used the infusion to dilate the pupils before an operation on the eyes, by dropping a little into them; by which means the operation was facilitated. Amongst others, Grasmeyer, Schmidt, and Himly followed. Saunders was the first that used it in this country to dilate the pupils before an operation, and of course this practice has been generally adopted by the English surgeons.

“ In order to make the use of the medicine as
“ advantageous as possible in cases where there

“ is a probability of success, and to prevent any
 “ injury arising from the experiment, I shall beg
 “ leave to offer such farther remarks and direc-
 “ tions as my own experience and the practice of
 “ others have suggested to me. Previous to these
 “ directions, I must observe, that as the species
 “ of this plant, called the *Deadly Nightshade*, has
 “ been found to be attended with troublesome
 “ symptoms, I shall enforce what I have before re-
 “ commended, the use of the *Garden Nightshade*.
 “ Bleeding, a purge, or a vomit, either one or all,
 “ should generally precede the use of this medi-
 “ cine.”

“ The infusion of one grain is as much as
 “ ever should be given for the first dose ; and as
 “ a quarter of a grain is sometimes found to pro-
 “ duce a very considerable effect, it may be best
 “ to begin with that quantity. The exactness of
 “ the quantity may be easily ascertained by in-
 “ fusing one grain of the nightshade in four
 “ ounces of water, and dividing it afterwards into
 “ smaller doses.”

“ The medicine should be generally given at
 “ night, as the necessary confinement in bed
 “ during the height of the perspiration, and the
 “ drowsiness which sometimes ensues, may be
 “ disagreeable in the day.”

“ It seldom happens that more than one dose
 “ is proper within the twenty-four hours ; nor

“ should, in general, the dose be repeated oftener
 “ than every second or third night. If it do not
 “ operate by stool, some other medicine should
 “ be given, either with the Nightshade or in a
 “ reasonable time after it, that the body may
 “ never be costive. And this circumstance is
 “ particularly to be attended to.”

“ No good effect, as far as I have observed,
 “ can be expected from this medicine, unless it
 “ operate by perspiration, urine, or stool. If,
 “ after trying enlarged doses, the quantity of
 “ five or six grains do not produce a very con-
 “ siderable increase of some of these discharges,
 “ a further use of the medicine is not advisable;
 “ for though a large dose might possibly have
 “ that effect, the operation of the medicine will
 “ not, I imagine, be regular enough afterwards
 “ to be serviceable.”—*Gataker's Essays*.

This medicine (the Nightshades) should be given in doses varying according to the indications that lead to its adoption. It should be prescribed in small and repeated doses, to operate gradually through the medium of the circulation. In this manner exhibited, to influence the kidneys, and prove diuretic—the intestines, and prove purgative—the skin, and prove sudorific—the nerves, and prove sedative—the absorbents, and prove the agents of absorption—and by these

means become beneficial in the various complaints in which it is employed. On the other hand, if given in large quantities, and it should not prove either diuretic, cathartic, sudorific, &c. but produce an opposite effect—in that case, it will have been absorbed in excess, and will be attended with injurious effects.

What must then be the risk of rashly employing this medicine (I mean the Garden and Deadly Nightshades) internally, when even the external application of it has proved sometimes of great inconvenience?

We have, according to the authorities adduced, found that these plants have cured both scirrhus and cancer, and have been beneficial in all kinds of tumours and ulcers, whatever may have been their nature, as well as in the variety of complaints before mentioned. What therefore can be more gratifying to mankind, in a medical point of view, than to find that they have a remedy which in all probability will relieve these diseases? for if they do not in all cases cure, at least they will palliate and diminish the distressing sufferings of a tormented and afflicted patient.

As there are many observations and cases on this subject, which I have published in the *London Medical Repository*, I think it right they should be mentioned in the present Essay, the

more effectually to concentrate what has fallen within my observation.

The first is on the employment of the Belladonna in various diseases. Vol. xix, page 457.

Having employed the Atropa Belladonna with great advantage in several nervous and inflammatory disorders, I was and am earnestly desirous to draw the attention of the readers of the Repository to the subject. The particular preparation of this medicine which I have been in the habit of using, is a very strong tincture, made from the extract in the following proportions : Take ten drams of the most carefully prepared extract of the Belladonna and one pound of proof spirit, macerate for fourteen days, and then filter. I endeavour to procure the extract in a state of its greatest activity, and possessing the virtues of the plants undiminished in the preparation ; and I consequently find a single drop of the tincture which is made from it to be more efficacious than a quarter of a grain dose of the extract, as it is usually obtained from druggists.

I have frequently employed this tincture in cases of mania, in various instances of convulsions, in hysteria, and in pertussis, with decided efficacy. In all cases of its internal use, I have commenced with small doses, generally with two or three minims in the day. I have been led to

embrace this cautious mode of commencing the remedy, because I have found that when given, at first, in a larger dose, owing to peculiar states of the constitution, especially in old subjects, it sometimes depresses the powers of life to a greater extent than was wished. The rapidity with which I have increased the dose, or the extent to which I have carried it, has always been regulated by its effects, by the circumstances of the case, and by the constitution of the patient; always keeping in mind, that its effects occasionally are not very marked for some time, when they suddenly evince themselves in a very decided manner; thus showing that, in some instances, it does not act upon the nervous system until its exhibition has been carried to a certain extent, when its effects are quickly expressed throughout the whole frame.

In several forms of cutaneous and superficial inflammation, I have experienced the greatest service from the external use of this tincture, either when added to a lotion or to any ointment which appeared most suitable, in other respects, to the particular nature of the case. When I have employed it in a lotion, a dram of the tincture to eight ounces of the liquid has been the proportion adopted; and in this form I have found it very beneficial in external inflammation and in irritable ulcers.

I have used the extract, either alone or combined with some ointment, with decided advantage, in spasmodic stricture of the rectum ; and I have found it useful in gonorrhœa, especially when chordee was present, conjoined with double the quantity of mercurial ointment, and rubbed along the course of the urethra. Without offering more general remarks on the use of this narcotic, I shall conclude with the particulars of a case of mania, in which I gave it with advantage, after other modes of treatment had failed in accomplishing a cure, although they may have acted beneficially in disposing the system of the patient to the influence of the Belladonna.

5th March, 1819.—C. G. aged forty-eight, of a pale complexion and spare habit, who had been accustomed to a very active life, became, in consequence of repeated misfortunes in business, the subject of mental derangement, in the form of melancholia ; and, being of a religious disposition, his mind was constantly filled with apprehensions of his future state. I saw him about a fortnight after these commencing symptoms of derangement, when he had all the actions of a furious maniac. His bowels were constipated ; his tongue foul ; urine in small quantity, and of a high colour ; pulse 86 ; skin dry and hot. He complained of pain at the scrobiculus cordis. After

subjecting him to the usual mode of coercion, a course of purgatives, combined with anodynes and occasional injections, were entered on; general and local blood-lettings were employed, and blisters applied to the nape of the neck. This treatment, which was varied according to circumstances, conjoined with various internal remedies, was continued until the 5th of April, when I resolved to employ the Belladonna, from the circumstance of my having used it with success in four cases* of a similar nature; it was prescribed in the following manner:

R Mistur. Camphoræ, f ʒvss.
 Tincturæ Belladonnæ, m. ij.
 Liquor. Antim. Tart. f ʒiij.—M.
 Capiat Cochlear. dua ampla, sextis horis.

