

IPECACUANHA AND ITS PREPARATIONS.

WHEN applied to the skin, ipecacuanha after some time produces a sensation of warmth, attended with redness, and the formation of papules; sometimes it produces even pustules, which on healing are not followed by pitting or scarring.

It has a bitter, disagreeable taste, and thus excites a flow of saliva.

In some persons the minutest quantity produces peculiar effects on the membrane covering the eyes, and lining the nose and respiratory tract. On smelling the drug, or even entering a room where it is kept, they are affected with swelling of the loose tissues around the eyes, with injection of the conjunctiva, repeated sneezing, abundant discharge from the nose, severe tense frontal pain of the head, much oppression at the chest, with frequent cough, and the signs and symptoms of bronchitis. Ipecacuanha thus excites symptoms and appearances similar to those met with in hay fever; that is, it excites a catarrhal inflammation in the mucous membranes just described. It is highly probable that ipecacuanha produces similar results in all persons, although generally to a scarcely appreciable extent, and that its action differs only in degree. Indeed, it is probable, as we shall see, that ipecacuanha affects all the mucous membranes of the body.

Small doses produce in the stomach a slight feeling of uneasiness, with increase of mucus. Larger doses excite nausea and a still greater secretion of mucus from the stomach and from the bronchial tubes. Increase of mucus occurs with all nauseating medicines, but probably ipecacuanha excites the secretion of mucus independently of its action as a nauseant and emetic. Large doses are stated to produce in animals inflammation of the mucous membranes of the stomach, intestines, and bronchial tubes.

This remedy is frequently used in catarrh of either the stomach or lungs. It is especially useful when the secretion from the lungs is abundant and tenacious.

In larger doses it produces both nausea and vomiting, and, like all other emetics, some general weakness, with sweating; and if there is any spasm, relaxation of it. Thus in nauseating doses, the drug is both diaphoretic and anti-spasmodic.

It is a mild, tardy, but certain emetic. It produces repeated vomiting, unaccompanied by much nausea or prostration; in these respects, and also in its slighter action on the bowels, it differs from tartar emetic. Its tardy action renders it an unfit emetic in cases of poisoning and the sulphates of zinc or copper are to be preferred.

On account of its slight irritant action on the mucous membrane of the stomach, and perhaps by the strong movements it produces in that organ when it excites vomiting, ipecacuanha is found of use in irritative dyspepsia, both of the acute and chronic kind. It is a favourite plan with some practical authorities to give occasionally in such cases ipecacuanha in emetic doses. It is sometimes given to produce vomiting in children with bronchitis, labouring under great obstruction to the breathing from mucus in the bronchial tubes. The movements of vomiting expel much mucus mechanically, and temporarily improve the breathing. The mildness of its operation fits ipecacuanha for such cases, and as an emetic for delicate persons.

The quantity required to excite vomiting varies greatly in different people. With some the smallest quantity is sufficient, while with others large doses are inoperative. As a rule, children require large doses, and babies only a few months old may need ten or twenty grains of the powder.

Whether ipecacuanha produces vomiting by its action on the stomach, on the nervous centres, or on both, are unsettled questions. When emetina is injected into a vein, or under the skin, it excites vomiting; so does tartar emetic; but this drug can certainly excite vomiting by its influence on some part other than the stomach, as shown by Magendie, who, after removing the stomach of a pig, and substituting a bladder, yet excited vomiting by the injection of tartar emetic.

into the veins. In this instance it is observable that the tartar emetic did not excite vomiting by its effects on the stomach, but by its influence on some other part of the body, probably the nervous centres which govern vomiting. Ipecacuanha may possibly act in the same way.

