Observations on poisons; and on the use of mercury in the cure of obstinate dysenteries / by Thomas Houlston.


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OBSERVATIONS

ON

POISONS;

AND ON THE

USE OF MERCURY

IN THE CURE OF

OBSTINATE DYSENTERIES;

By THOMAS HOULSTON, M. D.

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"*Sparsa coegi.*"

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ADVERTISEMENT.

THE following papers, moſt of which have appeared in different publications, though at different times and on different occaſions, have ſuch a relation to each other, as to be thought proper to be collected and re-printed together. In compliance with the ſentiments of thoſe who have judged favourably of them, and hoping, with them, that ſome utility to ſociety might poſſibly thence reſult, they are now offered in a more commodious, and leſs expenſive, form to the Public.

And as a proper introduction, connecting in ſome ſort the whole together, I have prefixed a paper, which I drew up lately at the inſtance of a friend, who requeſted I would arrange, and tranſmit to him, my thoughts on the ſubject of Poiſons, of which I had already treated in ſome caſual and detached publications. And, if part of what is contained in theſe ſhall appear to be repeated therein, as it is done with brevity, it may probably ſtand excuſed,

and

and anſwer the purpoſe in ſome ſort of a recapitulation ; — though, in the circumſtances in which it was wrote, every one muſt perceive it was unavoidable.

At the end, though not immediately connected with the ſubject, I have added a paper, not before publiſhed, but which I ſent ſometime ſince to the Edinburgh Medical Society, on the good effects produced by Mercurials in ſome caſes of obſtinate Dyſenteries: to which are now ſubjoined, ſome further obſervations on the uſe of the Dry Vomit, and on the ſucceſs attending the method of treating Intermittents recommended by Dr. Lind.

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MISCELLANEOUS OBSERVATIONS

ON

MEDICAL SUBJECTS;

From the LATIN of *JOHN FREDERICK CLOSS*, A.M.

Philos. & Med. Doct.

OBSERVATIONS

ON

POISONS.

I.

A Summary Account of the ſeveral Poiſons, and of the Means of counteracting their Effects.

AS the ſubject is avowedly of the higheſt importance, and one on which every perſon, concerned in medical practice, cannot have too clear and prompt ideas, it may not be an unprofitable labour, if we take a general view of the nature and effects of that claſs of ſubſtances, which, given in ſmall quantity, interrupt and deſtroy the vital functions: and, whilſt we cannot but lament, that their action

is ſo ſudden, ſo violent, and ſo certain, as frequently to render every effort, to ſave life, fruitleſs, it may be uſeful to point out thoſe means, which reaſon and experience ſhew to be the moſt likely, and moſt efficacious, to counteract the baneful effects of the ſeveral kinds of poiſons.

It is believed that, in former times, the knowledge of different kinds of poiſons, as well as of counter-poiſons, was much further extended than it is at this day, and happily, in this country, the art of poiſoning has been leſs ſtudied and perfected, than in ſome of the more Southern ones, where men are prompted, and accuſtomed to take ſo baſe and cowardly a method, to ſatisfy their jealouſy and revenge. It is related, and credited, that, in Italy, methods are known, and practiſed, of poiſoning perſons, by giving them a drug, which will not prove fatal 'till many months afterwards, or, (which is more probable,) producing the ſame effect by repeated, and imperceptible, doſes gradually undermining and deſtroying the health. May theſe, and the various kinds of poiſons they are ſaid to prepare and employ, ever remain a ſecret amongſt us. It is a ſecret

of

is said that the secret of this poi
to this day in the possession
certain family or family

of too dangerous a nature for a man to wish to be in poſſeſſion of.——The ſame may perhaps be ſaid reſpecting the Woorara poiſon, with which the Indians ſmear the points of their arrows, which has been mentioned by Dr. Bancroft in his Hiſtory of Guiana. The ſmalleſt particle of this, introduced into the ſyſtem by a wound, proves inſtantly fatal, and yet an animal ſo killed may be ſafely eaten, it being no longer a poiſon when introduced into the ſtomach.

The poiſons known amongſt ourſelves act, either mechanically, or chemically; on the primæ viæ, or on the nervous ſyſtem. Thus pounded glaſs has been given, and occaſioned certain death, by bringing on inflammation of the ſtomach and inteſtines: thus ſponge has been given, to produce ſtoppage of the paſſage; and ſtrong cauſtic alkali, ſwallowed haſtily by miſtake, has been followed by death. The former act mechanically, only on the parts to which they attain; the action of the cauſtic alkali, though chemical, is alſo only topical, and did it not, even in its paſſage, before it reaches the ſtomach, produce irreparable and fatal miſchief, its power might be leſſened, by

the mucus it met with, by oily or mucilaginous medicines, by fixed air, or by means of an acid exhibited.

The poiſons, however, the effects of which we are commonly called upon to obviate, may be conſidered under the different heads of the mineral, vegetable, and animal poiſons, upon each of which, it may be of uſe, to make ſome few general obſervations.——Of the minerals, the ſaline preparations of mercury, lead, and antimony, i. e. the ſolutions of theſe metals in different acids, are, in very ſmall doſes, uſeful and powerful medicines, but, given in no great quantity, are active and virulent poiſons. When theſe have been taken, it has been recommended to dilute largely with water, to evacuate by vomits, and to blunt their acrimony by oil, milk, &c. but no medicine will have ſo immediate, and beneficial, an effect, as a ſolution of any alkali, which, uniting with the acid, decompoſes the ſalt, and precipitates the metal in the form of a calx, nearly, or wholly, inactive. When this is done, the former methods may be uſed with much greater advantage.

It is ſurprizing, that ſo obvious a remedy againſt the action of theſe metallic ſalts ſhould not have been noticed by Tiſſot, Buchan, and others who have written on the ſubject; eſpecially as theſe excellent authors wrote avowedly for the public. In the Edinburgh Medical Commentaries (Vol. 6. Part 3.) * I have endeavoured to ſupply this deficiency, and given a remarkable inſtance of the good effect of ſalt of tartar, in the caſe of a woman at Liverpool poiſoned with corroſive ſublimate. This is one of the moſt powerful of the metallic ſalts, and is alſo difficultly ſoluble in water, and as in this caſe it was ſwallowed in a ſolid form, it only acted, as it diſſolved, gradually and repeatedly; the violent ſymptoms produced by its ſolution yielded, almoſt inſtantaneouſly, to the alkali.

Medical men are often called in to caſes of poiſon, where the particular kind ſwallowed cannot be known. There, it is always prudent to give, inſtead of water alone, water in which an alkali is diſſolved. If the ill effects ariſe from a metallic ſalt in the ſtomach, ſuch as ſubli-

* See, in the following pages, No. II.

ſublimate, ſugar of lead, extract of lead, or tartar emetic, all future action of it will immediately be guarded againſt. And ſhould it be arſenic, the moſt dangerous and inſoluble of the metallic poiſons, the addition of the alkali would ſerve to render the arſenic more eaſily ſoluble in water. In this caſe, however, the ſtomach ſhould be waſhed with very large quantities, as arſenic requires about fifteen times its weight of water to diſſolve it. And in all theſe caſes, beſides the alkali, it is adviſeable to give water moſt copiouſly, and alſo oil, and to promote vomiting as expeditiouſly as poſſible.

We ſee then, that with reſpect to mineral poiſons, there is a rational ground of hope, that, by a proper management, they may be decompoſed, their effects counteracted, and the danger reſulting from their exhibition be guarded againſt, and prevented.——But the poiſons taken from the vegetable kingdom cannot be ſaid to admit of ſuch a remedy: we know no certain means of counteracting their effects, and all medical help is almoſt ſolely confined to attempting, as ſpeedily as poſſible, to evacuate them. Nor can this be done, even

by

by the moſt powerful emetics, as the white vitriol, verdigris, or emetic tartar, unleſs they be adminiſtered at an early period, before the poiſon has rendered the ſtomach inſenſible to any ſtimulus, or has brought on ſuch a degree of ſpaſm as to create an impoſſibility of vomiting. For one or the other of theſe is the certain conſequence of their continued action on the ſtomach, they then cannot be evacuated, and their continuance there is inevitably fatal. Of the ſuddenneſs and certainty of the action of poiſonous vegetables, we have had two remarkable *recent* inſtances, (in 1781,) the one in the caſe of Sir Theodoſius Boughton, poiſoned by the diſtilled water of the lauro-ceraſus, (frequently, but improperly, employed in cookery, in ſmall quantity, under the name of laurel water,) which event gave riſe to a uſeful work on the poiſonous vegetables of this country, by Mr. Wilmer; the other, in that of a youth poiſoned accidentally, at Liverpool, by eating the roots of the oenanthe, or hemlock-dropwort, the circumſtances attending which I publiſhed: they are inſerted in the London Medical Journal for July, and, (together with a plate of the plant,) in the London Maga-

Magazine for Auguſt, 1781.* Similar are the effects of the cicuta aquatica, or water-hemlock, which, like the two former, almoſt certainly and ſpeedily produces death. Mr. Wilmer enumerates further the following indigenous plants of a poiſonous quality, though their action is neither ſo ſpeedy, nor ſo unavoidably fatal, as that of the foregoing ones.

THE

Hyoſcamus Niger, *Henbane*:
Belladonna, † *Deadly Nightſhade*:
Napellus Coeruleus, *Blue Monk's-hood*:
Cynocrambe, *Dog's Mercury*:
Stramonium, *Thorn Apple*:
Cicuta Major, *Common Hemlock*:
Agaricus Muſcarius. *Bug Agaric*: and
Fungus Piperatus, *Pepper Agaric*.

The

* See No. III.