April 6th. The symptoms were much the same as before; but he had passed a considerable quantity of urine. A draught, composed of gamboge and infusion of senna, was ordered, on account of the confined state of his bowels, and directed to be repeated when circumstances required it.

10th. The urine was greatly increased; and the symptoms of derangement were not so violent. His bowels were natural; his tongue clean;

* I have since used this medicine in three more cases of mania with decided advantage.

his pulse at 76, and regular. He was directed to take three table-spoonsful of the mixture every four hours.

17th. He has passed the nights in a more composed state, and has enjoyed some lucid intervals. Pulse 70 ; tongue clean ; bowels regular ; the pupils of the eyes rather dilated.

R Misturæ Camphoræ, fʒviijss.

Tincturæ Belladonnæ, m. iv.

Acid. Citrici, ʒj.—M.

Capiat Cochlear. tria magna quartâ quâque horâ.

20th.—The pupils were quite dilated, attended with loss of sight, and a great propensity to sleep. The countenance was rather flushed, but all the symptoms of mental derangement had left him. His pulse, tongue, and bowels were natural.

The Belladonna was discontinued for seven days, when his sight returned. His countenance was quite calm and cheerful. The following mixture was now used :

R Aquæ Menthæ Viridis, fʒviij.

Tincturæ Belladonnæ, m. ij.—Ft.

Mist. cujus Capiat Cochlearia tria magna, nocte manequæ.

This mixture was continued for three weeks, and an aperient draught given occasionally. He has continued well from that period up to the present, without the least appearance of a relapse.

From the experience I have had of this remedy, I consider that we cannot expect much benefit from its internal use until it has nearly produced a temporary loss of sight ; unless it act by the skin, kidneys, or bowels.

The second is an abstract of cases wherein the Tincture and Extract of Belladonna were employed.—Vol 1., new Series, p. 480.

The following pages contain a brief abstract of a number of cases of various complaints, in which I have exhibited the *Atropa Belladonna* in private practice for several years past. If the experiments, the result of which I now proceed to give, do not prove so conclusive as to lead to the general use of this medicine, they may, nevertheless, have the advantage of showing in what diseases it has been administered either with or without benefit ; this being a first step towards obtaining a knowledge of its powers, on which we can rely with confidence. Although the *Belladonna* may not prove a very important remedy in many diseases, yet certainly it will be a great point gained, to know to what lengths it may be administered with safety ; and to point out the manner in which it affects the patient, even when it fail to produce a beneficial effect on the system. Thus, even from its failure in some

disorders, we may be induced to draw inferences calculated to lead to its beneficial employment in other diseases, and under circumstances in which it had been neither exhibited nor thought capable of rendering any service.

Case i. **HYSTERIA**.—October, 1817. M. R. a woman of twenty-seven years of age, residing in Compton Street, Soho, had, for more than three years, been twice a month, and sometimes oftener, attacked with violent paroxysms of hysteria (a marked case of hysteria libidinosa). I had administered the remedies recommended both by ancient and modern practitioners, but without the least efficacy: at last, the tincture of Belladonna was given, according to the following formula:

R Tinct. Belladonnæ, m. ij.
Misturæ Camphoræ, fʒvss.
Spirit. Æther. Compos. fʒij.—M.
Ft. Mistura Cap. 4tam partem sextis horis.

Five days after she had commenced with the Belladonna, she had another paroxysm; but its violence was much mitigated. She continued the mixture for three weeks longer, without the pupils being in the least affected. At the end of three weeks she had another paroxysm, which was still less violent than the preceding, and continued for a very short time. I doubled the dose of the Belladonna, and, after the seventh dose, the pupils became dilated; I then omitted the

remedy until they had resumed their natural state, which was not until six days. She afterwards continued the first mixture for about seven weeks; and she has not had a return of the fits for the last seven years. It should be mentioned, that great attention was paid to the state of the primæ viæ during the administration of this remedy.

Case ii. September, 1817. J. C. a young woman of twenty-five, married, and living with her husband in Mount Street, Grosvenor Square, was greatly afflicted with hysteria. I gave her the Belladonna, commencing with small doses, and increasing it gradually, until she took two drops of the tincture three times a day. The pupils at length became dilated. She afterwards had no return of the hysterical paroxysms. She has since had two children and three abortions. Her health at this time is remarkably good.

Case iii. January, 1818. S. W. a young woman of eighteen, living in Chapel Street, Grosvenor Square, had, for seven months, paroxysms of hysteria (from a retention of the menses). They were not of so violent a nature as in the former case; but the fits were almost daily. I gave her the Belladonna as follows:

R Tinct. Belladonnæ, m. j.

Mist. Camphoræ, fʒvj.—M.

Ft. Mistura cujus Capiat Cochli. iij 4tis. horis.

The paroxysms became less violent as she continued the mixture. On the fifth day the pupils were dilated, and she afterwards had no return of the paroxysms. The menstrual evacuation took place, and continued to be regular until her marriage. She has since had three children, but no return of the hysteria.

Case iv. March, 1819. E. G. twenty-two years of age, residing in Crawford Street, had been for five years afflicted with hysteria. The paroxysms were more or less violent, and attacked her almost daily. I ordered her the Belladonna as follows:

R Tinct. Belladonnæ, m. ij.

Mist. Camphoræ, f $\frac{3}{4}$ vj.—M.

Ft. Mistura cujus Capiat quartam partem sextis horis.

Immediately after the first dose, she was seized with cold shiverings and perspirations. Her pupils became dilated, accompanied with an uncommon, dull, heavy pain in the head. As soon as I found these symptoms commence, I ordered her directly a strong aperient, and repeated doses of the subcarbonate of ammonia. The aperient operated well in two hours. The ammonia was continued, and an opiate was given at bed-time. She had a good night, and in the morning was perfectly relieved from the baneful effects of the Belladonna.

The patient's hysteria was cured afterwards by large doses of the carbonate of iron. (It was a decided case of hysteria à leucorrhœa.)

Cases v and vi. January, 1820, A. W. and June, 1820, C. M. the first about twenty-years of age, living in Brewer Street, Golden Square, the latter about twenty-nine, in Chandler Street, were both cases similar to the last; and in them the Belladonna had the same baneful effects. We must therefore infer, that when this disease is brought on by debilitating causes, the Belladonna is extremely inapplicable and injurious.

