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C O F F E E,

**T**HOUGH coffee has been in general use for more than a century past, has been analysed by fire, and variously investigated by writers of learning and reputation; yet neither chemistry nor experience have hitherto ascertained its true nature, or medicinal qualities. Of this the contradictory testimonies which have been delivered concerning it, afford a painful evidence. For it is surely to be lamented that an article of diet, active in its powers, and universally employed, should

should be so little understood. The following experiments may perhaps lead to farther enquiries on this useful subject.

## EXPERIMENT I.

THIRTY berries of roasted, and the same number of unroasted coffee were each digested, forty-eight hours, in two ounces of rectified spirit of wine. The former tincture was strongly impregnated with the peculiar taste and odour of the coffee; the latter had acquired little or no sensible flavour.

## EXPERIMENT II.

TEN drops of a solution of green vitriol, were added to a tea spoonful of each of the above-mentioned tinctures, diluted with an ounce of water. Both assumed a purple colour; but the change was greatest in the tincture prepared with unroasted coffee.

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A similar difference was observable in the infusions of roasted and unroasted coffee prepared with water, allowance being made for the dark hue communicated to the *menstruum* by the roasted coffee.

THESE facts evince the action of fire in diminishing astringency; and furnish an additional proof of the impropriety of employing heat in preparations of the bark, and other vegetables of a like quality. (a)

#### EXPERIMENT III.

Two drachms of roasted mutton chopped very small, were digested in an ounce of pump water, and in the same quantity of a strong infusion of roasted coffee. The phials which contained the mixtures, were placed at a moderate distance

(a) Vid. the Author's Essays Medical and Experimental, 2d. edit.

tance from the fire, so as to be kept nearly blood warm. In thirty hours the mutton and water became putrid; but the infusion of coffee continued sweet twelve hours longer.

#### EXPERIMENT IV.

To ascertain the action of coffee on the digestion of food in the stomach, I prepared three alimentary mixtures, consisting of equal parts, viz. two drachms of roasted mutton, of the crumb of bread, and of saliva, beat into a pulp, and severally combined with an ounce of the infusions of coffee, of green tea, and the same quantity of pump water. The bottles were placed (as in the former experiment) at a proper distance from the fire, and every now and then carefully examined. A fermentation was first perceived in the standard, i. e. the mixture with pump water, which became sour in about forty-eight

eight hours. The infusion of coffee emitted few air bubbles, and continued near four days without shewing any signs of acidity. By an accident, the phial which contained the tea was broken at the beginning of the experiment.

## EXPERIMENT V.

March 29th, 1772. I awoke at five o'clock in the morning with the head-ach. My pulse was hard and full, and beat 92 strokes in a minute. I drank four dishes of strong coffee. In half an hour the pain in my head was relieved; yet my pulse still continued to vibrate the same number of times, but was softer and less full. In an hour it sunk to 70. In an hour and a half it rose again to 76; and in two hours to 80, which is the standard of its frequency in health. I was in a recumbent posture during the whole time of this experiment, which I have

have since repeated several times, under different circumstances, with no material variation in the result.

FROM these observations we may infer that coffee is slightly astringent, and antiseptic; that it moderates alimentary fermentation, and is powerfully sedative. Its action on the nervous system probably depends on the oil it contains; which receives its flavour, and is rendered mildly empyreumatic by the process of roasting. Neumann obtained by distillation from one pound of coffee, five ounces, five drachms and a half of water; six ounces and half a drachm of thick foetid oil, and four ounces and two drachms of a *caput mortuum*. And it is well known that rye, torrefied with a few almonds, which furnish the necessary proportion of oil, is now frequently employed as a substitute for these berries.

The MEDICINAL QUALITIES of coffee seem to be derived from the grateful sensation

sation which it produces in the stomach; and from the sedative powers it exerts on the *vis vitæ*. Hence it assists digestion, and relieves the head-ach; and is taken in large quantities, with peculiar propriety, by the Turks and Arabians, because it counteracts the narcotic effects of opium, to the use of which those nations are much addicted.

IN delicate habits it often occasions watchfulness, tremors, and many of those complaints which are denominated nervous. It has even been suspected of producing palsies, and from my own observation I should apprehend, not entirely without foundation. Slare affirms that he became paralytic by the too liberal use of coffee; and that his disorder was removed by abstinence from that liquor.

COFFEE berries are said to be remarkably disposed to imbibe exhalations from other bodies, and thereby to acquire an adven-

adventitious and disagreeable flavour. A bottle of rum placed at some distance from a canister of coffee, so impregnated the berries in a short time as to injure their flavour. Some years since a few bags of pepper were conveyed in a coffee-ship from India, the effluvia of which being absorbed by the coffee, the whole cargo was spoiled. (a)

(a) Miller's Gardener's Dictionary, 8th. Edition, Article, COFFEE.

A REVIEW OF THE MOST IMPORTANT  
CONCLUSIONS DEDUCED FROM THE  
PRECEDING EXPERIMENTS.

1. COLUMBO ROOT yields its virtues most perfectly to rectified spirit of wine; and to other *menstrua* in the following order. 1. To French brandy. 2. to Madeira wine. 3. to white wine. 4. to distilled water. 5. to white wine vinegar. 6. to hard pump water.

2. THE watery infusion of Columbo root is more perishable than that of other bitters. In twenty-four hours a copious precipitation takes place in it; and in two days it becomes ropy, and even musty.

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3. THE addition of orange peel renders the infusion of Columbo root less ungrateful to the palate.

4. TWELVE ounces of Columbo root yield eight ounces and two drachms of extract, which retains the entire flavour of the root, and is equal, if not superiour in efficacy to the powder.

5. PERUVIAN bark resists the putrefaction of animal flesh more powerfully than the Columbo root; but as a preservative of the bile from putridity, this root exceeds the cortex.

6. PERUVIAN bark mixed with putrid gall, instantly produces a coagulation, and considerably increases the foetor of it. Whereas the infusion of Columbo root unites perfectly with it, and very powerfully corrects its offensive smell. This serves in some measure to explain the ac-

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tion of this remedy in the *cholera morbus*, and other diseases attended with a redundancy and depravation of the bile.

7. COLUMBO ROOT moderates, without suspending the fermentation of alimentary mixtures; prevents them from growing sour; and neutralises acidities when formed, much more completely than Peruvian bark, or chamomile flowers.

8. COLUMBO ROOT does not increase the quickness of the pulse; and may therefore be used with propriety in the *ptihisis pulmonalis*, and in hectic cases, to correct acrimony, and to strengthen the organs of digestion.

9. THE Columbo root is a useful remedy in the *cholera morbus*; in diarrhoeas; in the dysentery; in bilious fevers; in a languid state of the stomach, attended with want of appetite, nausea, and indigestion; and in habitual vomitings, when they

they proceed from a weakness or irritability of the stomach, from an irregular gout, from acidities, or from acrimonious bile.

10. The ORCHIS ROOT might be cultivated to great advantage in England, and SALEP which is a preparation of it, might be afforded at eight-pence or ten-pence per pound. Whereas foreign salep is now sold at five or six shillings per pound.

11. RICE, as an aliment, is inferior to salep; being slow of fermentation, and a very weak corrector of putrefaction. It is therefore an improper diet for hospital patients; and more particularly for sailors, in long voyages; because it seems incapable of preventing, and will not contribute much to check the progress of that fatal disease the sea scurvy.

12. CHEESE, when mellowed by age, ferments readily with flesh and water;  
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but separates a rancid oil, which appears to be incapable of any further change, and must, as a septic, be pernicious in the scurvy. The same objection may be urged, with still greater propriety, against the use of cheese in hospitals; because convalescents are so liable to relapses, that the slightest error of diet may occasion them.

13. SALEP has the singular property of concealing the taste of salt water; a circumstance of the highest importance at sea, when there is a scarcity of fresh water.

14. SALEP retards the acetous fermentation of milk; and consequently would be a good lithing for milk pottage, especially in large towns, where the cattle being fed upon sour draft, must yield acedent milk.

15. SALEP, in a certain proportion, would be a useful and profitable addition  
to

to bread. For by absorbing and retaining more water than flour alone is capable of, it occasions a considerable increase of weight.

16. BUXTON WATER is found, by analysis, to contain calcareous earth, fossil alkali, and sea salt; but in very small proportions. For a gallon of the water, when evaporated, yields only twenty-four grains of sediment.

17. THE temperature of Buxton bath is 82 degrees of Fahrenheit's thermometer; that of St. Ann's well somewhat less.

18. BUXTON water, when drunk, quickens the pulse very considerably, and sometimes occasions the head-ach. By the fixed air which it contains, it readily dissolves iron; and such an impregnation must, in many cases, improve its medicinal virtues.

19. MATLOCK WATER is grateful to the palate, and of an agreeable warmth, but exhibits no marks of any mineral spirit. It is very slightly impregnated with *selenites*, and contains a small portion of sea salt. Some have supposed that it is a chalybeate, but without foundation.

20. THE Bristol and Matlock waters appear to resemble each other, both in their chemical and medicinal qualities.

21. MATLOCK bath raises Fahrenheit's thermometer to the 68th; the spring to the 66th. degree.

22. FIXED air may, in no inconsiderable quantity, be breathed without danger or uneasiness. And in several cases of the *ptbisis pulmonalis*, the steams of an effervescent mixture of chalk and vinegar, have been inspired with great advantage. Antiseptic fumigations and vapours have been long employed and much extolled

extolled in such disorders. But their efficacy does not appear to depend on the extrication of fixed air from their substance.

23. THERE appears to be a diversity in the properties and effects of different species of factitious air.

24. THE fixed air of metals seems to be of a kind different from that which is contained in alcalis and calcareous earth. And consequently the action of these substances as *fluxes*, cannot be explained on the principle of their restoring the air, which had been lost by calcination.

25. COMMON SALT, in the quantity of ten grains, promotes putrefaction; the *sal catharticus amarus* in the same proportion is yet more septic; but BAY SALT in this quantity resists putrefaction; and GLAUBER'S SALT exceeds in this respect even bay salt. The septic and antiseptic qualities of these salts, when used in so minute



minute a quantity, are therefore evidently dependent on, and proportioned to their degrees of purity.