† Children, and ignorant people, are often induced by their appearance to eat of the berries of this ſhrub. In Dodſley's Annual Regiſter for 1780, we read of two women, who, gleaning in a field near Cambridge, were found nearly dead from this cauſe, and were ſucceſsfully aſſiſted by Mr. Hoffman of that city. Other inſtances are there alſo brought, of perſons dying, or being almoſt dead, from having eat of theſe berries or the plant itſelf. The method

The effects they produce, according to that gentleman, are, vertigo, faintneſs, delirium, madneſs, ſtupor, and paralytic or apoplectic ſymptoms. To obviate theſe, he adviſes the immediate exhibition of active emetics, cathartics and glyſters; and the copious uſe of ſome acidulous vegetable liquor, as weak ſparkling perry or cyder; and for the paralyſis which may afterwards remain, the uſual means, of ſinapiſms, bliſters, and electricity. Tiſſot recommends, as what is chiefly to be depended upon in ſuch caſes, to give a large quantity of vinegar, beſides the evacuants before-mentioned, and ſays, that by means of theſe, together with large dilution, 37 ſoldiers, who had eat the hemlock drop-wort roots by miſtake for carrots, were all ſaved, except one, who died before he could be aſſiſted. This celebrated author conſiders the noxious effects of theſe vegetable poiſons as depending on their narcotic quality, and ſimilar to thoſe of opium.

method Mr. Hoffman recommended, and which he has before time found to ſucceed, is this. To give a vomit as ſoon as poſſible, and, in the courſe of the day, about a pint of vinegar, or lemon juice, mixed with an equal quantity of water, and to walk the patient about to prevent ſleep, which he thinks would be fatal

Opium is ſometimes taken in too large a doſe by miſtake; ſometimes by deſign; and occaſions ſtupor, convulſions, apoplectic ſymptoms, and death, unleſs quickly and powerfully counteracted. Dr. Mead has ſaid much in favour of acids, in this intention, given with alkaline ſalts in repeated doſes; but we ought probably to place a much greater dependance on promoting evacuation by the methods before propoſed. It is alſo believed to be highly neceſſary to prevent the perſon from ſleeping, by uſing every method to rouſe the action both of the body and mind, to ſtimulate the noſe by volatile alkali, and the ſkin by bliſters. Bleeding will alſo certainly be of uſe, and leſſen the determination of blood to the head, which there is ſome ground to fear every ſtimulating method may poſſibly contribute to augment. Dilution has been recommended in this caſe, but is much more indicated, and indeed ſeems almoſt ſolely to be relied on, when perſons are dying from the effects of a poiſon, not leſs certain, and which, as it is ſought after with avidity, and ſwallowed with profuſion, oftener calls for our attention. I mean the different kinds of ardent ſpirits; gin, rum, brandy, &c. which beſides bringing

thouſands,

thouſands, gradually, and ſilently, to the grave, in very many inſtances, prove fatal in a few hours when drank in large quantity. The frequency of theſe accidents in the great ſea-port town of Liverpool, drew my attention to a ſubject of ſuch importance, and induced me to draw up, what appeared to me the moſt eligible method of attempting the relief of perſons thus unfortunately circumſtanced. This paper *, which was diſperſed in Liverpool, was reprinted and preſerved in Dr. Duncan's Medical Commentaries for 1780, Part 3. I therein propoſed, 1ſt. to evacuate the poiſon by the means before enumerated; or 2dly, to dilute it, and thereby weaken its action. I have adviſed alſo the warm bath, bleeding, bliſters, warmth, friction, and motion; but have laid the greateſt ſtreſs upon largely diluting that poiſon, which, in ſuch circumſtances, we in vain attempt to evacuate. This I propoſed doing by paſſing a pipe, ſomething like a catheter, beyond the glottis, and pouring down, through that, very large quantities of water only, (which probably may be beſt cold,) or of water mixed with vinegar, or with any

* See No. IV.

acid. In the Reports of the London Humane Society for 1780, I have communicated the caſe of a ſoldier * whom I reſcued from death by purſuing this mode of treatment.

The laſt claſs of poiſons, but on which I mean not here to enter minutely, is that of the animal ones. Amongſt theſe we might reckon ſeveral morbific ones, particularly the venereal, and variolous, matter, which act on the ſyſtem, inducing diſeaſe, and aſſimilating to their own nature the juices of the body into which they are admitted. Theſe are ſubjected to certain laws, and may be counteracted by certain means, appropriated for the cure of the particular diſeaſes which they produce. It may not be amiſs to obſerve however, that the ſame means, mercury, is found to counteract in ſome ſort both the variolous, and venereal, virus. But leaving theſe as the object of more general medical enquiry, I ſhall proceed to ſuch as more particularly relate to our ſubject.

To

* " —— Bailey, one of the Cheſhire Militia, in very " imminent danger from drinking brandy in a large quan- " tity, by bleeding, diluents thrown down into the ſtomach " by means of a pipe paſſed beyond the glottis, and proper " attention, after remaining many hours in a very uncer- " tain ſtate, was with difficulty recovered."

To remedy the bite of the viper, of the ſcorpion, and other venomous inſects, olive oil alone applied to the part is related to be ſufficient; though for further ſecurity, it has been recommended to ſuck the wound, and to take vinegar plentifully. But we are much more commonly, and ſeriouſly, alarmed, by the bite of a mad dog, or other mad animal; the frequent, though, I believe we may aſſert, by no means conſtant, effects of which are, heavineſs, melancholy, hydrophobia, violent delirium and a dreadful death. Various medicines, ſome of little utility and which ought not to be relied on, have gained reputation as preventives of theſe effects. Theſe medicines are moſtly ſuch as take off irritation and ſpaſm; as bathing, muſk, and opium; or ſuch as promote perſpiration and the other ſecretions. Dr. Mead ſpeaks more highly than one would ſuppoſe it deſerved of his medicine, of aſh-coloured-ground-liver-wort and pepper, joined with cold bathing. The public confidence has been much placed on a remedy kept a ſecret, prepared, at Ormſkirk in Lancaſhire, by Mr. Hill; but with what foundation that confidence has been placed herein, appears from its having failed of ſucceſs in ſeveral inſtances, but particularly

ticularly in that of Mr. Bellamy of Holborn, of which the late ingenious Dr. Fothergill gave the public a circumſtantial account. Nor will the following receipt for the making the Ormſkirk medicine, communicated by a medical friend, and obtained from an authority which it ſeems with good reaſon may be depended upon, increaſe our expectations of ſucceſs from its uſe.

Take elecampane, flowers of ſulphur, liquorice powder, oyſter ſhells burnt, of each as much as will lie on a ſhilling; alum, turmeric, bole armeniac, all in powder, of each as much as will lie on a ſix-pence, mixed.

From this, which is ſtrongly believed to be the original receipt, ſome ſmall deviations are made; e. g. a larger proportion of bole is now added *. Cobb's Powder, or the Eaſt India Specific, being a mixture of cinabar and muſk, promiſes much fairer. Mercurials, eſpecially if

* It is obſervable that Dr. Heiſham (de Rabie Caninâ) from analyſis, concludes Hill's medicine, which he examined nicely, to be compounded nearly of theſe ingredients, with the addition of a few drops of oil of aniſeeds.

if uſed 'till they bring on an increaſed ſecretion from the ſalivary glands, (which ſeem a principal ſeat of the diſeaſe, or, at leaſt, are the parts to which it has the principal determination,) afford a much more rational ground of hope. Although many reſpectable characters have declared, that nothing yet known could be depended upon to cure the hydrophobia, or ſcarcely to prevent it, yet we may place ſome degree of dependence on mercury, if there be only time to produce ſalivation, and if its exhibition be purſued with regularity and perſeverance. To judge properly on this ſubject, we ſhould attend to what has been ſaid upon it by the late Dr. James, who firſt propoſed the mercurial treatment in his Eſſay on Canine Madneſs, and by many other writers, particularly amongſt the French, who have purſued this idea with advantage; Sauvages eſpecially. A late work publiſhed by authority at Paris, of which I have given an abſtract in Dr. Duncan's Medical Commentaries, Vol. 8.* lays down as the moſt ſucceſsful, a mode of treating perſons bit by mad animals, of which ſalivation appears to be the baſis, if not the only eſſential part; though they endeavour to prevent

* See No. V

prevent the mercury ſalivating by purging every four or five days, and lay the great ſtreſs on the external application of the mercurial ointment round about the part which is bitten, and to the edges of the wound, which ſhould be enlarged and brought to ſuppurate.

Of fifteen perſons bit nearly at the ſame time by a mad wolf, in December, 1775, in the diſtrict of Macon, eleven were treated in this manner, by Monſieur Blais, a phyſician at Cluny, and the four who were not treated thus died, in a few days, raving mad. Of thoſe under this gentleman's care, one died with the true hydrophobia, (though without convulſion or any violent ſymptom,) after purſuing the treatment regularly ten days: a ſecond died much in the ſame manner, after uſing it near a month, during which time however he had made a practice of drinking privately to great exceſs; and a third, a boy, died at the expiration of ſix weeks, under the care of his friends, not with any ſymptom of madneſs, but from a caries of the ſcull neglected. (A fourth alſo died with the hydrophobia ſix weeks after having paſſed through the treatment, but as, ſubſequent to it, he had expoſed himſelf

himſelf to freſh danger from a like cauſe, it is not clear that he ſhould be included in this number.) The remaining ſeven recovered: in moſt of them ſalivation took place, and in all, the inunctions were continued a month or more. From theſe, and other like inſtances, there ſeems reaſon to conclude, that, not on the quantity of mercury adminiſtered, but on its bringing on ſalivation in time, depends the only rational ground of ſecurity from canine madneſs.—But in preference to any medicine, one ſhould adviſe, when it can be done, the immediate removal of the part bit; deſtroying either by the knife, cauſtic, or the actual cautery, all the fleſh in which may be lodged ſo formidable and fatal a virus, the effects of which are gradual, and in this reſpect ſimilar to thoſe of the matter uſed in inoculation.

It may not be improper to add here ſome conſiderations ſuggeſted very lately by the following accident. In the evening of December 14, 1783, an old woman, a nurſe in the Liverpool Infirmary, privately took into her bed room, which had no chimney, an iron pot with ſome lighted charcoal, by the vapour

of which ſhe was probably ſoon deſtroyed, and in the morning, on forcing the door open, was found dead.