Case vii. September, 1820. J. C. aged about ten, a boy of full habit of body, living in Broad Street, Carnaby Market. Determination of blood to the head was evident in this case, and the paroxysms very violent. After the necessary remedies, as in the last case, with the addition of cupping, he was relieved. Then, and not before, I gave him the Belladonna, and he recovered in a similar manner to the former.

Case viii. PERTUSSIS.—December, 1823. H. B. a boy of nine years of age, in Park Street, Grosvenor Square, was attacked, about the latter end of November, with pertussis. The usual

symptoms were present in great violence at the time when I first saw him, which was in the latter end of December. His bowels were much confined; his eyes much swollen, and appearing as if pushed from the sockets. His paroxysms of coughing were excessively convulsive, and his inspirations extremely shrill. The paroxysms always continued until vomiting terminated them. He was free from fever. I gave him aperients, sudorifics with sedatives, and small doses of tartarized antimonial wine every morning, so as to produce nausea and vomiting. This practice was continued until I considered that the danger of determination to the head had passed. I then gave him the fourth part of a drop of the tincture of Belladonna night and morning, according to the following formula:

R. Tincturæ Bellad. m. j.
 Pulv. Tragac. Comp. 3ss.
 Aquæ Menth. Viridis, fʒvi.

Fiat Mist. cujus Capiat 4tam partem nocte maneque.

He continued the remedy for two days without any material alteration, excepting that the paroxysms of coughing were not quite so strong. His bowels remained regular, and his pulse, between the paroxysms, was perfectly regular. I then ordered him half a drop night and morning in the usual mixture. From the first dose of this last mixture, the paroxysms grew less fre-

quent and violent; from the second and third they had nearly ceased; and from the fourth they ceased altogether, and did not afterwards return.

Case ix.—S. C. aged about eight, sister to J. C. had the same disease very slightly. Her bowels were well relieved, and the Belladonna afterwards given; but, after the first dose, she had not a return of the paroxysms.

Cases x and xi.—October 1820. G. P. aged about two years, and J. P. aged about eleven months, residing in Bird Street, were both strong boys. Their coughs were perfectly relieved after a few doses of the medicine.

Case xii.—September 1821. T. W. a boy, aged about eleven years, in Long Acre, was relieved soon after the first exhibition of the Belladonna; but the pupils became immediately dilated, and he did not recover his sight for about five days, when he was perfectly well.

Case xiii.—December 1821. A. W. a girl, seven years old, residing in the Strand. The Belladonna, after the first dose, brought on cold shiverings and perspirations, with dilatations of the pupils; but her pertussis was relieved, although she did not recover for nine days from

the baneful effects of the Belladonna. Oranges, lemons, and wine, with aperients, were required to be given before she could be restored from its influence. This patient was naturally of an indolent and scrofulous habit. In all patients, therefore, similar in constitution to this last case, I should not advise the use of the Belladonna. I have made it a rule not to give the remedy in such cases; but to substitute for it another course of treatment*.

Case xiv. TUMOR MAMMÆ.—January 1822. H. S. in Bond Street, a young woman of about twenty-three years of age, received a violent blow on her left breast, three years previously to her application to me for relief. I found a deep-seated tumour, about the size of an egg, and extremely tender to the touch. She said that it was nearly always attended with a sharp pain, and it appeared to her as if it were confined to the ribs by a string. I ordered her to apply the following plaster night and morning, spread on linen:—

R. Cerat. Saponis, ℥j.

Ext. Belladonnæ, ℥ss.—M. Ft. Ung.

* Although the Nightshade is of service in scrofula itself, it will be found, when applied to other diseases in such constitutions, to be more or less injurious.

And to take the following pills :—

R Ferri Carbonatis, 3j.

Mucilaginis G. Acaciæ, 9 S. ut ft. Pilul. xii. quarum
capiat i. 4tâ quâque horâ.

She continued this plan of treatment for seven weeks ; at the end of which, the tumour totally disappeared. This was the seventh case of tumour in which I have found it successful.

Case xv. SPASMODIC STRICTURE OF THE RECTUM.—November 1822. M. V. Chapel Street, May Fair, a woman of fifty-two years of age, was attacked with great pain in the rectum, and an inability of voiding her fæces, although she felt the inclination. On examination, I found a stricture about two inches up the rectum, which would not allow the introduction of a very small bougie. After the examination she had a motion, which proved to me that the stricture arose from spasm. I ordered her an injection, which did not operate, owing to a return of the spasm, apparently induced by its administration. I immediately had recourse to the following application to the anus, and after two hours she had three motions :

R Ung. Cerae, 3ss.

Extracti Belladonnæ, ʒj.—M. Ft. Ung.

The next day the pain and stricture returned,

and she was unable to procure a motion without the use of the ointment. After the fourth day, I increased the Belladonna to half a drachm: one motion was afterwards procured. On the next day, there was no evacuation. I repeated the ointment, but no motion was obtained. Its use was continued on the following day, but without benefit. I then examined the rectum, and found it completely dilated, and the sphincter ani quite flabby. About an inch up the rectum I could feel the fæces; and, on further examination, I found a large accumulation of fæces; the muscles and parts having been completely paralyzed by the Belladonna. I ordered an enema, but it returned. I then advised the fæces to be scooped out, and an injection of salt and water to be used every four hours, with an opiate at bed-time. This plan was continued for two days, when the parts recovered. The patient has continued well ever since. I blame myself much for having extended the application so far as I did in this case, as it might have been followed by more serious consequences. The case affords the advantage of proving, that the Belladonna is not a medicine to be used without great precaution as an *external* application*.

* This, out of five cases in which I have used this medicine in stricture of the rectum, has been the only one that was

Case xvi. ACUTE RHEUMATISM.—September, 1823, H. A. a female aged about thirty, residing in Berwick Street, from exposure to all the changes of the weather was attacked with acute rheumatism in its severest form; she was blooded, purged, sudorifics were administered, &c. a domestic contrivance* for administering a vapour bath was also had recourse to, and employed twice a day for three days without benefit; although it produced the most copious perspirations. In the next application of the vapour which was resorted to, I had one ounce of the extract of Belladonna dissolved in boiling water. She found almost instant relief from this mode of administering the Belladonna, which relief continued until the morning. The pains having returned, I repeated the bath. In the evening she was restless, and felt some slight pains shifting from one joint to the other; she took another bath, had a good night, and experienced no return of her pains, and gradually recovered her strength.

attended with unpleasant symptoms. The others it soon relieved, and the patients are at this present time perfectly well.

* The patient was placed in a chair covered with a blanket, so as to keep the hot steam proceeding from a pail of boiling water (which was under the seat of the chair) from scalding her; she being seated, was covered with another blanket to keep the vapour from escaping.

If, in this case, I had been fortunate enough to have had Captain Jekyll's vapour-bath, with the useful appendages, I have not the least doubt that even fewer applications of the vapour impregnated with the Belladonna, than those which were employed, would have been sufficient, and that her pupils would not have been dilated in the manner they actually were. Their dilatation in her case was owing to the steam escaping through the blankets ; but the dilatation did not continue longer than two or three hours.