26. SEA SALT, and the bitter purging salt, though they quicken putrefaction, prevent the progress of it beyond a certain degree. A quality which must increase the usefulness of the former, as a seasoning to our food.

27. COFFEE is slightly astringent, and antiseptic; moderates alimentary fermentation, and is powerfully sedative. Its action on the nervous system probably depends on the oil it contains; which receives its flavour, and is rendered mildly empyreumatic by the process of roasting.

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S E L E C T  
HISTORIES OF DISEASES,  
WITH  
R E M A R K S.

*Longum iter per precepta; breve et efficax  
per exempla.*

SENECA.

\* THE HISTORY AND CURE OF A DIFFICULTY IN DEGLUTITION OF LONG CONTINUANCE, ARISING FROM A SPASMODIC AFFECTION OF THE OESOPHAGUS.

MISS L—r, aged thirteen, a sprightly girl, of a delicate and irritable habit of body, during several years had a difficulty of swallowing; which occasionally left her for a month or two, and then suddenly returned without any apparent cause. September 3d, 1768, I was desired to visit her. She had then laboured under her disorder six or eight months without any intermission, and was reduced

\* This Case was read before the College of Physicians, August 9, 1769, and is published in the Medical Transactions, Vol. 2.

duced almost to a skeleton, though she still retained her natural vivacity. When she attempted to swallow solids, they passed down readily as far as the upper orifice of the stomach; but when arrived there, they were instantly, and with a strong convulsive motion, thrown up again. Liquids sipped slowly, and swallowed leisurely, met with no resistance; but when hastily drunk, or in too large a quantity, they were quickly regurgitated. Warm liquors were swallowed with more ease than cold ones; and in the evening, the difficulty in deglutition generally abated. She complained of no other pain but an uneasy craving in her stomach; nor was there any external swelling, or inward soreness, through the whole passage of the *œsophagus*. When she was in her ninth year the *catamenia* appeared, and had recurred once or twice since that time, without any regularity. Her belly was costive, her pulse was quick and small, and her feet were usually

ally cold. She was neither of a strumous nor scorbutic habit of body; nor could her friends give me any satisfactory account of the origin or cause of her disorder.

I APPREHENDED her case to be spasmodic, complicated with a slight thickening of the *œsophagus* about the part affected, the consequence of a contraction so long continued. The following medicines were therefore prescribed.

R. *Elixir. myrrhæ comp. tinct. valerian.*  
vol. aa. *ziv. M. dentur guttæ viginti*  
*in thea pulegii bis die.*

R. *Ol. amygdal. 3j. sp. sal. ammon. cum*  
*calce viva 3vj. camphoræ oleo solutæ*  
*3ij. ol. succin. 3iss. M. f. linimen-*  
*tum, quo bene fricetur spina dorsi, a*  
*prima cervicis vertebra usque ad duo-*  
*deciman dorsalem, mane & vespere quo-*  
*tidie.*

R. *Merc.*

R. *Merc. dulcis sexies sublimat. gr. ss. mucilag. gum. Arab. ʒij. sp. nitri dulcis ʒij. vin. antimon. gutt. vj. Aq. fontan. ʒss. Sacchari alb. ʒj. M. f. haust. hora decubitus quotidie sumendus, vini antimonialis dosin sensim augendo.*

R. *Extract. cort. Peruvian. mollis. castor. russic. galban. colat. aa. partes æquales, camphoræ sp. vin. rect. trit. ʒj. ol. succini. ʒj. balsam. Peruvian. q. s. M. f. emplastrum scrobiculo cordis applicandum, & semel in septimana renovandum.*

DIRECTIONS were given that her feet and legs should be kept warm; that her drinks should not be taken cold; that her diet should consist of broth, mutton, or beef tea, as it is called, panada, vermicelli, sago, rice, milk, chocolate, cocoa, salep, &c. that a little wine should be occasionally allowed;

ed; that she should abstain from tea and coffee; that moderate exercise should be daily used; and that a nourishing clyster, prepared of milk, broth, &c. should be injected every morning and noon; to obviate the loosening effect of which, a few red rose leaves were ordered to be boiled in it, or a little starch to be added to it.

September 22. THE liniment, calomel draught, and clyster, had been neglected. But the plaster had been applied; she had taken the drops with regularity, and had carefully observed the regimen prescribed to her. The difficulty in deglutition was sensibly abated, her appetite was mended, and she had recovered flesh and strength.

October 1. THE mercurial draught had purged her. To prevent this effect, fifteen or twenty drops of *elixir paregoricum* were added. But a few days afterwards it occasioned a soreness in her

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gums, and a slight salivation. The use of it was therefore discontinued.

October 21. SHE could now swallow solid food without any difficulty. Her appetite was good, her belly regular, her pulse fuller and slower, her flesh and strength recruited, and her health in every other respect was perfectly re-established. I directed her to continue the use of her medicines, and to persevere in her regimen a month or two longer; and she has ever since been entirely free from her disorder.

I SHALL beg leave to make some general observations on obstructed deglutition, without confining myself to the particular consideration of the case which has been related.

I. A DIFFICULTY in swallowing may proceed from such a variety of causes, not easy to be distinguished, and yet each requiring

requiring a particular method of cure, that the physician's practice in such cases must be uncertain and perplexed. And what adds considerably to this embarrassment is, that the effect often co-operates with the original cause, and confirms the disease. Thus a constriction of the *œsophagus*, arising from a spasmodic affection, will, if it continue long, produce either an enlargement of the glands, or a thickening of the substance of the gullet, about the part affected. On the contrary, if the stricture proceed from a glandular tumour, from schirrosities, or fungous excrescences, it will at the same time be complicated with some degree of spasm; of which amongst several instances that have fallen under my observation, I shall mention the following. A farmer's wife, aged fifty, of a strumous habit, perceived an impediment in her throat to the passage of solid food, some months before she applied for advice. Her disorder had increased by degrees, and she was then

unable to swallow any thing but liquids. A surgeon examined the gullet with a probe, and found the two glands which are situated about the fifth vertebra of the back considerably enlarged. Æther was then a fashionable remedy in this part of the country; and she was induced, by the fame of its effects, to wish a trial might be made of it. A dose properly diluted was given her, and about half an hour afterwards she had the power of swallowing, without much difficulty, a morsel of solid food. But the relief was only temporary. She relapsed in an hour or two, and had again recourse to the same remedy, which after a few trials lost all its efficacy, and the poor woman having languished about six months, died literally famished. From this and other instances, I should apprehend that the use of antispasmodics would assist the operation of the mercurial course, so judiciously recommended by Doctor Munckley in the first volume of the Medical Transactions;

actions; and would quicken, as well as render more certain, the cure of this deplorable disease.

2. IN spasmodic affections of the *œsophagus*, external applications to the spine are likely to be very serviceable, from the contiguity of that tube to the *vertebræ*. And perhaps nothing would be more effectual in such cases than a blister, applied either to the neck or between the shoulders. That epispastics are powerful antispasmodics, experience hath fully ascertained; and where the disorder is attended with an enlargement of the substance, or a fullness of the glands of the gullet, they would have additional efficacy, by producing a copious discharge of serous humours, and by that means unloading the vessels of the part affected.

VOLATILE and antispasmodic liniments are also highly useful, as the case above recited sufficiently evinces. It is indeed



to be lamented that external applications of this kind are not more frequently employed in practice; for there is just reason to apprehend that powerful effects might be expected from them in various diseases. In the hooping cough particularly, I have observed considerable benefit to accrue from the use of a liniment, similar to the one prescribed above.

3. WHEN constrictions of the *œsophagus*, arising from spasm, have been of long continuance, and do not yield to medicine; electricity furnishes us with no improbable means of relief. The publick indeed have been much disappointed in the medical effects of electricity. But this hath in part proceeded from the misapplication of so powerful a remedy. It appears to me, and I am confirmed in this opinion by the observation of a very eminent physician, that the electric shock bids fair to do much more good

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in diseases from rigidity, than in those from laxity. Amongst many other proofs of this, may be adduced the cure of a universal *tetanus*, the history of which is published by Doctor Watson, in one of the late volumes of the Philosophical Transactions.

4. STIMULATING vapours conveyed into the *pharynx* have a tendency to remove spasms, even when seated deep in the *œsophagus*. A few years ago an elderly gentlewoman, after eating pease, felt an uneasy sensation as if one of them stuck low down in her throat, and suddenly found herself deprived of the power of deglutition. Notwithstanding the use of a variety of remedies, her inability to swallow continued five or six days. She was directed to fumigate her throat with *assafœtida*, dissolved in a strong infusion of the aromatic herbs: and drawing in the vapours very forcibly, the spasm was in-

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stantly resolved; nor has she ever since suffered the least return of it.

5. WHEN this dreadful disease is so confirmed as to be deemed incurable, the patient's life may be prolonged by the daily injection of nutritive clysters, and by bathing his feet, hands, and arms, and occasionally his whole body, in new milk, broth, decoctions of salep, sago, or vermicelli, &c. The absorption by the lymphatics of the skin is very considerable. It has been found by experiment that the hand, after being well chafed, will imbibe in a quarter of an hour near an ounce and a half of warm water. And allowing that the surface of the hand is to that of the body as one to sixty, the absorption of the whole, in the same space of time, would amount to upwards of seven pounds. The copious discharge of urine in the *diabetes*, so much exceeding in quantity the patient's drink, confirms  
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in some measure this calculation. And the curious fact related by Dr. Chalmers, at the same time that it affords a further proof of the great absorption by the pores of the skin, points out to us the valuable purposes to which it may be applied in the disorder under consideration. A negro man, who had eaten or drunk but little before he was gibbeted in March, 1759, at Charles Town in South Carolina, and had nothing given him afterwards, regularly voided every morning a large quantity of urine, but discharged no more till about the same hour the next day. The dews of the evening, imbibed by the body, supplied in this case a superabundance of fluids in the night, and a sufficient quantity to support perspiration in the day. Had these fluids been of a nutritious quality, it is not improbable that, even under such circumstances, the poor negro might have been kept alive for a considerable length of time.