Few remedies are so efficacious in checking some kinds of vomiting as ipecacuanha. The author in numerous instances has witnessed the efficacy of the wine administered in drop doses, every hour or three times a day, according to the urgency of the case in checking the following kinds of sickness:—

1. It will check the vomiting of pregnancy. This vomiting is not always of the same kind. It occurs only in the morning in some cases, and is excited by the first waking movements. In most instances this form will yield to ipecacuanha, taken in the way described. Should it fail, however, relief in many cases follows the administration of the medicine to the patient on waking, and some time before any movement is allowed. In other instances the vomiting occurs not only in the morning, but frequently during the day, recurring whenever food is taken, and may be so severe that no food is retained, while during the intervals of meals there may be constant nausea and great loathing of all kinds of food. Vomiting and nausea of this kind ipecacuanha will in most instances immediately arrest, when the appetite returns, and the stomach will bear almost any kind of food. Ipecacuanha may check the nausea and vomiting, with the exception of the attack recurring on first moving in the morning, when on taking a dose immediately on waking this will also generally cease; but in some cases this early morning vomiting continues in spite of the treatment.

In other instances the early morning vomiting may be absent and the attack may occur only on taking food, increasing in severity as the day advances, and becoming most severe in the evening. Should ipecacuanha, as is sometimes the case, fail to check this kind of sickness, then nux vomica may be substituted and will generally give relief.

In some pregnancies, besides the sickness and nausea, there is much heart-burn, and perhaps great flatulence, symptoms which in many cases yield quickly to ipecacuanha; but here again, should this remedy fail, nux vomica will generally afford relief, but if both remedies are employed the symptoms yield more surely. It is singular that while ipecacuanha will remove, in pregnant patients, even excessive flatulence, co-existing with sickness; yet if the flatulence occurs without sickness, this medicine is generally unavailing, and recourse must be had to nux vomica, charcoal, sulphurous acid, or sulpho-carbolate of soda; and of all these drugs most reliance is to be placed on the sulpho-carbolate, in doses of five to fifteen grains dissolved in water, and administered immediately after a meal.

It has been stated just now that, in some instances, nux vomica succeeds when ipecacuanha fails; and this is notably the case when the tongue is coated with a creamy fur, when the stomach is out of order, and when there is much acidity and heart-burn. In these cases it is often a useful practice to give both nux vomica and ipecacuanha simultaneously.

It must be confessed, however, that in certain instances, at present unexplained, ipecacuanha fails to afford the expected relief. In these, it may be, the vomiting is kept up by a displacement of the uterus, or by a chronic inflammation of this organ, or of its cervix, or os, as was long since pointed out by Dr. Henry Bennett, when the treatment should be directed to the removal of these affections.

2. Some women, who, during pregnancy, were untroubled with nausea and vomiting, yet suffer with both these symptoms during the whole or part of the time of suckling. These symptoms usually begin after the first few weeks of suckling, and continue till the child is weaned, and may be so severe, and produce so much exhaustion, as to compel the mother to wean her child prematurely. The nausea and vomiting may be accompanied by great flatulence. All these symptoms will commonly soon cease on the employment of drop doses of ipecacuanha wine, administered three times a day.

3. Similar troubles to those just pointed out afflict some women at each menstrual epoch, occurring immediately before, during, or directly after the period. These cases will generally yield to ipecacuanha.

4. The morning vomiting of drunkards; but this morbid state can be more effectively controlled by arsenic.

5. The morning vomiting which sometimes accompanies general weakness, and is met with in convalescents from acute diseases.

6. Ipecacuanha will control at once the vomiting in children, with acute catarrh of the stomach. Indeed, this remedy appears to have a greater influence over the vomiting of children than over that of adults.

Arsenic also succeeds admirably in removing the vomiting of acute stomach catarrh; and either remedy may advantageously be given with aconite, to subdue the inflammation, and reduce the fever.

7. Ipecacuanha often removes or lessens the vomiting of whooping-cough, when this is produced by the violence of the cough, although it may in no way lessen its severity. Cases occur of vomiting from this cause which are unaffected by ipecacuanha, but yield immediately to alum. (See Alum.)

8. A species of vomiting occurs after meals, without nausea or pain, or even discomfort, the food being merely rejected, partially, and often very little, digested. This complaint may endure a considerable time, but in many instances is quickly stayed by ipecacuanha wine. Arsenic, however, is a still better remedy.

Ipecacuanha, in the author's experience, proves of little use in the following forms of vomiting:

(a.) In children, where the vomited matters are composed of hard, large lumps of curdled milk. In such a case, if diarrhoea is present, lime-water mixed with the milk is the best remedy, but if the child is constipated, bicarbonate of soda must be substituted for the lime-water; and, should these remedies both fail, recourse must be had to a diet altogether free of milk.