I have used this medicine in several instances where there was spasmodic stricture of the urethra, and always found it of great benefit : in one case only of this kind have I observed it to show its baneful effects. The case was that of a young gentleman, about twenty-two years of age, where it so completely paralysed the urethra and the sphincter of the bladder, that the urine could not be retained : it, however, removed the complaint for which it was ordered.

Such consequences are very disagreeable, both to the patient and the practitioner. I think that in this case I used more of the Belladonna than was necessary : a small quantity in general has the desired effect.

Cases xvii and xviii. SPRAIN.—July 1823.
C. R. of Park Street, a woman about fifty-nine

years of age, fell from a pair of steps and sprained her ankle. I saw her before effusion had taken place, and immediately proceeded to move the ankle in every possible direction. The pain caused by this measure produced fainting; but I continued it for about a quarter of an hour, when the pain ceased. I then applied to the ankle the Belladonna with soap cerate. In the morning I found her easy; she had passed a good night, and she now only complained of stiffness in the joint. I ordered her to continue the application, and remain in bed until the following morning. She could then move about and walk almost as well as before. In about two days she was perfectly recovered.

August 1823.—B. G. a groom, aged twenty-two, fell from a gig. I saw him two days after; his ankle was much swoln, and he could not put his foot to the ground. The Belladonna and soap cerate were applied twice a day for three or four days, when he could put on his boot and walk as well as ever.

I have had several cases similar to these, in which this treatment has been adopted, and they have all proved equally successful.

Case xix. ULCER.—February 1823. E. M. a young woman of seventeen, living in Wigmore Street, had a sphacelated ulcer on the right foot,

produced by a chilblain, which was extremely painful to the touch. I applied the following dressing :

R Extract Bellad. ʒij.
Cerat. Saponis, ʒvi. M.—Ft. Ung.
nocte manequæ applicandum.

An hour after the first application, the sore became easy. After the sixth or seventh dressing, the parts put on a healthy appearance ; and, in the course of ten days, the ulcer was perfectly healed. I have seen Mr. Heaviside use this application with decided advantage in cases of sphacelus.

In cases of stings by wasps, bees, gnats, &c. I have used the following lotion with success ; one application, in general, being quite sufficient to remove the pain and inflammation :

R Aquæ Rosæ, fʒiv.
Liquoris Ammoniacæ Acet. fʒij.
Tinct. Belladonnæ, fʒi. M.—Ft. Lotio.

Case xx.—M. C. a woman of seven and twenty, residing in Bell Street, Paddington, having been some time in labour, and the os uteri being dilated only to about the size of half-a-crown, and very rigid ; a state, which, in general, was met with in all her confinements ; I applied half a drachm of the extract of Belladonna*

* Drs. Copland and Dunglison mention that M. Chaussier applied the Belladonna in puerperal convulsions. This emi-

to the os uteri, and waited a quarter of an hour for a pain, which was ten minutes longer in the

gent physiologist and accoucheur, after describing the state of the uterus during this very dangerous disease, and pointing out the curative means which should be employed in it, takes particular notice of the local application of the Belladonna. He considers that the chief obstacle to delivery consists in the spasmodic constriction and resistance of the neck and orifice of the uterus. With a view to remove this, and, at the same time, of remedying the local plethora or congestion to which the nervous system is subjected, he recommends the active means (depletions) usually inculcated in this country, with revulsants to the lower extremities, cold applications to the head, emollient and relaxant enemas, and properly conducted endeavours to effect delivery. In order to subdue the spasmodic constriction of the neck and orifice of the uterus more particularly, and thus accomplish the last-mentioned purpose, M. Chaussier has been in the habit of employing the Belladonna in the form of ointment with very great success. This ointment consists of two drachms of the extract of Belladonna, moistened with a little distilled water, and incorporated by trituration with an ounce of simple cerate or prepared lard. He enjoins it to be applied directly to the orifice of the uterus; and, in order to accomplish this, he employs a small syringe, rounded at its extremity, with an aperture there sufficiently large to admit the tip of the little finger. Having drawn back the piston, as much of the ointment as is equal to a small nut is to be placed in the aperture of the syringe, which, by the direction of the finger, is to be carried to the orifice of the uterus, with which, by pushing the piston, the ointment comes in immediate contact. The os uteri generally becomes dilated in about thirty or forty minutes after this application, without impeding the action of the fundus or body of this viscus. This medicine has been employed since 1811 by M.

interval than before the introduction of the narcotic. To my great surprise, when I examined, I found the mouth of the womb flabby, and could move my finger within it, as if it were an empty bag. I tried to bring on action, both by giving stimulants internally, and rubbing externally the abdomen, and irritating the os uteri. The womb did not recover from its paralyzed state for six hours after the application, when the os uteri returned to its former state of dilatation (the size of half-a-crown). The pains then came on rapidly, and she was delivered in the course of twenty minutes. After this lesson, I will never apply this medicine to the os uteri in cases of labour.

Case xxi.—B. F. a woman, about thirty-eight years of age, residing in Grosvenor Street, was taken in labour with her first child. Every thing was going on right, excepting that the external parts were very rigid. I procured some of the extract of Belladonna, and when the head was

Chaussier, and, under his directions, by Madame Lachapelle and Madame Legrand, and its use made public both in his lectures and in several pharmaceutical works. As the introduction of Belladonna into obstetric practice has been arrogated by more than one accoucheur of this metropolis, we think it just to assign the practice to the real originator of it.
—*Repository*, Vol. I, new Series, p. 261.

in the perinæum, and not before, I applied it. It proved here of great benefit, as the external orifice dilated without the least difficulty, and the patient was safely delivered.

Case xxii.—In ophthalmia I have used this remedy with decided advantage. The first case of this description was that of a young man of nineteen years of age. He had inflammation of the conjunctiva, attended with catarrh. I ordered him the following lotion :

R Aq. Rosæ, fʒiij.

Tinct. Bellad. fʒj.

Acet. Acid. fʒj.

Ft. Lotio, assidue applicanda.

The first application dilated the pupils; and, as he was using it, he fell from his chair, and did not recover from his stupefaction for about a minute. The pupils remained dilated for a few hours. He discontinued the use of the lotion until next day, when I altered it as follows :

R Tinct. Belladonnæ, fʒj.

Aquæ Rosæ, fʒviij.

Acet. Acid. fʒij.—M. Ft. Lotio.

This he applied with impunity, and his eyes soon recovered. I have since continued this formula in several cases of ophthalmia with the greatest success.

Let me repeat my caution to those who at-

tempt the use of this medicine, to commence the administering of it, whether internally or externally, always in small doses or applications, and afterwards gradually increasing them. If the least unfavourable effects should arise, the prescription should be laid aside immediately. But, if all go on favourably, it ought to be increased gradually and prudently, until the desired effect be obtained: of course, there will not then arise any reason to increase it, as long as the same effect continues.