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PROSPER ALPINUS relates that the Egyptian women, in order to become fat, use every day a tepid bath; and whilst they continue in it, receive nourishing clysters, and a variety of the richest foods. By this means the females of that country, particularly the Hebrew women who reside there, are for the most part immoderately corpulent. *Illarum plurimæ perinde ac sues cernuntur pinguiissimæ humi recumbentes, maximeque Hebrææ, quibus istud vitii aliis familiaris observatur.*

I HAVE not enlarged upon the necessity of conveying aliment into the body by clysters, in obstructions of the *œsophagus*, because this must be obvious to every practitioner. The other method of nutrition, if not less known, is certainly less attended to, and in general is altogether neglected. It may perhaps be thought an omission, that no notice has been taken of the administration of medicines

cines under the form of clysters, in these deplorable cases. But I apprehend, however useful they might be in many respects, they would in general too much interfere with the nourishment of the patient.

## C A S E S

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## D R O P S I E S.

## C A S E I.

MRS. POPPLETON, aged 33, a woman of a very delicate constitution, and subject to a *profluvium mensium*, which had greatly impaired her strength, perceived about two years ago an indolent, moveable tumour in the lower part and left side of her belly, which gradually though slowly increased. Before it acquired any considerable bulk, her right leg began to swell, her urine was voided in

in small quantity; the symptoms of thirst and inward heat ensued; the *abdomen* became enlarged; a fluctuation was soon perceptible; and a complete *ascites* was formed.

THE tumour in the lower part of her belly, which from its situation I apprehend was an incysted dropfy of the left *ovarium*, now began to be extremely painful, the swelling of the *abdomen* increased, a general *anasarca* was coming on, and her case became every day more and more deplorable. Things were in this state, when the patient, as she arose out of bed in the morning (February 2d, 1771,) was seized with a nausea, without any apparent cause, which was soon succeeded by a violent vomiting. At three o'clock in the afternoon I was first called to her assistance, and found her quite exhausted with incessant reachings. Her pulse was so feeble as to be scarcely perceptible,

her extremities were cold, and her legs and thighs were affected with a most painful spasm. She had discharged near ten pints of water, and this evacuation had entirely removed the anasarca swellings, and greatly diminished the fullness and tension of the belly. The tumour of the left *ovarium*, though much decreased in bulk, was evident to the touch, and appeared to be still moveable under the fingers. Gentle cordials were directed to support the patient's strength, warm fomentations were applied to her legs and thighs, and an opiate was administered, to procure for her a short interval of rest and ease. She enjoyed a few hours refreshing sleep; the vomiting then recurred, and continued five or six days, with intermissions, which gradually became longer and longer. Her thirst during these evacuations was almost insupportable, but she refrained with great resolution from all liquids, except a little red port wine diluted with mint water. Oranges

ranges too were freely allowed, and were highly grateful to her. All her dropfical swellings were now removed, and the tumour of the *ovarium* itself was no longer perceptible. When the vomiting ceased, a gentle *diarrhœa* succeeded. An infusion of the bark with the *sp. nitr. dulcis.* and *tinct. mart. in sp. salis* were given. Her thirst abated, her appetite returned, and in a few weeks she recovered a tolerable degree of health and strength, and still continues free from any of her former ailments, though it is now four months from the time when her vomitings commenced. The quantity of water she discharged, exclusive of her evacuations by stool and urine, amounted to about three gallons.

THE case before us affords a striking proof of the efforts which nature exerts to relieve herself. By what secret instruments this salutary change was produced in the present instance, we may conjecture,



ture, but cannot ascertain. It is not to be supposed that the extravasated fluids passed by percolation through the coats of the stomach or intestines, and were then discharged by vomiting; because these coats in the living body are impervious to water, and transmit it only when the circulation ceases, when their vessels shrink, and the *mucus* lining the internal cavity is dried or abraded. Nor is it easy to conceive, how the hydropic cyst of the *ovarium* should thus empty itself into the ventricle; or so large a quantity of water transude with such rapidity, through the interstices of its fibres. For that the stomach was not ruptured is evident from the speedy recovery of the patient. The effect therefore must be ascribed, not to a mechanical cause, but to that vital energy which by imperceptible means regulates the motions, and corrects the disorders of the animal frame; though sometimes with a degree of violence dangerous to, and even destructive of life. In the present

present case it appears probable, that a sudden change took place in the course of circulation; the lymphatics recovered their power of absorption, and performed their office with renewed vigour; the vascular system became overloaded, and the exhalant arteries of the stomach and intestines poured forth the superfluous fluids, restoring thus the equilibrium.

INSTANCES of a sudden, and partially increased action of the vessels frequently occur, as in the *diarrhœa*, *cholera morbus*, hysteric disease, *profluvium urinæ*, &c. &c. But the following history, related by Doctor Simson, admirably illustrates, and at the same time confirms what I have advanced. *Cum homo adolescens, febris correptus, cui accesserat diarrhœa, cum extremo stupore sensuum, nihil plane ore haurire vellet, (quamquam immoderato æstu totus torresceret) quo humectaretur, jubeo in aquam egelidam immergi pedes; quo facto, protinus aquæ mirum cerno in vase decrementum,*

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*deinde ejusdem vixdum coloratæ, e vestigio impetuosam, more cataractæ, per anum effusionem. (a)*

SEVERAL instances are recorded of anasarcas, and some few even of the ascites, which have been cured by vomiting. But I believe it has rarely if ever happened, at least I do not recollect such a case either in books or in practice, that a dropfy of the *ovarium* has been removed by the spontaneous efforts of nature. Deductions from singular and solitary facts, though contrary to the rules of philosophising, are not always to be rejected; but may be allowed with proper caution and reserve, when the nature of the subject admits not of better evidence. The history before us furnishes, I apprehend, an exception to the general laws of reasoning by induction; and one instance, well authenticated, of the cure of

(a) Simson de Re Medica, p. 183.

of a disease, which the most eminent physicians have considered as irremediable, may justly lead us, in similar circumstances, to imitate by art the operations of nature; and to excite those efforts, which when spontaneous, have proved so salutary. In the incipient state of a dropfy of the *ovarium*, emetics repeatedly administered would be likely means of promoting the absorption or discharge of the incysted fluid. They produce the strongest contractions in the abdominal muscles, agitate all the viscera of the lower belly, quicken the circulation of the blood, and by their general action on the whole system, remove obstructions in the minutest and most remote series of vessels. Hence the powerful effects of Turpeth vomits in white swellings of the joints; in which the glands are at least equally diseased, and the extravasated fluid as much out of the course of the circulation, as in the species of dropfy we are now considering. But unfortunately this disorder is so insi-

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dious in its attack, and so little alarming in its progress, that it becomes almost incurable before the patient is apprehensive of any degree of danger. However in its more advanced stages, emetics may be administered with safety, and sometimes perhaps with advantage. If the *morsus diaboli* adhere to the enlarged *ovarium*, and the fallopian tubes be not totally obstructed, the action of vomiting may force a passage for the fluid, and thus procure at least some temporary relief. I have now under my care a lady who has long been afflicted with a dropfy of this kind, and who has frequent discharges of bloody water from the womb, succeeded always by a diminution of bulk. A troublesome *bernia* forbids the exhibition of an emetic, which otherwise I should not hesitate to direct. Besides we may possibly be so fortunate as to co-operate with nature at the most favourable conjuncture, and by assisting her efforts, of themselves perhaps

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too languid, may effect a cure. Such instances do not unfrequently occur, in almost every species of disease; and it is upon this principle alone, that we can explain the amazing success which has attended the exhibition of remedies, by no means adequate to the effects produced by them. Mr. W. a hard drinker, when past the meridian of life, had a jaundice which was succeeded by an *ascites*, a dropfy of the *thorax*, and an *anasarca*. The prognostic was in this case extremely unfavourable, and I scarcely indulged the least hope of his recovery. Diuretics, purgatives, &c. under various forms, were assiduously administered, but with no very advantageous effects. Amongst other medicines he took pills composed of *extract. jalap. pulv. scillar. siccata. and merc. dulcis.* and was directed to increase the dose of these *pro re nata*. Finding the usual quantity insufficient to procure the necessary discharges, he took, if I re-

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collect

collect aright, two pills extraordinary, the consequence of which was an *hypercatbarfis*, which greatly reduced his strength, but carried off all his dropical swellings, and by the aid of cordials and corroborants, produced a perfect cure. The following curious case, communicated to me by a physician of eminence in a neighbouring town, further illustrates the observation advanced above; and at the same time shews the resources which medicine affords to a sagacious practitioner, in the most desperate stages of this disorder.

## C A S E II.

Miss H. of Namptwich in Cheshire, aged upwards of forty, had laboured for some time under an *ascites*, when she was removed to Liverpool in February 1769, for the benefit of medical advice. Two physicians and a surgeon were consulted, and

and after a gentle evacuation by stool, and the exhibition of a few cardiacs, it was agreed that she should be tapped without delay. Eighteen pints of water were drawn off, and two large scirrrous tumours, one nearly the size of an infant's head, the other not much less in bulk, were discovered. These she had perceived for many years, and they had succeeded a fever, imperfect in its crisis. The operation had almost proved fatal to her; her mouth was covered with *aphthæ*, and so many alarming symptoms came on, that death was hourly expected. However in a fortnight she was tolerably recovered, and in a month the *paracentesis* was again repeated. She bore it better; but soon filled again, and was obliged to submit to the operation every third week. Tired with the frequency of this painful palliative, after the fifteenth repetition of it, she requested one of her physicians in a most pressing manner, to prescribe some medicine, which might at least protract

the period of tapping. It was now the latter end of August, the weather was favourable, and he directed her to be confined to her bed for three days, to be assiduously rubbed morning and evening with dry cloths impregnated with the fumes of camphor, and to take internally the *julepum e camphora*, prepared with only two-thirds of a pint of water, and warmed with the addition of one ounce of *aqua juniperi composita*. Under this form she took a drachm of camphor daily, for the space of a fortnight. A continued gentle *diaphoresis* was the happy consequence; every day she decreased in bulk, and the abatement of her swellings encouraged her resolutely to persevere in the use of her medicine. She recovered her health, and remained near two years free from any dropical complaints. But in the summer of 1771, her disorder recurred; and on the 16th. of July she was again tapped. On the 8th. of October following, she voided by the *anus* near twelve pints

pints of a mucilaginous liquor, in colour resembling *pus*, but without any offensive smell. After this remarkable discharge, she was better for a short time; but a violent and very painful apthous complaint, attended with a profuse spitting of viscid phlegm and saliva, then ensued; by which her strength was exhausted, and she died on the 9th. of November, quite emaciated.