(b) Ipecacuanha is not generally useful in that form of vomiting met with in young children, a few weeks or months old, who, almost immediately after the ingestion reject it with considerable force, either curdled or not, perhaps through both nose and mouth. At the *post-mortem* examination nothing may be discovered to explain this fatal form of vomiting; but sometimes the mucous membrane of the stomach is extremely soft, and looks as if made of water arrowroot. This form of vomiting is best treated by hourly small doses (one-third of a grain) of grey powder, or by calomel (one-tenth of a grain.)

(c) In hysterical vomiting.

Ipecacuanha is sometimes effective in checking the vomiting from cancer of the stomach, and has succeeded sometimes after the more commonly used remedies have entirely failed.

Ipecacuanha excites an increased production of mucus in the mucous coat of the intestines, and becomes in this way slightly purgative, and is reputed to assist the action of other purgative medicines, as jalap. It is also stated that constipation, depending on great torpor of the intestines, may be relieved by taking a grain of powdered ipecacuanha each morning while fasting. The same treatment, it is said, will remove the dyspepsia frequently associated with constipation, and characterised by depression of spirits, some flatulence, coldness of the extremities, and the food lies on the stomach "like a heavy weight."

It is well known that this drug is used in dysentery largely and beneficially. In some epidemics it answers admirably, while in others it appears to fail. Large doses are required, and will often succeed where small ones fail. Sixty to ninety grains of the powder are given at a dose, and repeated if required, oftentimes without the production of either nausea or sickness; but, should these symptoms arise, they may generally be obviated if the patient, after taking the dose, remains quietly on his back. In chronic cases, not requiring prompt treatment, it is a good practice to administer the first dose at night when the patient has gone to bed. Should the

few first doses excite sickness, it soon ceases on the continuance of the medicine.

E. S. Docker, who has had a very large experience of this treatment, extols ipecacuanha. He states that its effects on suitable cases are almost instantaneous; the motions in the very worst cases becoming natural in frequency and character. Ninety grains of the powder cut short at once very severe attacks of dysentery, not only restraining the discharge off-hand, but freeing the patient from pain immediately, while inducing natural stools without straining or griping. The disposition to relapse, so common in acute dysentery, is not observed after the ipecacuanha treatment; and there is no need for after treatment, nor for any great precautions concerning the quality of the food. After a large dose, as sixty or ninety grains, Docker recommends an interval of ten or twelve hours before repeating it, and should the bowels meanwhile remain quiet, to forego the medicine altogether. It is recommended to give ipecacuanha as an injection especially when it is rejected by the stomach.

The dysenteric diarrhœa of children, whether acute or chronic, will generally yield speedily to hourly drop doses of ipecacuanha wine. The especial indications for this treatment are slimy stools, green or not, with or without blood. Vomiting, if present as is commonly the case, affords an additional reason for the adoption of this treatment, and it will even cease, often after the first or second dose of the medicine, and generally before the diarrhœa is checked. Sometimes it happens that although the ipecacuanha abates the number and the dysenteric character of the evacuations yet other treatment may be required to effect a cure.

The active principle of ipecacuanha, without doubt, enters the blood, and we have next to consider its action on the distant organs of the body.

It produces an increased secretion from the bronchial mucous membrane. Some maintain that this occurs only when ipecacuanha excites nausea, and that the action of the drug is solely due to the production of this physiological state.

As is well known, during nausea an increased secretion takes place from most of the surfaces of the body, and, amongst others, from the mucous tract we are now speaking of. Others consider that it can affect this mucous membrane irrespective of the production of any sensation of sickness; and that this is the correct view, is borne out by the powerful effect of even a minute quantity of this medicine on the bronchial tract of some persons, in whom the same dose fails to produce sickness or even nausea.

In the form of wine, ipecacuanha is of almost constant use in bronchitis, when the expectoration is profuse, and difficult to expel.