Nothing can be more dangerous, or deſtructive, than the vapour emitted by burning charcoal, of the effects of which, Dr. Guthrie, phyſician at Peterſburg, has given a very curious account in the Philoſophical Tranſactions for 1779, vol. 69. He obſerves that accidents from this cauſe are ſo frequent in Ruſſia, and are there ſo familiar to the people, that medical aſſiſtance is never called in to remedy them. The Ruſſians heat their apartments by means of ſtoves, in which they burn wood, and, to ſave fuel, when the wood is burnt quite clear and bright, they cloſe up the vent, or chimney, of the ſtove to keep in the heat. But if, as often happens from negligence and inattention, any bit of wood remain not burnt clear, but of a blackiſh colour, the noxious vapour, or *ugar* is certain to ſpread itſelf through the chamber, and is productive of the following effects. All the perſons in the room are affected with a drowſineſs, and a reluctance, or inability, to move, and, if unaccuſtomed to it,

with

with a nauſea, and an inclination to vomit. Any one diſpoſed to ſleep falls into ſo ſound a ſleep, as renders it difficult to awaken him, nor is ſenſible of any pain or inconvenience. A little before death, however, he groans, ſo as ſometimes to call to his relief thoſe who are near. The ſteps taken to aſſiſt him, and which frequently ſucceed, if removed or diſcovered within an hour, from the commencement of this inſenſible ſtate, (beyond which time they think all probability of ſucceeding at an end,) are theſe. He is carried out and laid upon the ſnow almoſt naked; his ſtomach and temples are then well rubbed with ſnow, and they pour cold water or milk down his throat. Theſe frictions are continued till the body is reſtored, from a livid, to its natural, colour, and life returns. A violent head-ache, which often remains, they cure by binding on the forehead a poultice of rye bread and vinegar.——It is a very curious fact which the ſame gentleman informs us of, that effects, perfectly ſimilar, are produced (which are remedied in the ſame manner) by "an incruſtation formed on the "inſides of the glaſs windows during ſevere "froſt, compoſed of condenſed breath, per-

" ſpiration, &c.—the phlogiſton of candles,
" and of the ſtove, which, when converted
" into water by a thaw, lets looſe a principle
" producing all thoſe terrible effects on the
" human body, which the principle emitted
" from charcoal is ſo well known to do in this
" country, *(Ruſſia,)* where people every day
" ſuffer from it." They cannot be perſuaded, however, that theſe effects are occaſioned by a cauſe apparently ſo trifling, but attribute them, without the leaſt foundation, to the former one, a miſmanagement of the ſtove. By this account we find then, that expoſure to free air, and continued frictions, ſucceed in recovering perſons in theſe circumſtances. Dr. Guthrie thinks the cold applied may probably contribute thereto, by " ſome how or other freeing
" the body from the load of phlogiſton with
" which the ſyſtem ſeems to be replete"; as the perſon becomes conſiderably colder, when recovering, than when firſt brought out of the room.

A mode of treatment differing however in this reſpect, the application of warmth, has been found ſucceſsful, in reſtoring to life perſons

ſons nearly dead from a cauſe apparently ſimilar,—the vapour emitted from burning lime ſtone, of the fatal effects of which we have had repeated inſtances. Some years ago a very fatal accident happened from this cauſe in Liverpool, where the vapour from a lime-kiln penetrated through the wall of a houſe adjoining, and occaſioned the death of ſeveral perſons. In the Reports of the London Humane Society for 1778, I have related the circumſtances of two women, who, having lain down to ſleep in a hut, built adjoining to a lime-kiln to keep the tools in, were found, a few hours afterwards, the one dead, the other nearly ſo, but by care, and diligent perſeverance for ſeveral hours in employing the means recommended by that excellent inſtitution, ſhe was with difficulty recovered.

Great numbers of people have been deſtroyed, almoſt inſtantaneouſly, by ſudden expoſure to mephitic vapours, the gas emitted by fermenting liquors (in the large veſſels of breweries) air long confined and ſtagnating, in wells, vaults, privies, &c. From ſome parts of the earth there ariſe vapours highly noxious,

noxious, and injurious to animal life; as for inſtance from the Grotto del Cane in Italy*, in which an animal expoſed to them a very ſhort time is inevitably deſtroyed, but, if withdrawn

* It has been doubted, whether this vapour is really deleterious in its nature, or only, by its denſity, unfit for reſpiration, and therefore occaſions the death of animals immerſed in it. In this idea, in the winter of 1768, Richard Paul Jodrell, Eſq; (a gentleman well known in the literary world, as a man of genius and erudition) and I, tried the effect of it upon a viper, which we had procured for that purpoſe. It was no ſooner plunged into this *vapour* in the grotto, (*which* ariſes apparently about a foot in height,) than it manifeſted evident ſigns of its being greatly incommoded. It endeavoured to get to the walls, and being prevented, raiſed its head up as much as it was able, opened its jaws wide, ſeeming to gaſp for breath, and after nine minutes, became motionleſs, but being then thrown out into the open air, ſoon recovered. Dogs, who generally are ſubjected to this experiment, are nearly dead in leſs than half that time; but this reptile was made choice of, as it is known to be, if I may uſe the expreſſion, peculiarly tenacious of life. That it will live long without any ſupply of air, or food, is very certain, and the one I am now ſpeaking of accidentally furniſhed a ſufficient proof of it. When recovered, it was replaced in the box in which we had brought it, and was ſhut up cloſe, and carried back with us to Naples, where it was laid by and forgotten, 'till on Mr. Jodrell's preparing to leave that city three weeks afterwards, the box was again found, and the viper in it, alive and vigorous.

withdrawn before it be quite dead, and laid in the open air, it will gradually recover; though in conſequence of ſuch experiment, eſpecially if repeated, its life is ſaid to be much ſhortened, and that it will linger for a few months and then die. This has a property, which is common to the other mephitic vapours, and which affords an opportunity of detecting their preſence, and guarding againſt them. They extinguiſh flame; and it is therefore highly imprudent for any one to venture down into a place long ſhut up, without firſt trying, by letting down a candle, whether the air be ſuch as will admit of its continuing to burn, and, of conſequence, may, ſafely be reſpired.

When life is deſtroyed, or rather ſuſpended, from expoſure to mephitic vapours, the immediate removal of the body, and placing it in the open air, is of the moſt urgent neceſſity, and will alone, ſometimes, be ſufficient to bring about a recovery. But it will frequently, in ſuch caſes, be proper to have recourſe to frictions, inflation of the lungs, and the other means recommended by the Humane Society,—an inſtitution which does great

great honour, and has rendered important ſervice to the cauſe of humanity; which owes its introduction amongſt us to the laudable zeal and exertions of Dr. Cogan and Dr. Hawes, and its ſupport, to that ſpirit of benevolence and compaſſion, which forms ſo bright, and ſtriking, a feature in the national character.

II.

II.

Obſervations on Mineral Poiſons.

IT did not, 'till very lately, occur to me, that in treating of the antidotes, or remedies, for mineral poiſons, alkaline ſalts are omitted to be recommended, both in Tiſſot's Advice to the People, and Buchan's Domeſtic Medicine, books very generally read and eſteemed. As the effects of theſe poiſons are often ſo ſudden as not to admit of calling in medical aſſiſtance, it ſeems the more neceſſary to add this remedy to thoſe recommended for common uſe to the people; and as the following hiſtory of facts will tend to demonſtrate the importance, and to eſtabliſh the reaſonableneſs, of this practice, (although it happened ſome years ago,) I have thought it might be productive of good to ſociety that it ſhould be more extenſively known.

In 1774, one Jones, a cow-keeper of Liverpool, was convicted at the Lancaſter aſſizes, of poiſoning his ſiſter-in-law, in revenge for her

having oppoſed him in the ſale of ſome property, of right belonging to the children of her ſiſter, his former wife. Under an appearance of reconciliation, he had treated her, and the wife of the intended purchaſer, William Aſhcroft, one morning, at a public houſe, with ſome ale, which he himſelf had warmed. He put ſugar in it, and had repeatedly poured it backwards and forwards from one cup into another. The ſiſter-in-law went thence into the neighbourhood of Ormſkirk (thirteen miles diſtant) where, in a few days, ſhe died. The Coroner could not attend as ſoon as was deſired, and the body was in a very putrid ſtate when it was opened. In the ſtomach were found, ſome ſmall particles of what was judged to be corroſive ſublimate; but of this circumſtance I was not informed 'till after the other woman was better.