ON the same day her body was opened in the presence of two physicians, and other gentlemen of the faculty; and I am favoured by Mr. Wicksted, a very ingenious surgeon at Namptwich, who attended the patient during her last illness, with the following account of the appearances on dissection.

“ ON opening the abdomen a large hard tumour presented itself, which on examination, seemed to be the right

ova-

*ovarium* very much enlarged, and schirrous. It was in figure like an impregnated *uterus*, filling the lower space of the abdomen, and rising several inches above the brim of the *pelvis*. This substance, was found attached to the *uterus*, and weighed three pounds and seven ounces. By its pressure the *uterus* and bladder were forced down into the lower part of the *pelvis*; and when divided, it resembled a piece of boiled udder in colour and firmness.

THE left *ovarium* was very hard, and enlarged to the size of a goose egg. The body of the *uterus*, which with the bladder had been pressed by the weight of the tumour out of its usual situation, was hardly to be distinguished from the left *ovarium*, which was nearly of the same size and firmly united with it, and seemed to be a little diseased. The fallopian tubes were almost obliterated. The bladder and ureters were found.

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THE hydropic cyst, (which extended to the margin of the ribs, and appeared to be formed either from the distended peritoneal coats of the *ovaria*, or the duplicatures of the *peritonæum*) contained three quarters of a pint of a fluid, similar to that which had been evacuated by stool.

THE stomach and intestines were in a sound state, and no where adhered to the above-mentioned cyst. But at the bottom of the *pelvis* the cyst had a *firm attachment to the rectum* of the compass of half a crown; yet there was no visible perforation, by which so large a quantity of fluids could escape. The omentum was wasted to a membranous expansion. The kidneys, spleen, pancreas, and mesenteric glands were found. The substance of the liver was not at all diseased; but its whole convex surface was fixed by strong adhesions to the *diaphragm*. Both lobes of the lungs were found adhering to the *pleura*; their internal structure however seemed



seemed to be perfect. The heart was in a good state; and the *pericardium* contained about two ounces of limpid water."

## C A S E III.

MR. G. H. of Oldham, near Manchester, aged upwards of fifty, low of stature, corpulent, and habitually addicted to intemperance, in April, 1770, was afflicted with a dry cough, *dyspnœa*, *ascites*, and swelled legs. By the use of pills composed of *sapo venet.* *gum. ammoniac.* and *pulv. scillar.* and a smart mercurial cathartic, which I directed to be repeated at such intervals as not to debilitate his strength, he recovered his former state of health. But on the 2d. of January, 1771, I was again called to his assistance; he had been suddenly seized a few days before with a difficulty of breathing, which increased fast, and was then attended with a cough and frothy expectoration; his pulse

pulse was languid and oppressed, his heat natural, his face bloated, and his legs were slightly œdematous; the *abdomen* was not fuller than usual, nor had he previous to his attack, any symptoms of water in the cavity of the chest. A brisk purgative, *radix Senekæ*, *oxymel scillit.* blisters to the legs, *camphor*, *sal. volatile*, *venæsection*, &c. &c. were tried, but without effect. Respiration became more and more laborious, and in two days the patient was freed from his sufferings by death.

It appears probable to me that an *anasarca*, or infarction of the cellular membrane of the lungs, was the proximate cause of the *orthopnœa*, which in so short a time proved fatal to the unhappy patient. This disorder may, like other dropsies, arise from a general laxity of the solids, tenuity of the fluids, or obstructed circulation of the blood; but in such instances it will in all probability be slowly and



and gradually produced. How then are we to account for its sudden and rapid formation in the case I have just related? The ancient physicians who had no opportunities of dissecting human bodies, observed in brutes, particularly in oxen, sheep, and swine, large hydatids in the lungs; and to the rupture of these, Hippocrates and Galen, reasoning from analogy, ascribed the *hydrops pectoris* in the human species. Willis and Morgagni have adopted their opinion, and confirmed the testimony of the father of physic, and his learned commentators. Morgagni says, *In sue autem, cæteroquin sano, ut cætera ejusmodi hic omittam, a me in bestiis, hominibusque conspecta, hydatidem vidisse memini, quæ minorem sui partem in pulmonis superficie ostendens, interius adeo se amplificabat, ut aquæ limpidæ uncias aliquot contineret.* (a) And another laborious anatomist

(a) Morgagni de causis & sedibus Morb. Epist. 16. Art. 36.

tomist (*Bonetus in Sepulch. Anatom. Obs.* 33 and 36,) informs us that the lungs of a man were found full of bladders, which when opened, discharged either water, or a clear liquor resembling the white of an egg. These observations I think point out the cause, and at the same time account for the rapid progress and fatal termination of the pulmonary *ædema*, under which my patient laboured. Some hydatids, contained in the cellular membrane of the lungs, were probably ruptured internally, and in an habit abounding with the *colluvies serosa*, the extravasated fluids would be every instant accumulating, and the bronchial vesicles, becoming more and more compressed, suffocation inevitably ensued.

THE diagnostics of the *hydrops pectoris*, whether the water be contained in the cellular membrane of the lungs, or in the cavity of the chest, are sometimes very obscure. Doctor Hoadly relates that he was

was present at the dissection of a dropical man, from the symptoms of whose disease it was with such certainty concluded, that water was contained in one side of the breast, that the only motive for examination was to determine into which cavity the fluid was extravasated. On opening his body however they discovered not a single drop of water, but found an almost total adhesion of the external coat of the lungs to the pleura; together with an inflammation, and numberless small ulcers in one lobe.

A SENSIBLE fluctuation of water in the breast is a symptom which rarely occurs, and it appears from Morgagni's observations, that it is not unusual for patients labouring under this disorder, to bear with ease a recumbent posture. But an *œdema* or dropsy of the cellular membrane of the lungs, when its attack is sudden, may often be distinguished by the following signs, although it must be acknowledged

known that they sometimes prove equivocal. The difficulty in respiration is constant, and increased by the least motion, though not much varied by different attitudes of the body; the patient complains of great anxiety about the *præcordia*, and when he attempts to take a deep inspiration, he finds it impossible to dilate his chest, and his breath seems to be suddenly stopped. The pulse is small, languid, and oppressed; the face pale and bloated; the legs usually swelled; and the whole habit is for the most part leucophlegmatic.

A DISEASE so urgent in its symptoms, so quick in its progress, and so often fatal in its termination, requires a method of cure of adequate expedition and efficacy. A brisk mercurial cathartic, which will not only unload the internal canal, but promote absorption, by stimulating and increasing the action of the whole vascular system, should be administered  
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without delay. I have lately seen surprising relief in a very alarming case, almost instantly procured by such a remedy. (a) Blisters to the legs have also sometimes a good effect; for by destroying the cuticle, and *rete mucosum*, they discharge the water from the cellular membrane of a depending part, and thus in some degree produce a general depletion. Punctures made with a small lancet, or with such an instrument as Doctor Fothergill has lately recommended, will answer the same end; and be less liable to produce pain and inflammation. Diuretics, sudorifics, and expectorants, as they all increase the more fluid excretions, are indicated in this disease. And if the most powerful medicines of one class fail, recourse should immediately be had to another. Seneka root in liberal doses, sometimes answers every intention, and operates powerfully by the skin, the kidneys, and the

(a) A similar case is recorded by Dr. Simson, in the Edin. Med. Essays, Vol. 6. p. 126.

the bronchial glands, to the great relief of the patient. But if the most active medicines prove ineffectual, and the aggravation of all the symptoms threaten almost instant dissolution, might not the *paracentesis* of the lungs be attempted with safety, and advantage? *Melius est anceps remedium quam nullum*, is an established maxim in physic, and certainly in this instance would justify the trial of an operation which is neither very painful, nor likely to be attended with any dangerous consequences. Many cases have been recorded of wounds in the lungs, which have been healed, without much difficulty. Nor have such accidents been succeeded by an *emphysema*; for it may be concluded from Mr. Hewson's ingenious experiments that a puncture or incision will not occasion any emission of air, into the cavity of the *thorax*, on account of the effusion of blood, and subsequent inflammation, by which the divided vesicles are first filled, and afterwards entirely

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closed.

closed. To produce a discharge of air, a laceration or superficial abrasion of the lungs seems to be necessary; and hence it is that fractured ribs are the most frequent causes of the *emphysema*.

SHOULD the *paracentesis* of the lungs ever be deemed expedient, the chest may be perforated by cautiously dissecting with a knife, as in the operation for the *emphysema*. If the lungs adhere to the *pleura* where the incision is made, they may be punctured with a lancet, and the water will thus be discharged without falling into the cavity of the *thorax*; but a trocar will be necessary to obviate as much as possible this inconvenience, if there be no adhesion. The operation, for evident reasons, should first be performed on the right side, and if this do not afford the patient sufficient relief, another opening may be made between the seventh and eighth ribs of the left side, in order to avoid the *pericardium*.

CASE

CASE OF A PALSY, ARISING FROM  
THE EFFLUVIA OF LEAD, IN WHICH  
ELECTRICITY WAS SUCCESSFULLY  
EMPLOYED.