The successful use of a secret remedy by a well known practitioner induced the author in conjunction with his friend Mr. William Murrell, to try the effect of inhalations of ipecacuanha spray in those obstinate complaints, Winter Cough, and Bronchial Asthma, and our results have been most satisfactory. Our observations were made during January and February. Whilst undergoing this treatment, the patients took only coloured water and continued their usual mode of living in all respects. First, regarding winter cough, we made observations on twenty-five patients, whose ages varied between 45 and 72, with one exception, that of a woman of 32 years. We purposely chose severe cases. The following is a general description of these cases which will serve in most points to illustrate the condition of the patients: The patient had been troubled with winter cough perhaps for many years. During the summer he is pretty well; but during the cold months, from October to May, he suffers sometimes without any intermission, occasionally getting a little better and then catching cold; or perhaps he may lose his cough for a few weeks but again takes cold on the slightest exposure. So short is the breathing that he can walk only a few yards, especially in the cold air, and finds it very hard work to get upstairs, and is often quite unfitted for active life. The breathing grows worse at night, so that he cannot sleep unless the head is propped up with several

pillows. He is troubled, too, with a paroxysmal dyspnoea, usually at night, which may last several hours, and which compels him to sit up. Sometimes the breathing is difficult only on exertion, and in most cases it is made much worse by fogs, east winds or damp. The expectoration varies greatly. In a few cases there is very little; usually, however, it is rather abundant, often with little or no rhonchus in the chest. It is generally difficult to expel. The cough is very violent, frequent, hacking and paroxysmal, and the fits may last ten to twenty minutes and even excite vomiting. They are generally brought on by exertion; nay, in bad cases, so easily are they provoked, that the patient is afraid to move or even to speak. The cough and expectoration are much worse in the morning on waking. Sometimes the cough is slight and then the expectoration is generally scanty; the distressed breathing being the chief symptom. The patient generally wheezes loudly, especially at night. In a bad case the legs are swollen. The patient is emphysematous: there is often no rhonchus, or only sonorous and sibilant or a little bubbling rhonchus at both bases.

In this common but obstinate complaint our results have been very striking, although in many of our patients, so bad was the breathing, that on being shown into the out-patients' room, they dropped into a chair, and for a minute or so were unable to speak or only in monosyllables, having no breath for a long sentence. We used the ordinary spray producer with ipecacuanha wine, pure or variously diluted. At the first application it sometimes excites a paroxysm of coughing which generally soon subsides; but should it continue, a weaker solution should be used. The patient soon becomes accustomed to it, and inhales the spray freely into the lungs. At first a patient often inhales less adroitly than he learns to do afterwards, as he is apt to arch his tongue so that it touches the soft palate, and consequently less enters the chest than when the tongue is depressed. The spray may produce dryness or roughness of the throat, with a raw sore sensation beneath the sternum; and sometimes it causes hoarseness,

whilst, on the contrary, some hoarse patients recover their voice with the first inhalation. As they go on with the inhalation they feel it getting lower and lower into the chest, till many say they can feel it as low as the ensiform cartilage.

The dyspnoea is the first symptom relieved. The night after the first application the paroxysmal dyspnoea was often improved, and the patient had a good night's rest, although for months before the sleep was much broken by shortness of breath and coughing. The difficulty of breathing on exertion is also quickly relieved, for often after even the first administration the patient walked home much easier than he came to the hospital; and this improvement is continuous, so that in one or two days, or a week, the patient can walk with very little distress; a marked improvement takes place immediately after each inhalation, and although after some hours the breathing may again grow a little worse, some permanent improvement is gained unless the patient catches a fresh cold. I have heard patients say that in a week's time they could walk two miles with less distress of breathing than they could walk a hundred yards before the spray was employed. In some instances two or three days daily spraying elapse before any noticeable improvement takes place, this comparatively slow effect being sometimes due to awkward inhalation, so that but little ipecacuanha passes into their bronchial tubes. The effect on the cough and expectoration is also very marked, these both greatly decreasing in a few days; though the improvement in these respects is rather slower than in the case of the breathing, sometimes for the first few days the expectoration is rather increased; it speedily alters in character so that it is expelled much more readily, and thus the cough becomes easier, even before the expectoration diminishes. Treated in this way the patient is soon enabled to lie down at night with his head lower, and in a week or ten days, and sometimes earlier, can do with only one pillow. This improvement occurs in spite of fogs, damp, or East winds, nay, even whilst the weather