Mrs. Aſhcroft came to me, May 5th, a week after her drinking this ale. Immediately after ſhe took it, ſhe ſet out to go to Preſcot (ſeven miles) part of the way in a carriage, the reſt on foot. She had not gone far before there came on a violent pain in her ſtomach, with continued vomiting, and intolerable thirſt,

ſo

ſo that ſhe ſtopped to drink water almoſt at each ditch. Her tongue, from her own account too, was conſiderably ſwelled. After much vomiting ſhe was ſomewhat relieved; but, to the time ſhe applied to me, ſhe had continued to vomit up every thing ſhe took, and complained of a heat and pain in her ſtomach; at ſome times much more violent than at others. As ſhe ſeemed not in much pain then, and had vomited ſo frequently, I only adviſed her, whenever ſhe was ſick, to waſh her ſtomach plentifully with chamomile tea; hoping, that in a little time, the vomiting might be checked. The account of the death of the other woman alarmed her greatly, (as they had drank out of the ſame cup,) and on the 7th in the evening ſhe was extremely ill; her ſtomach ſwelled, and was violently painful, and ſhe could ſcarcely ſpeak to be heard. On conſidering the ſtory ſhe had told me, of the man's having put ſugar in the ale, and beſtowed ſo much pains in mixing it thoroughly, it occurred to me, that the poiſon added might probably be corroſive ſublimate, which does not eaſily diſſolve, and that ſome of it, having been ſwallowed undiſſolved, might remain in that ſtate enveloped in the mucus and attached

to the coats of the ſtomach; which, as it gradually diſſolved, irritated, and cauſed heat, pain, and vomiting. In this idea, I gave her a few ſpoonfuls of a ſolution of ſalt of tartar, with a view to decompoſe the ſublimate, and ſhe had no ſooner ſwallowed it than ſhe was eaſier. A little while after ſhe took a vomit, and I cauſed ſome blood to be taken away to guard againſt inflammation of the ſtomach; ſhe was much better the next day, eat her dinner well, and did not vomit; but, on the 9th at night, the pain returned, with great violence, and yielded, as expeditiouſly as before, to the ſolution of ſalt of tartar. I now firſt heard of there being ſomething found in the ſtomach of the other woman, ſuppoſed to be ſublimate; and, on queſtioning my patient, learned, that ſhe had always been moſt relieved, when, after ſeveral efforts, ſhe had vomited up a ſmall quantity of ſomething, which, as ſhe herſelf expreſſed it, taſted like milk which had ſtood in a braſs pan. From theſe concurring circumſtances, I had now no longer doubt of the poiſon being, as I had ſuppoſed it; ſublimate; and, from the return of the ſymptoms, concluded that there was ſtill ſome of it retained, whoſe ſolution, and action, was only very gradual.

dual. After repeating the vomit, I adviſed her to continue conſtantly the ſolution of ſalt of tartar. This, however, ſhe had neglected, and on the 11th ſhe had a freſh attack, which yielded readily to a repetition of the ſame means. As her objection to the ſalt of tartar was its diſagreeable taſte, I ordered her ſome pills, containing each three grains of it, which (convinced of the neceſſity) ſhe did not omit taking. On the 15th ſhe was perfectly well, and ſo continued.

The concluſion I would draw from hence, is this; in all caſes of poiſon it is prudent immediately to give a ſolution of an alkali, followed by a vomit. If the poiſon be corroſive ſublimate, an alkali, either fixed or volatile, will decompoſe it, and precipitate the metal in a form nearly inoffenſive. It will have a ſimilar effect on the ſugar of lead, the extract of lead, emetic tartar, or any metallic ſalt. If the poiſon be arſenic, Newmann obſerves, "that alkalies will very plentifully diſſolve it." And if ſo, as it is difficultly ſoluble in water, the vomit will then ſucceed the better to diſcharge it. Whether or no ſulphur, exhibited in any form, might leſſen the danger

of

of arſenic is not clear, though theſe two, when united, are not poiſonous. If the poiſon be of the vegetable claſs, an alkali can be of no diſſervice, nor interfere with the other means of remedying by evacuation, nor yet by the ſubſequent uſe of acids, ſo ſtrongly inſiſted on by Tiſſot, as counteracting the effects of narcotics; ſince acids given together with alkaline ſalts, are pronounced to be attended with great ſucceſs in this caſe, by Dr. Mead, and others.

To ſupply the omiſſion then in thoſe popular writers, might not the following directions be given on this ſubject? "When ſymptoms of "poiſon appear, mix a tea-ſpoonful of any of "the following articles, ſalt of tartar, ſalt of "wormwood, pearl-aſh, pot-aſh, ſpirit of "hartſhorn, or of ſal volatile, with half a "pint of water, and of this let one half be "given to the patient immediately, and the "other in a ſhort time afterwards. It will "ſometimes give great relief, and the vomit-"ing will ceaſe. That, however, is ſtill to "be promoted, and if it does not return on "drinking warm water, &c. after waiting a "while, it will be proper to give a vomit of "ipecacuanha, or, if that is not ſufficient,

"one

" one ſtill ſtronger. After each vomiting, a " doſe of this ſolution of ſalt of tartar ſhould " be given, and it may be repeated every two " or three hours, eſpecially if the pain of the " ſtomach returns. It ſhould be continued " too, in ſmall doſes, for ſome time after the " ſymptoms diſappear. If none of theſe ſalts " are at hand, a little wood-aſhes mixed with " boiling water will anſwer the ſame end, " ſuffering them to ſtand 'till they ſettle, and " pouring the water clear off, or filtering " through linen. By taſting it, the degree of " ſaltneſs will determine if the ſolution be " ſtrong enough; if it be not diſagreeably ſo " it may be given."

At Liverpool, Auguſt 27, 1783, a young child of Captain Bibby's, playing in a neighbour's houſe, got to ſome Jacob's-Water ſweetened, placed there to poiſon flies, and drank ſo much as occaſioned its dying the day after convulſed. As this poiſon is often uſed, and as ſimilar accidents in conſequence thereof are by no means rare, the following cautions may be

be uſeful. 1. If this poiſonous mixture (which ought not to be indiſcriminately ſold) is to be uſed at all, it ſhould be placed out of the reach of children, and mixed up in a manner dirty enough to diſguſt, and deter any one elſe from a deſire to taſte it. 2. As ſoon as it is known that a perſon has unfortunately taken any of it, immediate aſſiſtance ſhould be procured; a vomit ſhould be given directly, and ſalt of tartar, or pot-aſhes, diſſolved in water, ſhould be drank very freely. The poiſon ſold under the name of Jacob's-Water is ſometimes arſenic diſſolved in water, but that properly ſo called is only a weak ſolution of corroſive ſublimate; and in that caſe there is the ſtrongeſt reaſon to believe, that by taking a little of the above alkaline ſalt after it, (and the ſooner after it the better,) if violent ſymptoms are not already come on, no danger whatever would enſue; and even if ſuch ſymptoms have appeared, this is one of the moſt effectual means of relieving and removing them. And if the poiſon ſwallowed be a ſolution of arſenic, this would be one of the moſt likely means of guarding againſt its effects, whilſt at the ſame time it will not interfere with any of the uſual methods of obviating the danger.

III.

III.

Caſe of a Boy poiſoned by the Root of the Hemlock Dropwort, on the 9th of June, 1781.

THE eldeſt ſon of the Reverend Mr. Kirkpatrick, a diſſenting miniſter, about nine years old, rambling with ſeveral other children in the fields adjoining to the Leeds canal, near Liverpool, gathered, and gave to the others, a number of the roots of the Hemlock Dropwort, which he believed were ground nuts, and of which he eat a much greater quantity than the reſt. As he was returning home he grew giddy, and if he had not been prevented, would have reeled into the canal. His inability to direct his motions encreaſed gradually, and he was ſoon affected with ſtupor and convulſions. His mother, apprized of his ſituation, ſpeedily came to him, and immediately, as ſhe ſaid, conceived the idea of his having eaten ſomething, the effects of which were ſimilar to the poiſon adminiſtered to Sir Theodoſius Boughton, 'till

which time no ſuch thing had been apprehended. Some water out of the canal was given him to drink, and he vomited a conſiderable quantity of the root he had ſwallowed; he however grew worſe, raved, became heavy, and convulſed, and was carried into a houſe adjoining; Mr. Shertcliffe, a ſurgeon in the neighbourhood, was ſent for, who, with a view to evacuate what he had taken, gave him a ſolution of emetic tartar, and a purgative glyſter.

He had ſwallowed at leaſt twenty grains of the tartar emetic, when I was ſent for to him about eight in the evening. I found him quite in the epileptic ſtate, with the pupil of the eye vaſtly dilated, total inſenſibility, and all the appearance of a perſon in the laſt degree of intoxication. Convinced that unleſs the contents of the ſtomach could be expelled, no hope of his recovery remained, I gave, in ſolution, a ſcruple of white vitriol, moſt part of which was got down.

The convulſions for ſome time paſt had been ſtrong and frequent; they ſeemed to begin with an effort, as it were to vomit,

(though

(though after he got into the houſe he never vomited in the leaſt). The head was drawn to the right ſide, and thrown back, general ſpaſms ſucceeded, the eyes ſtarted prodigiouſly out from the ſockets, and the tongue was thruſt out and forcibly bit. Some æther was ſent for, and I poured a ſmall quantity into the mouth, on the temples, &c. It was thought at times to relieve the fits, which interrupted the circulation, ſo as to render the pulſe imperceptible, and often to give reaſon to ſuppoſe it was irrecoverably ſtopped. In this manner, however, the ſcene was cloſed at laſt, rather placidly, about ten o'clock at night, after he had ſuffered thus above four hours. The reſpiration, though ſlow, continued tolerably eaſy almoſt to the laſt. The glyſter operated a little before he died, and a very offenſive ſtool followed.

Notwithſtanding the boy had thrown up a conſiderable quantity of the root, yet I had no doubt, but that ſuch a part of what he had eaten remained in the ſtomach, as would render every effort to ſave him ineffectual. The event unfortunately anſwered my expectation, and diſſection confirmed the truth of the conjec-

ture. Mr. Shertcliffe found in the ſtomach above an handful of the root, and noticed very ſenſibly the ſmell peculiar to it, the moment he cut into the cellular membrane, tho' it was not twenty-four hours after death.

It was at firſt ſuppoſed, that what the boys had gathered and eaten was the water-parſnip; and afterwards, that it was the water-hemlock. Indeed Boerhaave in his Hiſtoria Plantarum, under the article Sium (water-parſnip) commends the firſt ſpecies for its aperient, emollient, and detergent qualities, but adds, "that he never had dared to adminiſter it, from the reſemblance which it bears to the ſecond ſpecies, the cicuta aquatica, of which thoſe who have eaten, unleſs relieved by vomiting, died dreadfully, and ſingularly convulſed." The latter (the water-hemlock) which is extremely poiſonous is frequently confounded alſo with the hemlock dropwort, the plant now ſpoken of; which is equally dangerous, and is termed by Lobel, Ray, and others, œnanthe cicutæ facie. This however, it is certain, was the one pitched upon by the boy who with difficulty recovered, as the root he and his companions had eat of.