ELECTRICITY, like all other active remedies, may prove injurious as well as beneficial to the human body; and it is to be regretted that experience has not yet supplied us with any certain *criteria*, by which to determine when it will be hurtful, when innocent, or efficacious. That analogy may deceive us is evident from many examples. A girl, about sixteen, who had lost the use of her arm, which was greatly wasted, became universally paralytic, after being electrified; and remained so above a fortnight.

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night. The general palsy was removed by proper medicines; but the diseased arm continued as before. Electricity was again tried, and repeated three or four days, when the girl became a second time universally paralytic, and even lost the use of her tongue. By a course of medicine she was once more relieved from this additional palsy; but the original one, which affected her arm, remained incurable. (a) A gentleman, aged forty-eight, inclined to corpulency, and of a phlegmatic temperament, had a paralytic affection of the leg and thigh. Electricity was tried, but the slightest shocks always increased the torpor of the limb. The same gentleman, twelve months afterwards, was attacked with an *hemiplegia*. To gratify his inclination, and contrary to my own judgement, I consented to the use of electricity a second time: and this remedy, which had before proved

(a) Vid. *Philos. Transact.* Vol. 48, p. 786; also, *Priestley's History of Electricity*, p. 386.

proved injurious, was now at least innocent, and even thought to be beneficial to him.

THE electrical shock incautiously communicated, may be productive of dangerous and even fatal consequences. Mr. R. aged fifty, subject to various nervous and hypochondriacal complaints, after suffering several slight paralytic affections, which yielded to medicine, was at length deprived of the use of one side. Electricity, and other active remedies, were applied. Gentle shocks were repeatedly given by a skilful person; and the patient seemed to receive benefit from each operation. But by an unfortunate mistake in the position of the chain, the shock was one day conveyed through the epigastric region, and not along the paralytic arm, which rested upon it. A violent pain was instantly perceived in the stomach, which in a few minutes was succeeded by a profuse vomiting of blood. The hæ-



morrhage continued two or three days, and so exhausted the strength of the patient, as certainly to accelerate, and perhaps to occasion his death.

PALSIES frequently succeed the *colica pictonum*, whether owing to some nervous sympathy between the bowels and the limbs, or to the translation of any morbid acrimony, cannot easily be determined. In such cases, the waters of Bath in Somersetshire are highly beneficial; and electricity, it is probable, would be a useful auxiliary to them. When the circumstances of the patient render a journey to those celebrated springs impracticable or inconvenient, the latter remedy may be tried alone with some prospect of success. Of this the following curious case, communicated to me by Dr. Withering, affords a presumptive proof.

JOSEPH

“JOSEPH ADAMS, aged 20, was admitted into the Stafford infirmary on the 16th. of September, 1768. Some months ago he felt a numbness and coldness in the left leg and thigh, which gradually extended all over him, his head excepted, which is now the only part he can move. His limbs are often seized with involuntary twitchings, as in the *chorea s. vitæ*. Pulse natural. Appetite good. Costive. This man was formerly used to work in lead mines, at which time he was often sensible of a sweet taste in his mouth; but for two years past has been employed in digging a navigable canal, and has been much exposed to wet and cold. An antimonial vomit, a mercurial purge, and an emulsion, with a large proportion of *ol. olivar.* were prescribed.

ON the 21st. He could move his right arm, and his legs a little, as he lay in bed. A number of small electrical shocks



shocks were passed through both arms, and ordered to be repeated daily.

23d. SWEATS after being electrified; is universally warmer; can stir his left arm.

24th. FEELS a tingling in his right arm. His fingers contract upon the chain, when the shock passes. The frequency of his pulse is not increased during the operation. Electrify all his limbs.

27th. CAN shut both his hands, and bring the right up to his mouth, when lying in bed; but not when raised up.

29th. FEELS the shocks more sensibly than he did at first. They always excite a strong tingling sensation. When raised upon his feet, can stand upright betwixt two assistants.

AT this time it was discovered that he had several venereal shankers, and an ulcer

cer upon the *glans penis*. The electricity was discontinued, and a course of sublimate solution, and mercurial uncti-  
on entered upon; by which means all the venereal symptoms were subdued.

November 30th. His paralytic complaints being just in the same state as on the 29th. of September, recourse was again had to the electrical machine; and two large spoonfuls of *ol. olivar.* were given twice a day, to prevent costiveness.

December 18th. SWEATS when electrified: has more motion in his body; feeds himself in bed, but cannot when up. The fingers sometimes drawn inwards, so as almost to touch the palms of his hands; his arms and legs always benumbed, except for a short time after the use of the machine.

28th. PALSY much the same; for the relief gained at the time of electrifying

ing ceases in a short time after it is over. Continues very costive. The antimonial vomit was repeated; a drachm of *pilul. gummos.* ordered to be taken twice in a day, with three ounces of the decoction of Peruvian bark. Omit the electricity.

January 10th, 1769. THESE medicines at first gave him stools, but they have not now that effect. The palsy in the same state. Complains of great pain in the right shoulder, and right side of the neck. A blister was applied to the neck, the pills continued, and the bark decoction changed for four ounces of paralytic infusion. An ounce of volatile liniment was ordered to be rubbed daily upon the spine; issues to be made in the thighs; and when the blister healed, a seton in his neck. He continued nearly in this method until the 12th. of April, without any other advantage than being free from his pains. He was ordered  
into

into the warm bath, every other day; and to take as much of the fresh leaves of cuckow pint\* twice every day, as his stomach would bear.

May 3d. THE cuckow pint creates an uncommon heat in his stomach, but produces no other sensible effect. Let blisters be applied to his legs, and afterwards to the lower part of the spine.

28th. THE palsy continuing in the same state, recourse was again had to electricity.

August 21st. HAS improved, though very slowly, in strength and motion. The muscles of his back allow him to stoop, and raise himself again: the right arm nearly as strong as when in health; but for more than a week past his palsy has continued the same, and he complains of  
gripping

\* *Arum Maculatum*, *Linnaei Species Plantarum*.

gripping pains in his belly, which is tense and very costive. The usual medicines not giving him stools, let him take a large spoonful of castor oil every morning. Continue the electricity.

September 6th. FREE from the pain in his belly; the castor oil purges him considerably. Has more use in his left arm, and sweats profusely after electrifying.

13th. STOOD himself to day.

November 10th. CAN raise himself from his chair, and stand without help.

22d. WALKS about, with the assistance of his chair.

December 17th. DURING this month was a good deal afflicted with the gravel, which gave way to the usual remedies.

27th. WALKS with one stick.

January

January 3d, 1770. BEGINS to walk without a stick. From this time he continued mending until the 11th. of May; when he was discharged perfectly cured.

THE first circumstance that strikes our attention in the history of this disease is the distance of time betwixt the patient's exposure to the deleterious *effluvia* of the lead mines, and the appearance of the palsy. That the palsy was occasioned by lead is most probable; as there seemed to be through the whole of the cure, more or less of the *colica pictonum* existing. The effects of the castor oil in this disease are too evident to pass unnoticed; especially as I have heard some very ingenious and candid practitioners assert, that they have found no more purgative quality in that oil, than in an equal quantity of olive oil. The medicine they used must have been highly adulterated.

THAT electricity does not afford relief  
in

in paralytic complaints, after five days application, has been asserted by a very ingenious philosopher; and I am afraid it is an opinion which has been too generally received. Dr. De Haen in his *Ratio Medendi* produces instances to the contrary; but none more striking than the above case, wherein it appears that the palsy continued in the same state, whenever the shocks were omitted. Patients are frequently discouraged by the painful sensation which large shocks excite, from persevering in an electrical course; and it is not uncommon to find, that any given degree of shock will occasion more pain in a diseased, and even in a paralytic limb, than in a sound one: I cannot omit adding, that I have never met with a case which resisted the power of small and repeated shocks, that would yield to great and terrifying strokes. Like other active and useful remedies, electricity may be given in too large a dose, and may then produce considerable mischief.

mischief. Nor are there wanting several well authenticated facts, to support this opinion. The largest shock I have ever found useful, has been from an eight ounce phial, coated in the common manner; and even this in many irritable habits, is considerably too strong. For there is an amazing difference in the sensibility of different constitutions to the electrical stimulus. Quick, lively people feel the most from it; those the least, who are dull and slow of apprehension.

CASES OF  
OF

# OBSTINATE CHOLICS,

CURED BY

THE USE OF ALUM.

A DUTCH writer of considerable merit, but not generally known in England, has recommended the use of alum in the *colica pictonum*, and in other obstinate and painful affections of the bowels, and has favoured the public with several well authenticated histories of its beneficial effects. (a)

I HAVE

(a) DE Colica Pictonum Tentamen, & Appendix, auctore, Joanne Graafhuis, M.D.

"CURA-

I HAVE administered this remedy in about fifteen cases; with a degree of success, which confirms his testimony, and induces me to propose it to the trial of other physicians. The dose in which I have given it, has usually been, from ten to twenty

"CURATIONIS methodus (colicæ scilicet pictonum) quatuor indicationibus absolvitur. Expostulat 1. lenimen doloris, nulla habita ad causam specialem ratione. 2. Causæ proximæ vel ablationem vel extinctionem. 3. Partium affectarum in integram, quantum fieri possit, restitutionem. 4. Alvi interea temporis, difficillime in ple-risque constipatæ, toto curationis decursu exsolutionem. Prima indicatio anodyna exposcit; secunda demulcentia; tertia roborantia. Sine his, levatio morbi duabus prioribus indicationibus impetrata, raro tuta fidaque est, hisce solis aliquando curatio integre absolvitur absque ullo aliorum extradietis jam indicationibus præsidio. Siquidem haud raro vidi morbum anodynus & demulcentibus, seorsum et per se, vel combinatis; sat magna copia & satis diu assumptis, vinci non potuisse: in quibus casibus omni spe sanationis impetrandæ abjecta, roborantibus fortioribus non calidis, ut intestinorum tonus relaxatus emendaretur, adhibitis, invincibilem ut videbatur hostem profligari feliciter. Quare hæc methodus a me tentata, deinceps mihi maxime commendabilis fuit; eoque felici-or quo medicamentorum adstrictoria potentia major, eorumque propinatio liberalior diuturniorque."