ON THE
ATROPA BELLADONNA
AND THE
SOLANUM HORTENSE.

THE Atropa Belladonna (so named from *Ατροπος*, the Goddess of Destiny, and the Italian words *Bella Donna*, a handsome lady, through the Italian ladies using it, as a cosmetic to take away the too florid colour of their faces)—*Solanum Lethale*—*Solanum Melanocerasus*—*Solanum Maniacum*—*Solanum Somniferum*—*Solanum Furiosum*—*Theophrasti Strychnos*—Deadly or Sleepy Nightshade—Dway-berries—Deadly Dwale—is an indigenous plant, poisonous in all its parts; it is found in woods, hedges, amongst limestone and rubbish, and where the ground is rich from manure; in St. Faith's Newton, near Norwich, and in Herts frequent.—*Mr. Woodward.* Very luxuriant amongst the mines of Furness Abbey, whence the valley is called the Vale of Nightshade.—See *West's Antiquities of Furness.* *Mr. Atkinson.* Yard of Lantony Abbey, near Gloucester—*Mr.*

Ballard. Hardwick Park, Derbyshire — *Dr. Stokes.* Banks of Dudley Castle, &c.

The stems annual, rather pubescent, purplish, upright, firm, numerous, branched, and herbaceous ; two or three feet high, sometimes more ; zig-zag. Blossom purple. Berry green, changing to red, and, when ripe, black ; staining paper of a beautiful and durable purple. The root is long, large, and creeping. Leaves egg-shaped, entire, very large, smooth at the edges, slightly pointed at the extremities, hairy and soft, and of a beautiful green.

Smell faint ; but, when dry, loses it ; and has not any peculiar taste.

Flowers in June or July, and its fruit is ripe about Michaelmas.

* M. Vauquelin, by analysis, discovered that the Belladonna contained an animal matter, some salts with a basis of potass, and a bitter substance on which the narcotic quality of the Deadly Nightshade depends. In order to ascertain the effects of this substance on the animal economy, he gave portions of it to various animals ; all of which became intoxicated and delirious, exactly in the same manner as if they had taken opium†.

* *London Medical Repository*, Vol. I, p. 402.

† On the Active Principle of Belladonna, M. Runge—*London Medical and Physical Journal*, Vol. LIII, p. 169.

The Qualities of the Deadly Nightshade.

The leaves and the roots, with their various preparations, commonly produce a diaphoretic as well as an anodyne effect, operating occasionally as a diuretic, a discutient, a resolvent, &c. According to Greding, it purges, and has been known to produce salivation, as well as mania, commonly called strychnomania.

The Solanum Hortense; Solatrum; Aguara Quiya; Solanum Vulgare; Officinarum; Nigrum.—Common Nightshade.—Garden Nightshade.—This species is not so deleterious as the former. It is an annual, found in uncultivated grounds, on dunghills, and in kitchen gardens; about two feet high; upright, branched, and spreading; the root fibrous; stalk green, ribbed, thick; and the branches spread obliquely. Its leaves are oval, pointed, and irregularly indented. The flower white and in clusters, occasionally yellowish, with a yellow button in the centre; the berries black.

Flowers in July or August, and its fruit is ripe about Michaelmas.

Smell nauseous.

On the Virtues of the Garden Nightshade.

The leaves and the roots, with their various preparations, are observed to cause general warmth, plentiful perspirations, relaxation of the bowels (so as to occasion purging), and a free discharge of the urine; anodyne and milder in its effects than the Deadly Nightshade, yet at the same time not so efficacious in many respects.

As it is well known that these plants are strictly poisonous in all their parts, and that occasionally the unwary are so affected, not only by eating the berries, but that even the leaves have been used, from ignorance, as vegetables, I should recommend in such cases, for the relief of those urgent symptoms, that the patients take the sulphate of zinc dissolved in warm water, from ten to twenty grains, and that to be repeated until the stomach be completely emptied. After this, large quantities of vinegar, or vinegar and water, or any other vegetable acid, should be frequently taken: then evacuations downwards, procured either by strong drastic purgatives or stimulating clysters. If paralytic symptoms, &c. should appear, sinapisms, blisters, and other remedies recommended in such cases, must be speedily employed*.

* Bodenmuller's Case of eating the Berries—*Lancet*, Vol. I, p. 434.

Although it will be found that I have used the Belladonna in many disorders, and that, rather than otherwise, with the greatest success, yet I think it a remedy of the utmost importance in scirrhus, in cancer, and in cancerous ulcers, &c. and, according to the best historical authorities on this subject, we find that these diseases have been cured as well as palliated by it in their most distressing stages.

Scirrhus or cancer forms one of the greatest afflictions of human nature ; is particularly distressing to the mind ; and influenced by the various passions. Hence the unequal scirrhus tumour has its stagnating principle put in motion so as to inflame its marginal vessels, and produce a malignant ulcer, acquiring an acrimony which irritates and corrodes the containing and surrounding parts, discharging a thin, an acrid, and a fetid matter.

This disease may be seated in any part of the body, but generally affects the glands and viscera ; in men the mouth, the tongue, the stomach, the intestines, the viscera in general, and the axilla ; and, in women, the *breasts*, the *womb*, the viscera, &c. are the principal parts attacked.

It is generally occasioned by obstructed excretions. Single women in particular, when their periodical discharges have ceased ; women who have borne children, but have not nursed them ; but those who have suckled their children

are seldom afflicted with this complaint; and it is very rare that man is troubled with this disease.

When there is an hereditary taint, it may arise from external and internal excitement; such as contusions, bruises, violent pressure from stays, improper food, either too much salted or too highly seasoned, or hard of digestion, fermented or heating drinks, the passions, violent exercise to occasion fatigue, vicissitudes of climate, inactivity, or a sedentary life.

A tumour, being at first a hard glandular swelling without inflammation, is called scirrhus, and will continue for years without being troublesome, or increasing in size, which perhaps may not exceed that of a pea or a walnut; sometimes, even in all its parts; at other times, irregular and knotty: but, when an itching, pricking, or shooting pain begins, and the colour of the skin commences to change to a dusky, a purple, or a livid hue, and the veins and glands with their lymphatics become distended, pushing out roots or limbs, then it is called cancer, from the fancied appearance of crab's claws; then are the parts soon affected with a burning and piercing pain, the tumour rapidly increases, the neighbouring glands become obstructed, the original tumour grows prominent and gathers to a point, the burning acute pains are augmented and are not

so deep-seated, the skin cracks, a corrosive ichor oozes, sometimes tinged with blood, then an ulcer soon forms, the discharges continuing thin, corroding, and offensive to the smell, causing the surface of the sore to become unequal, by risings and excavations. The lips of the ulcer are of a dark and unpleasant hue, frequently bleeding, the edges or lips become at length indurated, ragged, unequal, inverted, or incurvated and expanded, and the pains increase in a more acute, pungent, and excruciating degree. Soon the ulceration grows large and deep, the surrounding parts become œdematous, and the patient's health is much impaired. It is impossible to decide of which the patient suffers most, either from the pain or the fetidness of the ulcer. The mind, the body, the appetite, &c. are all vitiated. A hectic fever with superabundant and offensive perspirations at last wear down the suffering victim, who sinks gradually under these complicated miseries, or by a profuse hemorrhage, either from the ulcer or some other part of the body.