Four

Four of the other boys in company had partaken, though more ſparingly, of the noxious repaſt; but, on the firſt alarm, vomits having been exhibited, they all eſcaped. One however was with difficulty made to vomit, tho' he took largely both emetic tartar and ipecacuanha, and he was affected with giddineſs, drowſineſs, and twitchings ſo much, that for ſome hours his recovery remained doubtful. He told me he had eat one root and an half; and more than two hours had elapſed before he was ſenſibly affected by it.

This unfortunate accident, as well as the one which was lately the ſubject of a judicial diſcuſſion, proves how fatally certain is the effect of the poiſons of this claſs. Theſe vegetable poiſons, do not, like the mineral ones, become fatal by producing inflammation of the ſtomach: though at firſt they ſtimulate and endeavour to promote their own diſcharge, yet their baneful action is ſolely on the nervous ſyſtem. Like to opium, or ſpirits, they bring on ſuch a degree of inſenſibility, or as ſome ſuppoſe of ſpaſm, as wholly to deſtroy or counteract the power of the ſtomach to expel them, whilſt their continuance there muſt inevitably

vitably prove fatal. Whereas many mineral poiſons may be decompoſed by any alkali; and even the danger from drinking ſpirits, may be greatly leſſened, by conveying into the ſtomach (by means of a pipe paſſed beyond the glottis) large quantities of water to dilute them, after the power of vomiting as well as ſwallowing is loſt. (See two papers which I drew up on this ſubject, and which are inſerted in the Edinburgh Medical Commentaries, Vol. VI. page 325, and in thoſe by Dr. Duncan, part III. 1780.)

To render a poiſonous vegetable in the ſtomach, which cannot be evacuated, inactive, is what we are yet unequal to;—to dilute it would probably be at leaſt a vain attempt, if it did not (by the liquid acting as a menſtruum) elicit, and render more active, the poiſonous quality;—and unfortunately, to evacuate it after it has remained long enough to produce, in a certain degree, its effect on the ſtomach ſeems next to impoſſible. We ſhould, however when there is the leaſt ground to ſuſpect any thing of this kind, immediately endeavour, by an active emetic, to evacuate the ſtomach whilſt there yet remains a poſſibility of doing it.

it. On the early exhibition of a vomit in ſuch caſes depends its operation, and on that only, perhaps, the ſecurity of the patient.

Botanical Deſcription of the Hemlock Dropwort, and of the Earth Nut.—See the Plate.

OENANTHE CROCATA.
OENANTHE CICUTÆ FACIE.
HEMLOCK DROPWORT.

A. The roots.
B. The leaves.
C. The univerſal umbel.
a. The partial umbel.
b. The univerſal involucrum.
c. The partial involucrum.
d. A ſingle hermaphrodite flower.
* The ſame magnified.
e. The calyx.
f. The petals.
g. The ſtamens.
h. The germen.

BUNIUM BULBOCASTANUM.
Earth, Kipper, Pig, or Hawk-nut.

A. The roots.
B. The leaves.
C. The univerſal umbel.
a. The partial umbel.
b. The univerſal involucrum.
c. The partial involucrum.
d. A ſingle flower.
* Ditto magnified.
e. The calyx.
f. The petals.
g. The ſtamens.
h. The germen.
i. The ſeed.

i. The

i. The ſeed.

k. The ſame as it divides into two.

l. A male flower.

m. The petals.

n. The ſtamens.

o. The hermaphrodite flowers ſtanding in the diſk; and are fertile.

p. The male flowers forming the ray; and are abortive.

This plant is found, ſcattered up and down the banks of rivers, and in abundance upon thoſe of the Thames.

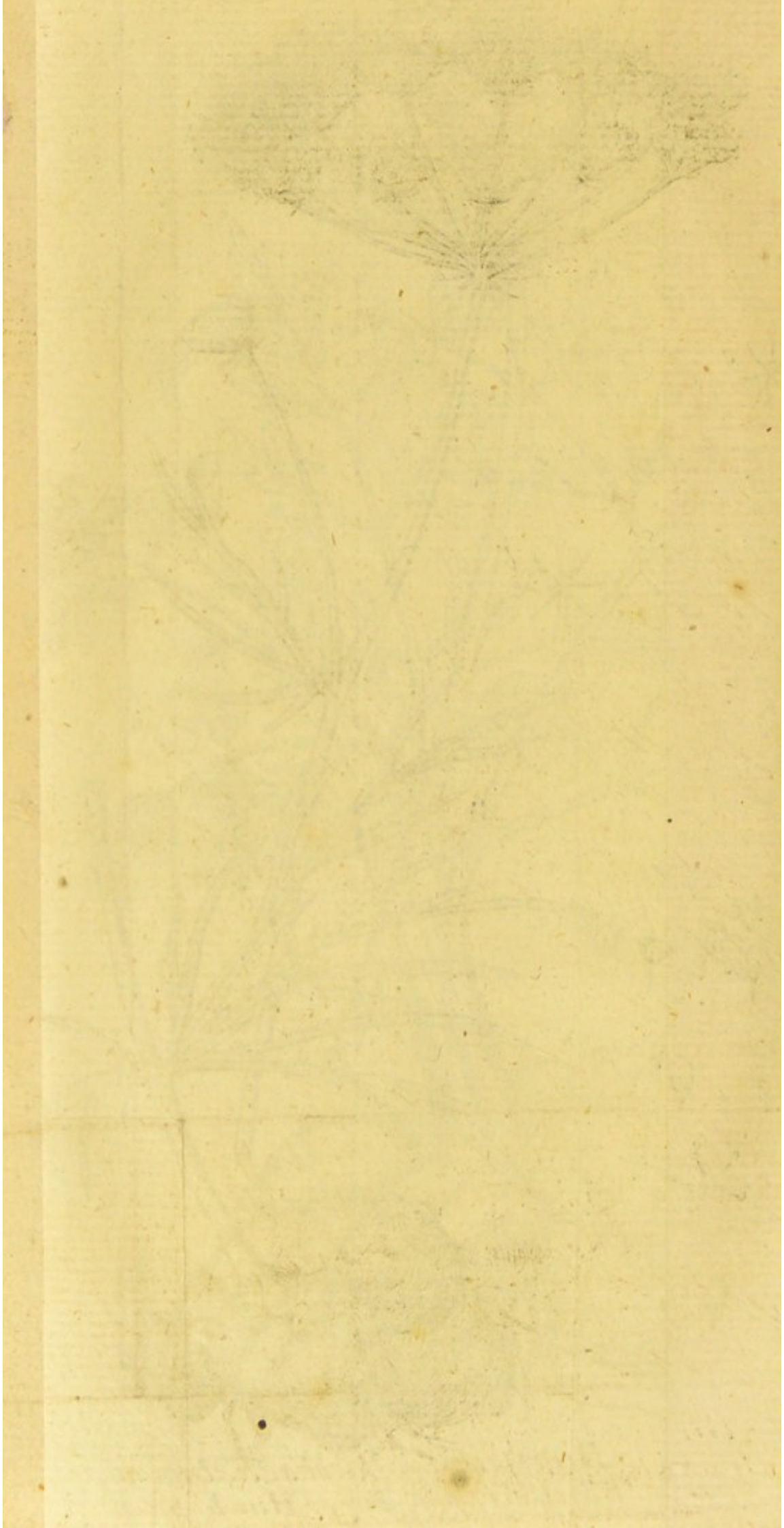
k. The ſame when ripe divided by Nature.

This plant grows in meadows and other paſture lands, and in woods, in which it is moſt abundant.

IV.

Bunium - Bulbocastanum
Earth Kipper, Pig or Hawk - nut

Oenanthe - crocata .
Hemlock Water - dropwort .



IV.

On the Mode of aſſiſting Perſons dying from drinking Spirits.

MANY perſons are deſtroyed ſuddenly by drinking large quantities of ſpirits. Their firſt effects are ſtimulant; they quicken the circulation, and occaſion much blood to be thrown upon the head. They afterwards prove ſedative; they bring on ſtupor; loſs of reaſon, total; of motion and ſenſation, almoſt total. Their effects may be partly oweing to their entering, in ſome degree, into the circulation, but depend chiefly, when violent, on their action on the nerves of the ſtomach. In conſequence, the brain is affected, and the nervous influence ſuſpended if not deſtroyed. All the parts of the body therefore partake of this inſenſibility. As the ſkin in ſome caſes may be burnt even without feeling, ſo the ſtomach and inteſtines may be ſtimulated conſiderably without any effect. The motion of

the heart and lungs is much enfeebled and interrupted, but continues irregularly 'till death enſues.

To reſcue the perſon from ſo dangerous a ſtate is extremely difficult. To counteract theſe effects by medicine is leſs likely, both as the power of ſwallowing is loſt, and as, probably, little or no abſorption then takes place. But we ought to endeavour, 1ſt, to evacuate the poiſon; or elſe, 2dly, to dilute it, and thereby weaken its action. With a view to the firſt, briſk vomits may be given; but, from the want of irritability of the ſtomach, theſe often will not act, unleſs given early, when they are of great ſervice in caſe of intoxication. A Dock-porter who died in the Liverpool Infirmary, February 28, 1780, got down, over night, nearly 12 grains of Emetic Tartar diſſolved, yet it produced little or no effect, though he lived 'till the next day. Purges are alſo proper, but liable, though in a leſs degree, to the ſame objections. Sharp Glyſters may be adminiſtered and will produce ſome evacuation, but their operation does not extend far enough. Large Glyſters, of water only, or of water in which purging

ſalts

ſalts are diſſolved, thrown up with ſome force by a ſyringe, might be of more ſervice.