De Colica Pictonum, p. 48.



twenty grains, mixed with an equal proportion of sugar. When there was reason to apprehend that it might be too rough and austere in its action, I have directed it to be combined with gum arabic or *sperma ceti*: and in cases of flatulence, when a warm opiate was indicated, half a scruple of the *philonium Londinense*, made a useful addition to it. Fifteen grains of alum given every fourth, fifth, or sixth hour, for the most part prove gently aperient; and when the symptoms are not very severe, the second or third dose seldom fails to mitigate the pain, and sometimes entirely removes it. This remedy when continued for a sufficient length of time, seems to abate flatulence, to obviate spasm, to improve the appetite, and to strengthen the organs of digestion. On these tonic powers the virtues of alum must chiefly depend; though they may in part arise from its obtunding the morbid sensibility of the intestines, by an immediate action on their nerves.

To

To these it is applied more quickly, forcibly, and through a larger extent than most other astringents, from its ready solubility, great stypticity, and unchangeable nature. But without discussing the mode of its operation, I shall briefly relate the two following histories, selected from several others, of its salutary effects.

## C A S E   I.

January 28th, 1772. MR. G. aged thirty, a temperate and active man, had been subject more than twelve months, to a violent pain in the right *hypogastrium*, which often recurred periodically and continued two or three days, leaving a yellowness of the countenance, and great foreness of the *abdomen*. His belly was moderately soluble, and his pulse regular in the short intervals of his fits. For as he lived at a distance from Manchester, I had no opportunity of seeing him in the

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paroxysms

paroxysms of his disorder. The diagnostics of this case were obscure; but from a suspicion that his pain might be in the course of the ureter, I directed the following medicines,

*R. Pulv. uvæ ursæ ʒj. Aluminis usti ʒss.  
M. f. Pulvis in doses 24 æquales dividendus; quarum capiat unam ter die, ex unciiis tribus decocti sequentis.*

*R. Rad. petroselini. passular. solis. exacinnat. aa ʒj. Semin. & summit. dauci sylv. herb. parietar. aa ʒss. aq. fontanæ ℥iij. coque ad ℥ij. colaturæ & adde sp. nitri dulcis ʒj. aq. junip. com. ʒiij. M.*

THESE remedies were continued three weeks, and during the use of them the patient suffered no return of his disorder. The medicines proved diuretic, but he discharged no gravel, nor did his urine at this time assume any remarkable appearance.

MR.

MR. G. now considered himself as cured, and therefore neglected the repetition of his powders. In less than a month his cholic recurred with great violence; and, April 27th, 1772, he again applied to me for advice. I prescribed fifteen grains of burnt alum, and the same quantity of sugar, to be taken twice every day, in any agreeable vehicle, during the space of seven or eight weeks. And by steadily persevering in this course, he has remained six months entirely free from his disorder.

## CASE II.

September 21st, 1772. E. P. a house-painter, aged 28, had complained several days of a violent pain in the region of the navel, attended with a slight nausea, and frequent cramps in the extremities. Sixteen hours before I saw him he had taken two doses of castor oil, which

O 4

had

had yet procured no stool, nor afforded any relief. He was now afflicted, during the short remissions of his cholic, with very severe pains in his arms and shoulders. His countenance was yellow; his pulse beat about seventy five strokes in a minute; and his feet were cold. I directed him to go into the warm bath in the evening; and to take the following bolus every sixth hour.

R, *Spermatis ceti*, *aluminis rup.* aa ʒj,  
*syr. simplicis* q. s. M. f. bolus.

THE pain was much abated by the use of this medicine, before he tried the warm bath.

April 27th. HE had taken seven doses of alum, and was entirely free from pain; but remained extremely costive. The bolus was therefore omitted; and a solution of the cathartic salt in barley-water was ordered to be given at proper inter-

intervals, till several stools were procured. The succeeding day he continued easy, but to prevent a relapse, I prescribed a scruple of alum mixed with an equal quantity of sugar, to be swallowed twice every day, during the following week or fortnight. The patient soon recovered his health and strength, and I have reason to believe has remained ever since free from his disorder.

## C A S E S

IN WHICH THE

## W A R M B A T H

W A S

## SUCCESSFULLY EMPLOYED.

THE use of WARM BATHING is of great antiquity. Hippocrates recommends it in the strongest terms. *Calidum, seu Therma cutim emollit, attenuat, dolores tollit, rigores, convulsiones, nervorum distensiones mitigat, capitis gravitatem solvit.* (a) Aristotle, Pliny, Galen, and Celsus,

(a) Hippoc. Aph. 22. Sect. 5.

Celsus, have given their testimony in its favour. The Romans derived this practice from the Greeks, and regarded it both as an efficacious remedy, and as one of the highest enjoyments of luxury. But under the reign of Augustus Cæsar, who was cured of a lingering and dangerous malady, by the use of cold bathing, the warm bath fell, for a short time, into disrepute. This appears from Horace;

*Sane Myrteta relinqui**Distaque cessantem nervis elidere morbum**Sulfura contemni; vicus gemit; invidus ægris**Qui caput & stomachum supponere fontibus audent,*  
*Clusinis, Gabiosque petunt, & frigida rura.*

Hor. Ep. xv.

VAPOUR bathing, as I am well informed, is a universal practice amongst the native Indians of North America. When afflicted with the rheumatism, a disease to which, from their climate, mode of life, and rigid fibres, they are peculiarly incident,

dent, they shut themselves in a close place, and pouring water upon a large stone; heated to a sufficient degree, they expose themselves for a considerable time to the steams which arise from it. Covered with a profuse sweat, they then plunge into the cold bath; and afterwards receive the hot vapours as before, repeating for the most part twice or thrice these severe operations. A similar practice prevails in Russia and Siberia; and every person in those countries, from the sovereign, to the meanest peasant, uses twice in a day such artificial hot baths. The Abbe Chappe d'Aueroche, who travelled into Siberia in the year 1761, by order of the King of France, informs us that the heat of these baths is raised to 148, and occasionally even to 168 degrees of Fahrenheit's thermometer. In this intense heat the Russians sometimes remain two hours, pouring hot water frequently over their bodies; and then rush into the open air, dissolved in sweat, to roll themselves in the

the snow, during the most piercing frost, when the thermometer stands ten degrees below 0. Many chronic diseases are cured by this method of bathing; and the rheumatism is said to be almost unknown in Russia.

PROSPER ALPINUS relates that warm baths are used by the Egyptians, in all fevers except those of the pestilential kind; and in a variety of other disorders. They are employed also by the females of that country, especially by the Hebrew women, to render them more corpulent. "*Quod ut obtineant, multis diebus, dulcibus tepidis Balneis indulgent; in iisque diu morantes, comedunt, potant, clysteribusque ibi ex variis pinguedinibus, ac adipibus paratis utuntur, multaque etiam medicamenta per os assumunt.*"

IN England warm bathing is rarely employed in private practice, notwithstanding several modern writers of reputation



tation have strongly recommended it; and the experience of ages hath evinced its utility. To excite more attention to a remedy, which though well known is too much neglected, I shall briefly relate a few cases in which it proved eminently successful.

## C A S E I.

January 14th, 1770. A young gentleman, of an irritable habit, after drinking freely and swallowing a large quantity of Cayenne pepper, was seized with an inflammatory *angina*. The fever, swelling of the *fauces*, laborious respiration, difficult deglutition, and violent pain in the head, were succeeded by a delirium; and although these symptoms were in some degree mitigated by venæsection, cathartics, blisters, leeches applied to the throat, *pediluvia*, and by nitrous and antimonial medicines, yet they continued with great severity,

severity, and the patient passed six days and nights without enjoying the least slumber. Under these circumstances (January 20th) the warm bath was prescribed, and the young gentleman directed to sit in it half an hour. The delirium soon abated; he fell into a profound and refreshing sleep, in which he continued thirteen hours; and then awoke entirely free from fever or delirium. And in a short time he recovered his usual health and strength.

## C A S E II.

MASTER S. P. aged two years, healthy but of a delicate make, and with a head larger than is natural, was seized August 13th, 1771, at one o'clock in the morning, with severe convulsions. He had been slightly indisposed a day or two before, and the preceding evening a few eruptions were observed on his face and neck.

neck. His sister was just recovered from the small pox, and he had not been separated from her during her illness, so that there remained no doubt concerning the cause of these symptoms. An emetic was administered, and a laxative clyster afterwards injected. But the fits continued with great violence, recurring at shorter and shorter intervals, notwithstanding the application of a blister to the back, an antispasmodic liniment to the spine, and the assiduous use of paregoric elixir, foetid *sal volatile*, musk, camphor, the *pediluvium*, &c. The child's strength was now almost exhausted, his respiration became laborious, his extremities cold, his pulse trembling, quick and languid, and his face was alternately flushed, and of a cadaverous paleness. The variolous eruption neither increased nor receded.

SUCH was the situation of my little patient at eleven o'clock at night, when I directed him to be immersed, as high

as

as the chin, in warm water. The relief this afforded was almost instantaneous. Every convulsive motion ceased, his breathing became free and regular, he took notice of those around him, and seemed sensible of the present ease he enjoyed. He remained in the bath about ten minutes, and was much refreshed by it, but had a fit not long afterwards: This however was very slight, and yielded immediately to a clyster prepared of a strong infusion of Valerian root and assafætida, with a few drops of tinct. Thebaica which was in readiness, and should have been injected on his coming out of the water. He retained the clyster only a few minutes, but passed the rest of the night in a composed and comfortable sleep, and the next morning the eruption was universal. The pustules were distinct, but so slow in suppurating, that they died away without coming to any degree of maturity, although a cordial diet was enjoined, the bark prescribed, and small doses of sulphur,

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phur,

phur, mixed with syrup of poppies, were frequently administered.