This must point out to those who have tumours of the scirrhus kind, how necessary it is that they should confine themselves to a cool, moist, and light diet; that they should lose blood, &c. according to the state of their constitutions, and seek, as soon as possible, medical

relief, in order to remove the nucleus of such a baneful disorder.

Case i.—M. B. a lady, aged about fifty-eight years, residing in Brook Street, at the age of forty-nine received a blow on her left breast, about half an inch above the nipple. Not the least notice was taken of this injury until three years after, when the tumour, which was of the size of a walnut, became painful, changed colour, &c.; and at last put on the true character of cancer. About four years after, the skin cracked, and poured out the usual discharge in such cases. In 1816, about six months before her death, I was requested to see her. I found her in the last stage of her complaint, suffering in every respect from the pain, the offensive discharge, and extreme exhaustion. I recommended the *Belladonna* to be applied to the wound; but she was too far gone to take it internally. The first application relieved her much, and she had several hours good sleep in the night, which large doses of opium did not procure. The plaister was applied three times a day, composed of one part of the extract and two parts of simple ointment, which, I am happy to say, not only relieved the pain, but also the fetidness of the discharge. It was pleasing to me to perceive that I could afford relief and comfort to an afflicted and dying fel-

low-creature, whose sufferings, at last, were closed by a sudden and profuse hemorrhage from the wound.

Case ii.—W. W. aged forty-five, residing in Southampton Row, applied to me in 1823; she had a cancerous ulcer of the left mamma, about the size of a crown. The Belladonna was taken internally, and applied externally, varied in doses and applications according to the symptoms, &c. and, in about nine or ten weeks after the first use and application of the remedy, she recovered.

Case iii.—D. T. of the Strand, aged about forty years, in the beginning of 1824, applied for relief of a tumour of the right breast, about the size of an egg, which, by the external application of the Deadly Nightshade, was entirely removed in the course of a few weeks.

Case iv.—T. F. aged about forty-three, residing in Wardour Street, applied to me in the beginning of 1824, complaining of tumefaction and ulceration of the side of the nose, accompanied with very pungent pain. I gave her the extract of Belladonna in a quarter of a grain pill, night and morning, and told her to apply twice a day the following ointment:

R Ung. Ceræ. ʒvj.

Ext. Bellad. ʒj.—M. Ft. Ung.

In about three months she was perfectly cured.

Case v.—About the latter end of the summer of 1823, I was consulted by the parents of S. B. a child of seven years old, who had what is commonly called a white swelling of the right knee. I immediately applied the Deadly Nightshade in the form of ointment, to be renewed night and morning, and gave her, when necessary, aperient medicines. In the course of five or six weeks the swelling abated, and the knee was nearly of the natural size. I then ordered her to the sea side, to use the warm salt water bath, and to continue the application of the ointment. I am happy to say, that the parents informed me lately, that their daughter was perfectly recovered*.

The fact is, I could mention many other cases; but, as they would only be repetitions, I think it advisable briefly to state, that, in some, the Belladonna was given internally, as well as applied externally, and with decided advantage. For those who did not take it internally, I, in general, had recourse to some tonic, directed principally by the constitution of the patient and

* On the External Use of Belladonna. Chevalier.—*London Medical and Physical Journal*, Vol. LVI, p. 403.

nature of the tumour or the ulceration. The first patient had had six or seven children, but never nursed one; and it will usually be found, that hardly one in ten who do not suckle their offspring, is exempt from this or some other direful complaint.

As an injection for this disease and ulceration of the womb, I have always found it a great palliative, acting immediately on the affected and surrounding parts; for instance, on the bladder, and causing a copious discharge of urine; on the rectum, and causing an evacuation of fæces and flatulence, decreasing the pain and the irritation every time it was applied.

Dr. Ley has also been in the habit of using this medicine, in the form of injection, in cancer and ulceration of the womb, and in leucorrhœa, with great success, applying it with great judgment, according to the constitutions of his patients, and the nature, &c. of their complaints.

In tetanus, in tic douloureux*, and in neuralgia, there can be no doubt of the effects of this medicine, either internally or externally.

* Account of two Cases of Tic Douloureux cured by the External Use of Belladonna, by Henry.—*London Medical and Physical Journal*, Vol. LIII, p. 474.

Bacot's Case in the same Journal, Vol. XVIII.

Cases of Tic Douloureux in the same Journal, by the Author, Vol. LV, p. 123.

Dr. Hunt, of Richmond, Surry, has most obligingly communicated to me the following case of tic douloureux.

“I regret that I have nothing on the subject of Belladonna to communicate that is entitled to your consideration ; unless so far as the following meagre facts may tend to advance the claim of the medicine to attention, as one mode of relief, in neuralgic pains.

“In March, 1824, I was requested to visit a lady at Stratford, in Essex, in consultation with Mr. Hackness, of Ratcliff. She stated that, two months previously, in consequence of damp feet, she was attacked with fever, bilious vomiting, and pains which were at first considered rheumatic. The most marked symptom, at the commencement, was a sudden and violent seizure of pain at the insertion of the deltoid muscle in the arm, which, on the following day, as suddenly shifted its seat, and fixed on the anastomosing branches of the fifth and seventh pairs of nerves of the left cheek, under the *unequivocal* form of tic douloureux ; ranging from the angle of the mouth and ala of the nose to the mastoid process of the same side. The paroxysms progressively increased in severity until they attained their acme about a fortnight previous to my visit. The patient was confined to her bed ; she was unable to articulate, except in a low whisper ; and suf-

ferred the most lancinating shocks from the slightest touch on the cheek, or from the action of swallowing. This was a genuine example of the disease, distinctly marked in its diagnosis from those with which it has been so often confounded. It had no regular exacerbations, but the paroxysms were of frequent occurrence, and, during the nights, which were almost sleepless, nearly as much so as in the day. The fever and concomitant symptoms had been judiciously treated by Mr. Hackness; but the tic douloureux had progressively increased (and that I have invariably observed to be the case) under the depletory and antiphlogistic treatment.