Oil has been adviſed to be given, to help to evacuate the ſpirit, or to weaken its action.—But when the inactivity of the ſtomach is become ſo great and the danger ſo preſſing, there ſeems more reaſon to expect ſucceſs, from largely diluting that poiſon, which we in vain attempt to evacuate. When intoxication has been produced by drinking ſtrong liquors, large quantities of water, or weak liquids drank, are found to leſſen it very conſiderably. And though the power of ſwallowing be loſt, yet by means of a pipe (as a flexible catheter) paſſed beyond the glottis, or even down into the ſtomach, water might be poured in, in ſuch a quantity as was judged ſufficient to dilute and carry off the liquor in the ſtomach. To the water might be added with advantage probably, vinegar, or any kind of acid; or purgatives might be diſſolved in it, to facilitate the poiſon's paſſing off by the inteſtines. A pipe of this kind too would afford the beſt method of introducing ſubſtances into the ſtomach to promote vomiting.

Putting the body into a warm bath, or the legs and feet in warm water, will be of uſe, by leſſening the quantity of blood accumulated in the head and in the larger veſſels: and ſome of the water may perhaps be abſorbed. With a view to relieve the oppreſſion, bleeding, and opening the temporal artery are adviſeable. If the pulſe is found to become freer and fuller on loſing ſome blood, more may be taken away. Bliſters may alſo be applied with advantage.

The coldneſs of the extremities, and the evident difficulty with which the circulation is kept up, point out the propriety of aſſiſting it by warmth and friction applied to the ſkin (as in recovering drowned perſons). Motion, to prevent ſleep, may probably be ſerviceable in ſuch caſes. Great care ſhould be taken to looſen the neck-band, garters, and every kind of bandage, and that the body ſhould lie in a natural, eaſy, poſture; on the ſide is perhaps better than on the belly, tho' that has been recommended, that the ſtomach might the eaſier diſcharge its contents. The breathing ſhould not be obſtructed, nor the neck lie low, or in a bent poſition.

V.

V.

Obſervations on Canine Madneſs.

WHEN men of undoubted profeſſional knowledge, candour, and humanity, ſtand forth to deſtroy the public confidence, in a matter of ſuch moment as a preventative for madneſs, this can only be ſuppoſed to ariſe from a thorough conviction of the inefficacy of the means propoſed, and an ardent zeal for the cauſe of truth. Well aware that they are hereby depriving numbers of that great cordial, hope, and reducing them to a ſtate of horror and apprehenſion, little ſhort of that which they wiſh to guard againſt, nothing but a deſire of obviating the fatal conſequences of an ill grounded confidence, and of exciting the endeavours of men of ſcience, to diſcover more certain remedies than are yet known, could induce them to take ſuch a ſtep.

Dr. Fothergill, in the caſe of Mr. Bellamy, and Dr. Vaughan, of Leiceſter, in three caſes which

which he has publiſhed, have fully proved, that all the methods recommended for that end, are inſufficient for the cure of the Hydrophobia, when once commenced. The patients all died in the courſe of one or two days from the appearance of this ſymptom, notwithſtanding the moſt attentive and judicious treatment. From theſe caſes, they conclude, that no dependance is, in reality, to be placed on the Ormſkirk Medicine, before ſo much confided in; and they have each declared their opinion, how doubtful and uncertain, not to ſay uſeleſs, are all the other methods hitherto propoſed, to prevent the ill conſequences ſometimes reſulting from the bite of mad animals. The attempt, then, to recommend and enforce a plan of treatment, agreeable to reaſon, and ſupported by experiment, muſt meet with approbation, and may be productive of eſſential ſervice to ſociety. May it not very eaſily happen, that a remedy, the gradual exhibition of which may prevent the attack, would prove wholly inſufficient for the cure of the Hydrophobia? or is the inference juſt, that becauſe the action of mercurials, applied for three or four days at moſt, will not cure the diſeaſe in its laſt haſty ſtage, the

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ſame remedy would have been of no avail in the interval between the bite and the attack, which was (in theſe caſes) of one, three, and nine months? During that period, a gradual and ſufficient action of the mercury might have been excited; whereas, when the Hydrophobia has appeared, there is ſcarcely ever time for any ſuch effect. There is ſome reaſon to conclude too, that under certain diſeaſes, the ſyſtem is leſs capable of being acted upon by mercury, which, though applied in large quantities, ſeems then not to produce its uſual effects. I mean not to dwell upon the reaſonableneſs of a practice, in which the action of the remedy is principally determined to the part where the Virus chiefly exerts its baneful powers, *viz.* the Salivary Glands, nor yet upon the authority of the late Dr. James, and the celebrated Sauvages, who have largely inſiſted on the beneficial effects of mercury, to prevent the dangerous conſequences of the bite of mad animals. Not to ſwell this paper to an improper bulk, I purpoſe only to give a brief account of a pamphlet, publiſhed at Paris by order of government, entitled, "Methode éprouvée pour le traitément de la Rage," wherein we are informed of the ſucceſs of a mode

mode of treatment, of which mercurial inunction is the baſis and moſt eſſential part, laid down by Monſieur de Laſſone, firſt phyſician to the King of France, and tried in eleven out of fifteen perſons dreadfully bit and torn by a mad wolf, on the 8th and 9th of December, 1775, within twenty-four hours of each other. Three of theſe unhappy people, truſting to powdered oyſter ſhells, and ſimilar remedies of no uſe, were not ſubjected to this treatment, and died in a few days, raving mad; as did alſo a young woman, who did not apply for relief 'till two days before ſhe died, and after the ſymptoms of Hydrophobia had commenced. The remaining eleven were, by the States of Macon, near which place the accident happened, put under the care of a phyſician of Cluny, Monſieur Blaiſe; and the account he gives of the ſucceſs attending the method of treatment purſued, of which a ſummary is ſubjoined, is as follows:—One man, who, for ten days, exactly followed the plan laid down, whoſe wounds, though very large, ſupurated well, and were in a good ſtate, and in whom the mercury ſeemed to begin to act, became melancholy, was ſeized with a horror and dread of liquids, and died within forty-

eight

eight hours afterwards, though placidly, in his ſenſes, and without being convulſed.—A ſecond, whoſe mouth and gums had been ſlightly affected by the mercury, which he uſed near a month, grew delirious and furious, and after experiencing the ſymptoms of Hydrophobia for two days, died comatous. This man, however, it was found, had privately drank very large quantities of wine for three days together, preceding his delirium; and, it is ſuppoſed, this contributed greatly to his death.—A third, a boy, who continued the uſe of the mercurial frictions and antiſpaſmodic medicines for eighteen days, and was doing well, being removed home by his friends, died there three weeks after, as is believed, only from the wound in his head not being taken due care of, and not from madneſs, as he drank freely an hour before his death.——The remaining eight recovered, although one of them during the courſe became ſad and melancholy, and another, a woman, delivered of a child during the time, manifeſted an averſion to liquids. Salivation took place in moſt of them, upon which, gradually excited, (though they endeavour to guard againſt it by repeated purging,) depends, moſt probably,

in ſuch caſes, the only rational hope of ſecurity from Canine Madneſs. Dr. Blaiſe adds, that " the treatment was continued, in all, " above a month in the eight who got well,* " ſix of whom had been grievouſly bit in " parts not covered with the clothes; and " that moſt of them experienced, nearly at " the ſame time, ſymptoms of nervous affec- " tion, which might be attributed to the " Virus too much attenuated and weakened " by the remedies, to produce a manifeſt " acceſſion of Hydrophobia." He concludes with theſe judicious remarks. " It is moſt " certain, that the remedies we have em- " ployed have been very ſucceſsful; but they " would have been much more ſo, had they " been uſed early; and particularly, if, almoſt " immediately after the bite, thoſe external " means had been made uſe of, which appear

* In the hiſtory of the Royal Society of Medicine at Paris, vol. 2. we are informed by Monſieur Blaiſe that, of theſe eight, one died with Hydrophobia ſix weeks after he was diſcharged apparently well; but it appears that, four days before this attacked him, he had paſſed his arm down the throat of an ox, believed to be mad, though the man is not ſaid to have been bit by it. Monſieur Blaiſe alſo mentions his having ſince ſucceſsfully treated two other children in this method, whereas a third, bit by the ſame dog and not ſo treated, died mad.

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" to me indiſpenſably neceſſary, *viz.* deep " ſcarifications, cutting away the lacerated " parts, and thoſe adjoining to the wounds, " the cautery, applying cupping glaſſes, and " eſtabliſhing a copious ſuppuration, for a " long time, in the part bit; becauſe it ſome- " times happens, that the ſaliva is lodged in " the cellular membrane, where it remains, " as it were, fixed and inert, 'till, brought into " action by ſome cauſe, it enters into the cir- " culation, affects the nerves, and produces " the train of ſymptoms of this moſt terrible " of diſeaſes." It now remains only to give the mode of treatment propoſed, which I wiſh to do as conciſely as I can conſiſtently. After opening the body by laxative glyſters, bleed once or twice, eſpecially if there be any ſymptom of madneſs, or any wildneſs in the looks; uſe morning and evening, for an hour, a warm foot-bath, or, if it can be had, a warm bath; waſh the wound repeatedly and long in warm water, in which common ſalt, or rather ſal ammoniac, is plentifully diſſolved, making at the ſame time deep ſcarifications, cutting away lacerated parts, or, which is preferable, (when it is an animal which is bit,) applying the actual cautery: This done, rub a dram

of mercurial ointment lightly round about the wound, which may be dreſſed twice a day, with baſilicon or digeſtive, waſhing it each time with the ſalt and water. The mercurial ointment, however, is only to be applied once in twenty-four hours, and in the above doſe. The body muſt be daily kept open by glyſters, to which add one ſpoonful of honey, and two of vinegar; every four or five days, a gentle purgative is given, to prevent ſalivation. To excite vomiting once or twice will be of ſervice, eſpecially at the firſt, if there be frequent nauſea or inclination to vomit. Once, or, if no inconvenience follows its uſe, twice a day, morning and evening, give a ſpoonful of wine, with twenty or twenty-five drops of eau-de-luce, to promote a gentle ſweat. Let the patient take every day four grains of camphor, two grains of muſk, and ſix grains of nitre, made into a bolus, with honey. In caſe of great reſtleſſneſs and want of ſleep, give, in a moderate doſe, an opiate; but do not repeat it ſeveral ſucceſſive days. The patient ought freely to uſe diluting drinks, mixed with honey and vinegar; but ſhould the Hydrophobia already have come on, theſe and the foregoing medicines may be adminiſtered in glyſters.