## C A S E III.

MRS. H. aged thirty-five, a lady of a tender constitution, subject to scorbutic eruptions, and enfeebled by frequent child bearing, received in the beginning of January 1770, a severe shock by the untimely death of an infant at the breast, which occasioned a miscarriage and profuse uterine hæmorrhage. A variety of hysterical symptoms succeeded, and gradually increased. February 18th, my assistance was desired. She was then afflicted with great languor of body, and dejection of mind, with flatulence, want of appetite, and a violent sense of suffocation in her throat. Every morning a *delirium* came on, attended with severe convulsions. Her pulse was quick, fluttering, and irregular; her skin was dry, and

and since her miscarriage free from any eruption; and she complained of an oppression about the *præcordia*. A blister to the head was directed; a cordial and nourishing diet recommended; and the frequent use of the *pediluvium* enjoined. The following medicines were also prescribed.

R. *Affætidæ electæ* gr. xv. *Pulv. Ipecac. extract. Thebaic.* aa gr. j. *Ol. Mentbæ* gutt. ij. *syr. simp.* q. s. *M. f. Pilulæ mediocres omni nocte hora somni sumendæ.*

R. *Pulv. Cort. Peruvian.* ʒj. *Rasur. Ligni Guaiac. Sassafras, Cort. Winteran. Rad. Glycyrrhiz.* aa ʒij. *Aq. Font. bullient.* ℥j. *Infunde, vase clauso per sex horas, deinde cola.*

R. *Colaturæ præscriptæ* ʒiss. *Tinct. Valerian. vol. Tinct. Castor.* aa ʒj. *M. f. Haustus ter die sumendus.*

By these remedies she was much relieved, and continued better till the 12th of March; when she relapsed into all her former complaints, which recurred with an increased degree of dejection and anxiety of mind. Without my knowledge she had tried the cold bath, and had been sensibly injured by it. No eruption yet appeared on her skin; and the delirium, which was more violent than before, now invaded her always in the evening. Troches of sulphur and the compound lime water, with the pills mentioned above were at this time prescribed; and the patient was directed to use the warm bath every night, previous to the accession of the delirium.

March 13th. THE delirium recurred with much less violence, and was of shorter continuance; and after bathing the patient fell into a sound and composed sleep.

March 16th. THE warm bath was omitted, and the delirium was much more violent,

violent, and lasted longer. The following draught was directed to be taken an hour before its accession, the succeeding evening, and the use of the bath to be repeated.

*R. Sagapeni, Mosch. aa gr. x. Camphoræ gr. ij. Mucilag. Gum. Arab. q. s. simul tritis gradatim adde Aquæ Menth. vulg. simp. ʒiss. Tinct. Valer. simp. ʒij. Syr. à Cort. Aurant. ʒj. M. f. Haustus.*

By these means, assiduously pursued, the patient recovered her health before the end of March. Whenever the warm bath was omitted, which happened twice or thrice, she suffered sensibly by the neglect. Her delirium was more severe, and of longer duration, her sleep was shorter and less refreshing, and the succeeding day she was more troubled with anxiety of mind, oppression about the *præcordia*, and other nervous symptoms.

## CASE IV.

A LEARNED and very benevolent clergyman, who resides about forty miles from Manchester, consulted me by letter in the beginning of March, 1769. He had been several years afflicted with a variety of hypochondriacal complaints, which had succeeded the sudden repulsion of an eruption on his foot, by means of an astringent bath; and he was then under a continual anxiety and distraction of mind. He had one prevailing idea constantly in his head, and one distressing image before his eyes. These symptoms of his disorder he ascribed to a violent commotion of mind, at a time when he was under great depression of spirits, and which occasioned a sudden start, or convulsive motion, in one part of his head. In this part he felt a constant and forcible spasm, which he supposed extended itself

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to his breast and bowels, as he generally perceived a sense of contraction in those parts, attended with an inward heat. His eyes were particularly affected, being drawn as it were out of their sockets, and endued with an unnatural sensibility. In a second letter dated March 11th, he informed me that he perceived every night, when he lay in bed, a continual motion from his forehead upwards, and about his temples, like the undulation of waves. The uneasiness and pain in his head was so extreme, that he could not bear even the pressure of his hat. But all this bodily pain was trifling in degree when compared to the distress of his mind, arising from the irresistible force with which external objects distracted his eyes and imagination.

UNDER these unhappy circumstances he had consulted several Physicians of great eminence, and had tried a variety

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of



of medicines, the detail of which, as well as of those which I prescribed to him, would be equally tedious and unnecessary. Nothing had afforded him so much relief as the warm *pediluvium*, and the extract of opium, of which he had habituated himself to take ten or twelve grains every day. Medicine proving so ineffectual, I advised the gradual discontinuance of his opiates; recommended the frequent use of the warm bath; and directed hot water to be poured in a stream, upon the part of his head which was most affected. The following passages extracted from his letters, shew the beneficial consequences of this course. "My days begin to be easier, and I have not had such bad nights since I went into the warm bath, which is near two months ago. It has wonderfully softened and composed my head, and enabled me to sleep sooner and sounder than I used to do. I have made several attempts to use the cold bath along with it, but I am always obliged to desist, as it

it immediately alters me for the worse, greatly increases the distress in my head, and renders my sleep more disturbed. I am however attempting it again; and I hope with a better prospect of success. I should be much encouraged by finding myself able to bear it; as I am persuaded it would have a happy effect in strengthening and restoring me."—"I find myself daily advancing towards a more perfect state of health. I have brought myself at length to bear the cold bath very well, I use it every other day, and find a very happy effect from it, in restoring my spirits and strengthening my whole frame. But it would not do without the assistance of the warm bath, which is my constant antidote against any disagreeable effects from the other, and gives me never failing relief and rest at night. The pouring warm water, in a constant stream, upon that part of my head, where my complaint lies, has I apprehend, been of singular service in softening and opening it, and

and contributed greatly to that happy change which I find in myself. I have been gradually weaning myself from opium; and have reduced the dose from three pills to one."

THIS gentleman soon recovered his health, and has been ever since free from any returns of his disorder.

I HAVE recommended warm bathing in a variety of other complaints, and for the most part with the happiest success. Like other remedies, however, it has sometimes disappointed my expectations; and in two instances its operation proved in some degree unfavourable. The one case was a violent pain resembling the sciatica, but which I believe proceeded from an affection of the kidney. The other was a most troublesome sense of motion in the *uterus* from one side of the pelvis to the other, which occurred at the end  
of

of every fortnight, in the intervals between the *catamenia*, and lasted generally three or four days. The patient was free from this complaint when in a sitting posture; and it was most uneasy to her when she was walking. The warm bath aggravated the pain in the former instance; and seemed to protract the disorder a day or two in the latter.

## MISCELLANEOUS

## CASES

## AND

## OBSERVATIONS.

1. **I**T is highly probable that Palsies frequently arise from diseases of the *viscera*, without any previous fault in the brain or spinal marrow. And considerable errors may be committed in practice, by a want of precision in distinguishing the

## OBSERVATIONS. 221

the causes from which they proceed. Large evacuations are often indiscriminately directed in these disorders, from a supposition that they arise from plentitude; and thus irreparable mischief is done in those cases of weakness or irritability, which are now most numerous.

I HAVE seen several *hemiplegias* which derived their origin from affections of the liver; others from an *atonia* of the stomach and bowels; and three instances have occurred to me of Palsies from pregnancy. The following history is of this kind.

MRS. D. of Rochdale, aged 21, whose *menfes* had always recurred with regularity, but attended with great pain and general disorder, in the spring of 1771 had a miscarriage. The following August the *catamenia* did not appear at the usual period. She had a violent pain in the loins and about the *os sacrum*, which continued

tinued several hours, and was then succeeded by a pain equally acute in her head. Soon afterwards she lost all power of speech, and the use of her right side. Her habit was not plethoric, but an experienced and sensible Apothecary, before my arrival, had taken from her arm half a pound of blood, had applied a blister to her back, and a volatile liniment to the side affected. By these means she recovered in about sixteen hours the use of her side, but still complained of a *torpor* in it, and of a dull pain and confusion in her head. Her pulse was soft and natural, and her blood of a proper texture. I considered the palsy as arising from an uterine affection; and directed a gentle purgative of rhubarb and magnesia every other night, and an infusion of Peruvian bark and Valerian, to strengthen the habit of the patient, and to abate irritability. Venæsection was also recommended a few days before the next period of the *catamenia*. At the return of this

this period she had a second paralytic stroke, of the same kind as before, and preceded by the like symptoms. Venæsection had been omitted, and she had neglected her medicines. She was now evidently in a state of pregnancy. I advised a repetition of the remedies before prescribed; and recommended the use of a temperately cold bath. She complied with these injunctions, and had no return of her disorder.

2. FULLER, in his *Medicina Gymnastica*, strongly recommends COLTSFOOT in consumptive disorders. It appears to be anodyne and a corrector of acrimony; but only exerts these powers when taken in a large quantity. I gave a strong infusion of it to a young woman, who had various running sores, hectic heats, a colliquative *diarrhœa*, and wandering pains all over her body. It produced a better digestion in the ulcers, alleviated her pains, and abated the violence of the *darrhœa*.

*diarrhœa*. Cicuta, and Peruvian bark were before administered with good effect, but had been for some time discontinued, on account of their expensiveness. I thought the *tupilago* afforded more relief to the patient than either of them.

3. LARGE doses of opium have been frequently administered in painful and spasmodic diseases, not only with safety, but with the happiest success. A very learned and ingenious practitioner informs me that he lately gave to a lady in the fifth month of her pregnancy, who had an acute pain in her bowels, which threatened an abortion, twenty-two grains of the extract of opium, and three hundred drops of laudanum, in the space of thirty-six hours. And by these means, and these alone, she perfectly recovered. But the nervous system, especially in spasmodic disorders, is subject to great and sudden changes, which must sometimes render the doses of medicines, powerful in their

their operation, uncertain and liable to produce the most dangerous effects. The following case, communicated to me by a young physician, who is likely to be an ornament to his profession, affords a striking confirmation of the truth of this observation.