“ March 1.—R. Extracti Belladonnæ, g. ij. divide in Pilulas iv. Capiat unam quintâ quâque horâ. A Belladonna lotion to be applied three or four times a day to the cheek. It was reported to me, on my second visit, March 9th, that the lotion could not be used, owing to the painful susceptibility of the cheek, although attempted with a camel's hair pencil. *Three only of the pills* were taken, when they brought on violent spasms of the chest and stomach (she had been formerly subject to spasm); but the immediate ease experienced from the tic left only *a sensation which was not deemed painful*: she could both swallow and bear slight pressure on the cheek without uneasiness. She took tonics for her general debility

and dyspeptic symptoms up to the date of this visit; and, as she dreaded any active medicine, after the effect produced by the Belladonna, it was agreed that she should attend only to her general health. From exposure, in taking exercise out of doors, she suffered a slight recurrence of the tic (*which had at no time wholly ceased*); and, towards the end of the month of March, she commenced taking the carbonate of iron. June the 3rd, Mr. Hackness informs me by letter, "that Mrs. — has taken half an ounce of the carbonate of iron daily, up to the present time, which has certainly '*relieved, if not cured, the complaint.*'"

"From the above period I am unacquainted with the history of the case. It is, however, a marked instance of the *palliative* effects of Belladonna; and it affords an example of the requisite caution in the administration thereof."

Tetanus, produced by the irritation of a wounded nerve or tendon, or the surfaces of stumps, or any part where a cicatrix is formed from amputations, burns, &c. is easily removed by the local application of this herb (the Belladonna). It often occurs in cases of the amputation of extremities, and particularly of those from gun-shot or lacerated wounds, that, after the recovery, either from one to twelve months or

years, tetanus will come on, gradually increasing until it destroy the patient. But it will be found, that the speedy and continued application of the Belladonna will in time relieve those symptoms, and eventually prove a perfect cure.

Tic douloureux, produced by any of the above causes, will also be found to be relieved and cured by this medicine.

Neuralgic affections, let them be produced from whatsoever cause they may, are palliated and effectually cured by the local applications of this drug.

Dr. Beatty, of the Royal Hospital at Greenwich, has cured many patients of neuralgia, and some of them very distressing cases. He always employed the Belladonna with great prudence and medical judgment.

In hydrophobia*, the old physicians used it with great success. It would be well if its application in such cases were renewed, or, at least, minutely investigated.

* A German Journal states, that in a case of hydrophobia, when the female patient was unable to swallow, it was determined to inject the Belladonna into the veins. The injection acted promptly, and the patient fell into a stupor, the convulsions, anxiety, and oppression, entirely ceasing. She began to be able to swallow liquids, though with difficulty. Some slight hopes of recovery were entertained; but the symptoms soon became severe, and terminated in her death.—*Lancet*, Vol. II, p. 206.

I have administered the *Atropa Belladonna* in gout, in rheumatic gout, in rheumatism*, in scarlatina†, in pertussis‡, and in erysipelas§; but, I must candidly confess, that in the first three cases I prefer the *Solanum Hortense*, as it acts more decidedly on the skin, &c. &c. possessing less of the narcotic properties than the Deadly Nightshade, and of course more useful in such cases than the *Belladonna*: yet Mr. Pace, of St. George's Infirmary, administered the *Atropa* with great success in rheumatism, &c. The following cases he has sent me.

“ Case i.—Thomas Smith, ætat. fifty-three, was admitted into the St. George's Infirmary on the

* Chevalier.—*London Medical and Physical Journal*, Vol. LVI, p. 403.

† Vide Martini's Case, *Lancet*, Vol. II, p. 561—On the Preservative Power of *Belladonna* from Scarlet Fever, by Professor Hufeland, *Lancet*, Vol. VI, p. 407—Professor Koreff's Opinions, *Medical and Physical Journal*, Vol. LII, p. 57—Asserted Powers of *Belladonna* to secure the Constitution against the Infection of Scarlatina, *London Medical Repository*, Vol. XXIII, p. 256.

‡ Raisin on the *Atropa Belladonna* in Hooping Cough.—*London Medical Repository*, Vol. VI, p. 77.

Borda.—*London Medical Repository*, Vol. XV, p. 509.

§ Vide on Erysipelas, by the Author.—*London Medical and Physical Journal*, Vol. LV, p. 298.

20th of April, 1824, labouring under very severe gouty symptoms, attended with a smart attack of fever. The first day he took a volatile saline mixture, and an opening draught. On the 21st I ordered him to take a quarter of a grain of the extract of Belladonna, *ter quotidie*. 22nd, The same as yesterday. 23rd, Pain and fever less; slept for several hours. To the 27th, continued the same. 28th, Ordered the dose to be increased to half a grain, *ter die*, which he continued to take until the 10th of May, without complaining of any affection or uneasiness in the head, &c. Fever and pain much decreased. He complained of much debility and loss of appetite, for which I ordered him the infusion of cascarilla, with tincture of cardamoms and calumba *ter in die*, which he took until the 21st of May, when he was discharged apparently convalescent."

"Case ii.—William Linnett, *ætat.* forty, was admitted as an out-patient to the St. George's Infirmary on the 3rd of July, 1823, labouring under violent cough, attended with gouty symptoms. I ordered him immediately the extract of Belladonna, a quarter of a grain in a pill, *ter in die*, which he took until the 28th, at times complaining of a little dimness of sight, accompanied with head-ache, which might have proceeded, and more than probable, did arise, from inattention to the

bowels. Nevertheless he was discharged at the end of the month, having lost his cough and gouty symptoms. During the whole time that he took the Nightshade he expectorated easily.”

This gentleman continues the use of this medicine in a variety of complaints internally; and Mr. Heaviside, who is surgeon to the same establishment, applies it externally in tumours, in ulcers, in sphacelus, &c.

In ophthalmia and various diseases of the eyes, it has been found of great service. Mr. Green, late of Wenlock, in Shropshire, has been pleased to send me the following communication.

“The Belladonna I have principally used as an external agent. In a case of iritis* attacking a gentleman in Staffordshire, for whom I was, by ties of kindred, much interested, it proved decidedly advantageous. The case was one of the most severe attacks of ophthalmia I and other medical gentlemen attending him had ever witnessed. By copious bleeding, and the usual appropriate treatment, during upwards of three weeks, the disease became arrested, so as to admit

* On Closure of the Pupil in Iritis, by Mackenzie.—*London Medical and Physical Journal*, Vol. LIV, p. 113.

of some examination of the organ. It was found that the iris had become attached to the capsule of the lens, leaving the pupil so contracted, as not to be more in circumference than a pin's point; in one eye it was longitudinal, and in the other triangular; he could not bear the light but with his back towards it; and could just discern his hand, though very indistinctly; he was exceedingly reduced in strength. Counter irritation was continued; the Belladonna was applied round the eyes, but occasioned no dilatation of the pupils. It was agreed, together with the other treatment, to apply the extract in the usual way, night and morning, for half an hour each time. In four or five days this plan produced no apparent good effect on the pupils. The oculist, who had been called in, suggested the propriety of its discontinuation, fearing it might do harm; observing at the same time, if the inflammation still continued and the pupil became quite obliterated, that there yet remained the operation for artificial pupils, which he considered the only thing that would be useful, and was absolutely required.