glyſters. The food ſhould conſiſt chiefly of vegetables; but milk is to be avoided. This mode of treatment muſt be continued 'till the wound is healed firmly; a month at leaſt, and longer, when the wounds have been conſiderable, or any ſymptoms have manifeſted themſelves. Should the wounds put on a bad appearance, give the bark in ſtrong decoction, as alſo where great weakneſs and languor remain. Uſeful animals, when bit, may be treated nearly in the ſame manner, only a triple quantity of the mercurial ointment ſhould be employed. They ſhould be kept up from mixing with others, and on the appearance of any ſymptoms of madneſs they ſhould be immediately deſtroyed; as ought alſo dogs and animals of leſs uſe without heſitation. Thus far Dr. de Laſſone. Several ſtrong proofs of the ſucceſs attending the uſe of mercurial friction, are inſerted in the ſecond volume of the Memoirs of the Paris Royal Society of Medicine, of which the inſtances given by Mr. Odoardi deſerve particularly to be noticed. Of nine perſons bit by a mad wolf, one (treated by another ſurgeon, but not with mercurial frictions) died of the Hydrophobia, the twenty-fourth day after.

after. The eight others who uſed this remedy under that gentleman's care, all did well. He mentions ſeveral inſtances which have fallen under his care or notice, in which mercurial frictions on the wounded part have preſerved the patient from all danger, ſometimes without producing ſalivation. Notwithſtanding this ſucceſs however, he eſteems it the ſureſt method to excite a ſlight degree of ſalivation; and perhaps this will be found to anſwer beſt, when attempted ſoon after the accident, and brought about not too haſtily.

VI.

On the Effects of Mercurials in the Cure of obſtinate Dyſenteries.

IT would ſeem, at firſt ſight, that no medicine was leſs adapted to the cure of Dyſentery than Mercury; and yet the following caſes, which, having occurred in the public Infirmary at Liverpool, were ſeen and known by numbers, will, I flatter myſelf, evince that the application of it in certain circumſtances is founded in reaſon, and juſtified by ſucceſs.

1. William Brown, a ſeaman, who had remained above two years on the coaſt of Africa, was admitted an out-patient of the Infirmary, May 23, 1776, for a Dyſentery which he had laboured under for two years paſt, and for which he had taken a variety of medicines without obtaining any benefit. He was a ſtout made man, about forty-eight years of age, but had a very ſallow complexion, and a prominent belly, the region of the liver being

being enlarged, and, on preſſure, painful. Theſe, together with the flux, he himſelf imputed to his having been poiſoned by the negroes, though he had no idea when, or how. On enquiry I found, he had had an intermittent fever of long duration in the hot climates, and from that period his health had declined. His preſent complaint began on the coaſt, with coſtiveneſs, attended with loſs of appetite, vomiting, violent pain of the belly, ſhivering, and fever. When, after five days, a ſtool was procured, he ſeemed ſomewhat relieved at firſt. A looſeneſs however ſucceeded, with griping pain, teneſmus, ſlimy and bloody ſtools. From this time his appetite continued tolerably good.

The moſt probable, and uſual, means of putting a ſtop to the Dyſentery were ordered, and perſevered in near eight months, but finding that, during all that time, the diſeaſe was little relieved, and that only ſometimes for a ſhort ſpace, recurring again with its uſual violence very ſoon, I began to conſider, that it might very probably take its riſe from a diſeaſed liver, and a conſequent irregular ſecretion of bile. If that were the caſe, it was not

not likely that the flux ſhould be got the better of, unleſs the affection of the liver on which it depended was firſt removed. With this view, having admitted him an in-patient, January 16, 1777, I directed the mercurial inunctions to be gradually applied, and, as no increaſe of the Dyſenteric ſymptoms followed their uſe, they were continued (a fortnight) 'till the mouth was affected, and a moderate ſalivation came on. When this took place, his ſtools became leſs frequent, more regular, natural, and free from blood. By the time it had ceaſed, he thought himſelf freed from all his complaints, and, at his own requeſt, was diſcharged, February 27: though I told him then I was apprehenſive that his diſorder would return, and a repetition of the courſe be requiſite.

A fortnight after, (March 13,) he applied again for admiſſion: his appetite was impaired, his gripings violent, his ſtools very frequent and bloody; his belly, about the region of the liver, was ſwelled, hard, and painful. After premiſing a few gentle evacuants, the inunctions were repeated. For ſome days he was no better, and, being rather feveriſh, the mer-

cury was omitted for a week, and then reſumed. April 4, ptyaliſm was produced; he was then very eaſy in his belly, his looſeneſs was almoſt ſtopped, and he ſaid himſelf he was much better than ever he had been ſince the beginning of his illneſs. The mercurials, after a little reſpite, were continued ſome time longer, and on May 8, he was diſcharged perfectly well, and ſo remained.

2. September 23, 1779, William Martin, an Iriſh mariner, 28 years old, meagre, of a ſallow, bilious, complexion, was admitted an in-patient of the Infirmary, for a Dyſentery of ſix years ſtanding. He had ſpent much of his life in the warm climates: ſeven years ago he had lain nine months upon the Coaſt of Guinea, and a little before that, had remained there two years at one time, during which reſidence he had had the flux. It began again in December, 1773, at Boſton, and had continued from that time, almoſt without intermiſſion, in ſpite of every attempt to cure it. For that end, he had been in an Hoſpital in Charles-Town, South-Carolina; and on his return to England, was ſix months in Guy's, and after that, three months in St. Bartholomew's Hoſpital,

pital, London; from thence he went into that at Cork, and afterwards into thoſe of Gibraltar and Minorca, where he was diſcharged from the navy as unfit for the ſervice. In theſe he took decoctions of Logwood, Decoctum Album, Rhubarb, and a great number of other medicines, but found no benefit from any, except Lapis Calaminaris boiled in Milk, and from the dry vomit*, both of which checked the purging, though but for a ſhort time, not more than twenty-four hours. He was forced to live almoſt wholly on Milk. His ſtools were attended with much griping pain; they were bloody, but not always ſo. He was alſo troubled with the piles.

As ſuch various means had been uſed under the direction of ſo many able practitioners, I thought it unneceſſary to attempt to ſucceed in his cure by the uſual remedies, and deter-

* The dry vomit (recommended by Dr. Maryatt) is compoſed of Tart. Emet. and Vitriol. Roman. aa. p. æq. Five grains is given as a doſe upon an empty ſtomach, and without any liquid to aſſiſt the vomiting. It generally operates eaſily, and evacuates much bile, without relaxing the ſtomach. After its operation, a ſpoonful of brandy is given, and if that comes up, a ſecond, to remove the inclination to vomit.

mined to try what mercurials would do. It is true he had no ſenſible enlargement of the belly, but I was induced to have recourſe to the inunctions, from recollecting the great benefit I had experienced from them in the preceding caſe, from the long duration of the diſeaſe, and the inefficacy of every remedy which had been adminiſtered. His complexion too was very bilious, and had been ſo much ſo, long before I ſaw him, that he was ſuppoſed to have the jaundice; ſome had concluded that he was poiſoned on the coaſt; others that he was in a conſumption, as his fleſh and ſtrength declined much, though he had no cough, nor any pain in the breaſt.

I ordered him then to rub in half a dram of ſtrong mercurial ointment, (equal parts,) every other evening, which he continued to do 'till October 9, when ptyaliſm was produced, which laſted ten or twelve days very copious. During this time he took only the Decoctum Album, and Caſtile Soap. In three days after the ſpitting began, his flux ſtopped, his ſtools were natural, not more than one or two in twenty-four hours, and without any griping. He had however a very acute head-ach,

which

which gradually went off, and by the end of the month he could eat broths, and other things which before this time uſed to render the complaint violent, without any inconvenience.

Still the purging returned at times ſoon after, though not with the former violence, and he took the dry vomit, Rhubarb, and Lapis Calaminaris, to little purpoſe. At his own requeſt, therefore, he began again with the inunctions, November 25, which excited ſalivation in leſs than a fortnight, and ſeemed to have carried off the complaint; but as the ſtomach and inteſtines were greatly debilitated, I gave him, at different times, the ſal martis, bark, and ſome aſtringents. Towards the end of January, 1780, he had a rheumatic attack, which he aſcribed to cold from changing his room, but which yielded ſoon to the Decoctum Guaici. The middle of February he was attacked with a ſlight tertian ague, to which he had been ſubject before, but which went off in a few days. In the beginning of March he was free from both, and ſignified a deſire of going to ſea.

The account he then gave of himſelf was this. Of ſtools, he had two or three in twenty-four hours, eaſy, and natural, ſometimes more coſtive than he wiſhed on account of his hæmorrhoids. Perhaps once in a fortnight, he had a purging which continued about twenty-four hours. His appetite was poor, but what he eat, (in which he was not very cautious,) ſat eaſier upon his ſtomach, and agreed better with him, than it had uſed to do, and his health and ſtrength were much better than at any time ſince his diſorder began. I conſented to his going a ſhort voyage, and his intention is, if the looſeneſs return, and further aſſiſtance be neceſſary, (which it probably may,) to apply again, and try the effect of another ſalivation.*

3. Gaſpard-Peter Finch, a German, twenty-two years of age, having been a voyage to Jamaica, after ſtaying there about half a year, came in a veſſel to Liverpool, where he applied for admiſſion into the Infirmary, October 14, 1779, for a Dyſentery, which began during the paſſage, and had continued about

* I never ſaw more of this man, but have reaſon to believe he got well, having been ſeen long afterwards apparently in good health.

three

three months. He was much emaciated, had a ſallow, bilious, complexion, but no apparent enlargement, or increaſed ſenſibility, of the Viſcera. I gave him the uſual evacuant, and aſtringent, medicines, which he continued to take for three months, with but very little advantage, and that not permanent. Finding this to be the caſe, I propoſed to him to try a mercurial courſe, to which he was perſuaded by the laſt-mentioned patient. He began to rub in half a dram of the ſtrongeſt ointment every night, and continued ſo to do for a month, when it was diſcontinued on account of his having a tertian ague, of which he had had an attack before, ſince his admiſſion into the Hoſpital. It yeilded, as did the former, to an emetic before the cold fit, and an opiate in the beginning of the hot one. I ſuffered it, indeed, to go on for a few days, as thinking it might poſſibly be of ſome ſervice. No ſalivation had taken place, but his ſtools were regular, without pain or blood, and not more than two in twenty-four hours. He left the Infirmary at the end of February, and I met him a fortnight after, when he informed me he was perfectly well, and going to Barbadoes in a veſſel from this port.

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Theſe are the only caſes, of which, as they appeared new and important, I had noted the particulars, but I am aſſured by Mr. Richard Audley, a very intelligent young ſurgeon, who attended our Hoſpital five years with great diligence, that ſome others of the ſame nature, treated by me during that time in this method, have ſucceeded equally well. Though the accuracy of his obſervation is much to be depended upon, yet, not being able at this diſtance of time to recollect the circumſtances, I omit taking further notice of them.

Indeed I have found in many inſtances, where after a reſidence in the hot climates, the liver has been obſtructed and enlarged, that very great benefit has been obtained by the gradual, and prudent uſe of mercurials, and that, ſometimes, from much ſmaller quantities than one might expect. A caſe of this kind occurred not long ſince. A gentleman who had ſpent ſome years in the Weſt-Indies, returned to England, on account of his having long laboured under a bad ſtate of health, which was not at all improved during the voyage home. He applied to me ſoon after his arrival, and, as it appeared clearly that the

liver

liver was affected, I put him upon the mercurial inunctions. After he had uſed them a few times, he had occaſion to go a journey of three or four days, and was deſired to omit the mercury, which he did about a week before he ſat out. By the time he came to the end of his journey, however, he found himſelf much better, and was very ſoon ſurpriſingly recovered.

We frequently meet with here, perſons returned from the Coaſt of Africa, with pale, ſallow, bilious, complexions, prominent bellies, loſs of appetite and ſtrength, ſwelled legs, and general ill health. They grow gradually worſe, and die, at length, emaciated and dropſical. They ſuſpect, and others conclude, without foundation, that they have had a ſlow poiſon given them privately by the negroes. But theſe evils, which are wrongfully attributed to the natives, are only cauſed by the climate. Enquire of theſe poor objects, you will generally find, they have had a fever, (an intermittent,) or the flux, in the Torrid Zone; examine them, and you will frequently perceive, that the Viſcera are enlarged and indurated. This is the true cauſe of their bad

ſtate of health, and the remedy for it, in the opinion of the ingenious Dr. Lind, Dr. Clark of Newcaſtle, and others, is to be looked for in mercurials. I have repeatedly ſeen great good effects in ſuch caſes from a ſalivation, and where that has relieved but in part, a ſecond, or even a third, being excited, has ſucceeded well.

The practice now recommended, I apprehend, has been ſufficiently experienced to juſtify a trial of it. Succeſs in a number of caſes can alone eſtabliſh its propriety.

In the foregoing paper, I have made curſory mention of two remedies, I have often found of great uſe, and to the beneficial effects of which I wiſh to bear more ample teſtimony. And I conceive it would be rendering ſervice, both to the faculty and to the community, if thoſe of the profeſſion, who have had frequent occaſions of obſerving the good effects of any particular medicine, or mode of treatment, would embrace ſuch opportunities as may offer to communicate and recommend it to the pub-

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lic; eſpecially when ſuch remedy, or practice, is not generally adopted, which I believe is the caſe with thoſe of which I am now ſpeaking.

The dry vomit, as I obſerved above, is a compoſition of equal parts of tart. emet. and vitr. roman. A quantity of it is mixed at once, and the doſe of this mixture, commonly given, is five grains, on an empty ſtomach, in about half a meat-ſpoonful of water. The patient is directed to drink nothing after it. In a ſhort time after ſwallowing it, ſickneſs is produced, and a quantity of bile is generally thrown up. To take off the ſickneſs, a ſpoonful of brandy, or of any ſpirit, may then be given, and if that ſhould come up, a ſecond.

This was a favourite medicine of the late Dr. Maryatt, whoſe practice, to judge from the account he himſelf gave of it, appears more empirical than rational. I own, I entertained very great doubts of the propriety of giving, in common, two grains and an half of emetic tartar and the ſame quantity of blue vitriol, as a vomit; having ſeen ſeveral inſtances of violent vomiting produced by a much ſmaller quantity of tartar emetic alone; particularly

in the preſent Earl of Arran, to whom, when at Naples, I gave a ſingle grain (prepared at Apothecaries-hall, in London,) which operated to a degree extremely alarming and diſtreſſing. I did not chuſe therefore to make a trial of the dry vomit, 'till I was aſſured by a gentleman of great ingenuity and veracity, who had given it to ſeveral, and even taken it himſelf, that its operation was far from ſevere. Since then I have given it in a variety of caſes, and it has acted ſo mildly, that I ſcarcely recollect an inſtance where it was complained of as too violent; but I have met with ſeveral wherein five grains were not ſufficient to produce any effect, and where I have found it neceſſary to increaſe the doſe to ſeven or eight grains of the mixture. The reaſon why the compound acts more mildly than one of the ingredients would do alone,—whether ſome decompoſition takes place on their being combined together,—is not eaſy to aſcertain. But it is ſufficient for medical purpoſes to know, that it is not only a ſafe, but even a mild vomit.

The nature of the diſeaſe, or the ſtate of the ſtomach, may often render it more eligible to give a dry vomit. It is the ſtimulus to the whole

whole ſyſtem from the action of vomiting which, in many caſes, we would wiſh to excite. In this reſpect, and in evacuating bile, the dry vomit anſwers the ſame purpoſe as ſea-ſickneſs. Drinking largely of warm water after taking a vomit, as is commonly practiſed, beſides leſſening theſe effects, tends to leave the ſtomach in a relaxed ſtate, and thus may frequently do as much harm, as it was expected to do good.

A practice of which I have great reaſon to ſpeak well, and which I ſhould wiſh alſo to recommend to the notice of others who may not have experienced it, is that of the ingenious Dr. Lind in the cure of intermittents :—the giving a vomit an hour before the cold fit, and a ſufficient doſe of tinct. thebaic. half an hour after the hot fit commences. In many intermittents of long continuance, both tertians and quartans, I have known this method ſucceed to put a ſtop to them the very firſt time it was made uſe of. But though this will often not be the caſe, and it will be neceſſary to repeat the tinct. thebaic. on each acceſſion of the hot fit, and to increaſe the doſe of it, yet the great relief it occaſions, and the gradual diminution in the ſtrength of the fits, are ſtrong inducements

inducements to perſevere in the uſe of the remedy, 'till they are compleatly removed. That this will be the conſequence of ſuch perſeverance, even where no other medicine is exhibited, experience will evince. I very rarely indeed have had occaſion to recur to the bark for the cure of agues, though I ſometimes give it after the complaint is removed, with a view to ſtrengthen the habit. Indeed, we receive into our Infirmary numbers of the poor Iriſh, returning home from the fens after harveſt, labouring a long time under agues, having begged their way, half-ſtarved, and greatly debilitated. In ſuch, a cure is not to be looked for 'till they are a little recruited, by enjoying, for ſome time, the neceſſaries and conveniences of life, to which they have long been ſtrangers. It is eaſy to obſerve the gradual good effects produced in them by better living only. To perſons in this ſituation, I ſometimes give, with advantage, a glaſs of ſpirits a little before the paroxyſm. I remember, many years ago, ſeeing a German ſoon cure himſelf of an obſtinate ague, by drinking every morning a glaſs of brandy, in which a ſmall quantity of myrrh, aloes and ſaffron was infuſed, and it proved equally ſucceſsful, in ſome caſes of long ſtanding,

ing, where I recommended a trial of it after the bark has failed. To the ſpirit however, I conclude, the ſucceſs is chiefly to be attributed. I have alſo given twenty drops of tinct. thebaic. before the cold fit, and the ſame quantity during the hot one, in ſome caſes, with evident advantage.

There is one circumſtance more, I ſhould wiſh to mention now I am upon this ſubject. It is a caſe of accidental recovery, in one of theſe poor Iriſhmen, whom I had taken into the Infirmary, labouring under an ague of long continuance, anaſarca, extreme debility and emaciation. His complexion was very ſallow, and his belly prominent; the effect, as appeared on examination, of enlarged and indurated Viſcera; a frequent conſequence of agues amongſt thoſe who live in low, marſhy, ſituations, to which they give the name of the ague-cake, and which, together with the ſubſequent ill health, is often wrongfully attributed to the uſe of the bark. I tried the above, and other means, for ſome time, without any permanent good effect. The ague indeed would ſtop for a while, and the patient ſeemed to acquire a little ſtrength, but he ſoon relapſed. At

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length it happened that mercurial inunctions, directed for another patient, were, by miſtake, given to him. He had uſed them only a few times, when, to my great ſurprize, I found him in a ſalivation. I was the leſs diſſatisfied at the miſtake, as I thought it probable he might thence receive eſſential benefit: and the event juſtified my opinion, for the man ſoon got quite well. An inſtance this, which might be adduced as a further proof of the good effects of mercurials in caſes of obſtructed Viſcera; though, ſuch was the degree of weakneſs of this patient, that, however deſireable a mercurial treatment might have appeared, few practitioners would have ventured to adviſe it for a man ſo extremely reduced: and though the event was favourable, it would ſcarcely be a ſufficient juſtification for adopting ſo hazardous a practice, in ſimilar circumſtances.

THE END.