“As I knew of no instance of bad effects following the frequent external application of the Belladonna, and as it was the only remedy here that promised benefit, and being borne out in this opinion by the other medical gentlemen, it

was continued as before. He was reduced to an extreme degree of debility, but took daily repeated small doses of the tartarized antimony. In a fortnight more, the inflammatory diathesis was subdued, he could bear the light better, the pupils seemed somewhat extended, but his vision no ways improved. The London opinions advised this plan to be persisted in, which was done for three months. During that time the pupils had enlarged, until they became about a third of their natural size, still retaining the irregular figure ; and it was now found that there was a deposition of coagulated lymph in the centre of each, connecting with it the edges of the iris. It appeared to the judgment of his medical attendants, that it was the action of the Belladonna alone, or at least principally, which prevented the complete closing of the pupils. As no ill effects had arisen from its frequent application, it was applied pretty generally every night, and suffered to remain on till the following morning. In about a month his strength was sufficiently restored, to enable him to proceed to London, where he took the opinions of three of the most able oculists, two of whom were of opinion, that the operation for artificial pupil was necessary ; the other advised the continued application of the Deadly Nightshade, as before. The advice of the latter was followed ; the patient returned

to the country, and adhered to it with much perseverance for four months, the adhesions of the iris to the capsule of the lens slowly yielding, and the pupils gradually becoming larger, and his vision improving; the pupils still retain a very irregular form, and there is still remaining a little deposition of lymph in the centre of each, which interrupts his clear view; he however can read, and enjoys all the sports of the field, as he has been wont to do. He has left off the extract for upwards of three years. It seemed not to have the power to extend any further the adhesions that had taken place during the activity of the inflammation. But it is only a reasonable inference, to conclude that the pupils would have been entirely closed, had it not been used in the way it was in this case; and no ill effects seemed consequent on its protracted use.

“As the plant grew luxuriantly in some ruins in my neighbourhood, I had, long before the occurrence of this case, been in the habit of using it externally as an embrocation in inflammatory affections with advantage. I have likewise used it internally, in doses of a quarter of a grain every three hours, in spasmodic* and hysterical complaints; sometimes, I have thought, with

* Kerrison's Case of Chorea.—*London Medical Repository*, Vol. VI, p. 265.

advantage; but, in two cases, its administration decidedly did mischief, by occasioning vertigo and great irritation of the nervous system. On the whole, my practice with this medicine convinced me it was not to be prescribed internally without the greatest attention."

The Garden Nightshade being a less potent hypnotic than the Deadly Nightshade, I have not used it in any other complaints than the gout, rheumatic gout, rheumatism, and asthma. It certainly has less of the anodyne power than the latter, but possesses the diuretic, cathartic, and sudorific in a greater degree; therefore it is more useful in these complaints and all species of dropsies than the Belladonna.

In these complaints I have employed it with decided advantage, as in the gout, the rheumatism, &c. It is obviously necessary that a general warmth, a plentiful perspiration, a copious relaxation of the bowels, and a considerable discharge of urine should be produced; and that in asthma the morbid irritability of the membrane lining the trachea and bronchial ramifications should have their excitability removed by some local means.


It will be found that the tincture of this herb will act, in all its effects, similar to the Eau Médicinale d'Husson, extremely capricious and uncer-

tain, sometimes operating as a cathartic or emetic, or both, and at other times producing no evacuation at all; but, in general, like the Eau Médicinale, it allays pain, procures ease and sleep, reduces the pulse and inflammatory action, causing copious and bilious evacuations both by vomiting and stool, producing profuse sweating, and copious discharges of urine.

The effects of this medicine do so assimilate with the Eau Médicinale, in every respect, whether successful or not, that I think it only a loss of time, &c. to give any cases.

In asthma, I found the dried leaves of the *Solanum Hortense*, diluted, of great service. The patients were relieved by smoking a little in a pipe, just before bed-time. It relieved the breathing and superceded the spasm; generally they had a good night. The first two or three patients complained in the morning of nausea and unpleasant sensation in the throat and head. I therefore combined with it the leaves of rosemary and sage. By this I found that the patients could use it without the least unpleasant consequences, and it has always produced permanent and good effects.

APPENDIX.



Of the Preparations of the Atropa Belladonna and the Solanum Hortense.

WE are now to consider the various preparations of these herbs, and, according to their applications, we must divide them into internal and external.

The leaves and roots* of the Belladonna (and formerly the berries) have been used internally, from a quarter of a grain and upwards, in powder, pills, tincture, or infusion; and, externally applied, fresh gathered, alone or in powder, or diluted with some other powder, or in form of poultice, &c.

The extract has been employed internally, from a quarter of a grain or upwards, in substance, or in form of tincture, or, combined with some other substance, in form of pill; externally, in ointment, or lotion, or injection; the proportion was, in general, one drachm to two or more of oint-

* Observations on Belladonna, by M. Marc Johnson.—*Medico-Chirurgical Journal*, Vol. I, p. 132.

ment, increasing or diminishing it according to circumstances ; or mixed with any oil, according to the above proportions ; for a lotion, ten grains to half a drachm in eight ounces of any aqueous liquid ; as an injection, one drachm to sixteen ounces, varying also according to the nature of the case, and constitutional irritation of the patients*.

The tincture which I now use, instead of the one mentioned in the *Repository*, is made from the fresh expressed juice of the leaves of the plant. I was particular that the herb should be gathered before the fruit was set. The proportion is ten fluid drachms of the expressed juice to sixteen ounces of proof spirits ; allowed to macerate for twenty-one days, and strain for use†.

The dose is, for children one year old, two drops ; from one to two years old, five drops ; from two years old to six, ten drops ; from six to fifteen years old, fifteen drops ; and to adults, beginning with ten to fifteen drops, and increasing to a drachm or upwards.

I find this preparation more safe, more useful,

* Orfila's *Traité des Poisons*, &c.

† Some authors have proposed to prepare a vinegar of this herb ; but, in reality, I do not see to what use it can be applied, as we have only to lessen the dose if too potent.

and more certain in its effects than any other mode of giving the Deadly Nightshade*.

The leaves and the roots (as well as the berries formerly) also of the Garden Nightshade, have been employed, in powder, in pills, and in infusion; but I prefer the following tincture: Take of the fresh dried leaves of this plant three drachms and a half, and one pound of proof spirit; macerate for fourteen days, and then filter. I was as particular in selecting the leaves of this plant as of the former, and found that a thirty-drop dose was equal in all respects to a full grain dose taken in infusion†.

The dried leaves, diluted with other herbs, as follows, were used in asthma: Take of the Garden Nightshade four ounces, fresh dried leaves of rosemary and sage, of each one pound, to be well incorporated. The dose was from two to five pipes-full smoked every night before bed time.

Whatever may be the opinions and the event of the use of these plants, I can, with the strictest honour, say that I wish them no better success

* Vide Vol. XXI, p. 112, *Medical Repository*.

* See Storck on Solanum.

than they shall, on a fair trial, be found to merit ; and I shall be extremely happy to see them, by the aid of superior abilities, further improved and perfected, in their preparations, applications, and consequent effects.

FINIS.