A YOUTH, who was admitted into the hospital at — on account of a violent spasmodic disease, which recurred periodically in the evening, after trying a variety of remedies, was directed to take the *extractum Thebaicum* in such a quantity as might prove sufficient to mitigate the violence of the paroxysms. The dose amounted to twenty-two grains, and was repeated every night, during the space of a week, without producing any soporific effects. On the eighth night it was observed that he had no return of the spasm; and in the morning he was found dead. It is probable that a sudden alteration had taken place in the nervous system of this

Q patient,



patient, and that the opium, in consequence of it, exerted with full force its usual powers on the body.

4. I HAVE lately received from a clergyman of great learning and humanity, a small quantity of seed, which is brought from the coast of Malabar, and is celebrated in the East Indies as a powerful remedy for the cholic. It is called by the Portuguese AJAVA. "Captain B. formerly commander of the Prince Henry Indiaman, procured some of it from the Jesuit's College at Goa, brought it over with him to England, and distributed it amongst such of his neighbours and acquaintance as were troubled with the cholic, who found great benefit from the use of it. Being himself exceedingly afflicted at times with the windy gout, and having in one of his fits applied several things in vain, he made trial of the *ajava seed*, and found it so very efficacious in expelling the wind, and removing the  
gout

gout from the stomach and head, that he has ever since taken it on the like occasions. The most usual effect of it is to procure a plentiful discharge of wind, and sometimes it relieves the disorder by a stool or two." From the sensible qualities of this seed, I should judge it to be an active remedy: But I have yet had no experience of its efficacy, and I mention it only to promote an enquiry into its medicinal virtues.

5. A LADY, aged 40, was subject several years to an excessive degree of acidity in her stomach and bowels, which medicines sometimes palliated, but never cured. By degrees the acidity abated, and at length entirely ceased; but she became subject to frequent diarrhoeas, to a *profluvium mensium*, and to copious and sudden discharges of urine. She complained of great feebleness, of weariness in her legs, and of a constant pain in her loins. Her pulse was languid and slow.

her skin cold, of a dark hue, and covered with freckles. She had often a putrid taste in her mouth, at which time the saliva was tinged with blood; and in the intervals of her *menfes* she had a continual discharge of brown, foetid water from the *uterus*.

THESE symptoms are characteristics of a true scurvy or dissolution of the blood; which in this instance seems to have been produced by the long continuance of an acid acrimony in the first passages. Dr. Gaubius has well described the effects of such an acrimony. *Acor primis maxime viis infestus, tempore & sanguinem humoresque inde deductos subiens, nascitur ex usu diuturno acidorum aut acescentium, quæ viribus corporis non subiguntur; aut quia ex se indomabilia sunt naturæ humanæ, aut ob virtutis coëtricis impotentiam. Debilitas igitur solidorum universalis, aut privata viscerum primæ digestionis; irritabilitas regulares horum motus turbans; inertia defectusve succorum præ-*

*præparantium; circulationis & caloris naturalis languor; neglectus motus animalis, eo disponunt, ut pateat, cui maxime ætati, sexui, vitæ generi, hoc acre frequentius eveniat. (a)*

To determine the comparative nutritive powers of different foods, a few years ago a Physician, of distinguished abilities, made a variety of experiments, to which he at length fell an unfortunate sacrifice. I have been well informed that he lived a month upon bread and water only, by which he daily diminished in his weight. At the end of that time, he added sugar to his bread and water, and confined himself a fortnight longer to this diet. His breath then became offensive, his gums bled, putrid sloughs appeared in his mouth, and *vibices* spread themselves over different parts of his body. These symptoms were removed by a return to animal diet, and by the use of the bark.

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(a) Gaubij Pathologia, Sect. 307.

It is contrary to the prevailing THEORY, that vegetable food should give rise to putrefaction in the animal system; but there are many proofs of the truth of it. Doctor Bisset relates several cases of highly putrid fevers, quick in their progress and fatal in their termination, wherein the septic ferment evidently began in the *primæ viæ* after eating heartily of acedent food. Calves also put to graze in a rich pasture, towards the close of autumn, are sometimes affected with a putrid disease, which destroys them in thirty hours. The farmers call it the *quarter felon*, because one hind quarter becomes putrid and emphysematous; and as soon as the *emphysema* extends to the spine, the animal expires: It is most incident to calves that are healthy. Juices, which are perfectly animalized or assimilated, are less prone to putrefy than such as are crude, or blended with a great proportion of acedent chyle. The meat of bullocks and of sheep which have been kept fasting a sufficient

sufficient length of time before they are killed, that is till the recent chyle be completely assimilated, is firmer and continues sweet much longer, than the flesh of such as are slaughtered soon after taking them from their pastures. (b)

THE learned writer whom I have quoted above observes. *Dulciaria, saccharata, mellita, bisque similia, usu immodico, per occultam acrimoniam dentibus inimica sunt; pro vi sua fermentante, acidum ingenerant, et quæ ex hoc profluunt mala; præterea solvunt tenuantque humores; horum minuta densitate et firmas partes relaxant; non uno hinc nomine generi nervoso infesta, infantibus, sexui sequiori, debilibus, hystericis, hypochondriacis, obsunt. (c)*

FROM the useful and accurate experiments of Sir John Pringle it appears that

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(b) Vid. Bisset's Medical Observations, p. 85.

(c) Gaubij Pathologia, Sect. 470.

bread, water, and fresh gall, when fermented together, first turned sour, then putrid. And Doctor Bryan Robinson found that perspiration is diminished by fruit, and garden vegetables. Perhaps these facts may reflect some light on the preceding observations.

6. MR. William White of York, the ingenious author of an Essay on the Diseases of the Bile, has lately communicated to me some curious experiments on the solution of those calculous concretions, which are called gall stones. He has discovered that *alcohol* saturated with *oleum terebinthinæ æthereum*, quickly and totally dissolves them. And induced by the powerful action of this *menstruum* out of the body, he has administered it internally with some degree of success; and is desirous of recommending it to the trial of others. Such a remedy, if it prove effectual, must be regarded as a valuable addition to the *materia medica*. But if we consider

consider the peculiar œconomy observed by nature in the circulation of the blood through the liver; the long stagnation of the bile in the gall bladder; and the quickness with which *alcohol* and oil of turpentine pass off by urine and perspiration, it is to be feared that such a *menstruum*, powerful as it may be, will scarcely reach the solvend. To this objection also we may add, that the diagnostics of the disease are often obscure and uncertain. The same gentleman informs me, that he was not long since present at the dissection of a woman, who had laboured several months under an obstinate jaundice, attended with violent and periodical pains in the region of the liver, with costiveness, white stools, and other symptoms of biliary concretions. No such cause however was found; but a large schirrus, extended itself from the *pylorus* along the *duodenum*, so as to close the orifice of the *ductus communis*, and thus prevent the passage of the bile into the intestines. But  
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I mean not to discourage, and wish rather to promote the trial of a medicine, which is active in its properties, and yet unlikely to prove injurious in its operation. Such experiments are justified by a maxim well known, and of undoubted authority in physic.

7. I COMMUNICATED some time ago to Doctor Priestley, the history of a putrid fever, in which the injection of mephitic air into the intestines, was attended with very beneficial effects. The Doctor has annexed it to his papers on factitious air, which will probably be published in the next volume of the Philosophical Transactions. A case, of the same kind, has very lately occurred to me; and I shall here briefly relate the most important particulars of it.

ELIZABETH GRUNDY, aged seventeen, was attacked on the 16th of December, 1772, with the usual symptoms of a con-  
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tinued fever. The common method of cure was pursued; but the disease increased, and soon assumed a putrid type. On the 23d, I found her labouring under a constant *delirium*, with a *subfultus tendinum*: Her skin was hot and dry, her tongue black, her thirst immoderate, and her stools were frequent, extremely offensive, and for the most part involuntary. Her pulse beat about 130 strokes in a minute; she dosed much; and was very deaf. I directed wine to be administered freely; a blister to be applied to her back; the *pediluvium* to be used several times in the day; and mephitic air to be injected, under the form of a clyster, every two hours. The next day her stools were less frequent, had lost their fœtor, and were no longer discharged involuntarily; her pulse was reduced to 110 strokes in a minute; and her *delirium* was much abated. Directions were given to repeat the clysters, and to supply the patient liberally with wine. These means were assidu-

ously

ously pursued several days; and the young woman was so much recruited by the 28th, that the injection was discontinued. She was now quite rational, and not averse to medicine: A decoction of the Peruvian bark was therefore prescribed; by the use of which she speedily recovered her health.

PRO-

## P R O P O S A L S

FOR ESTABLISHING MORE

ACCURATE AND COMPREHENSIVE

B I L L S

O F

M O R T A L I T Y.



*Fluminis ritu feruntur.*

HOR.

*Fas est et ab hoste doceri.*

Ovid. Metam.

PROPOSALS FOR ESTABLISHING  
MORE ACCURATE AND COMPREHENSIVE  
BILLS OF MORTALITY IN  
MANCHESTER.

THE establishment of a judicious and accurate register of the births and burials, in every town and parish, would be attended with the most important advantages, medical, political, and moral. By such an institution, the increase or decrease of certain diseases; the comparative healthiness of different situations, climates, and seasons; the influence of particular trades and manufactures on longevity; with many other curious circumstances, not more interesting to Physicians,

ficians, than beneficial to mankind, would be ascertained with tolerable precision. In a political view, exact registers of human mortality are of still greater consequence, as the number of people and the progress of population in the kingdom, may in the most easy and unexceptionable manner, be deduced from them. They are the foundation likewise of all calculations concerning the values of assurances on lives, reversionary payments, and of every scheme for providing annuities for widows, and persons in old age. In a moral light also such *tables* are of evident utility, as the increase of vice or virtue may be determined, by observing the proportion which the diseases arising from luxury, intemperance, and other similar causes bear to the rest; and in what particular places distempers of this class are found to be most fatal.

A FEW examples may perhaps confirm and illustrate these observations. In the  
Pais

Pais de Vaud, a district of the province of Bern in Switzerland, and in a country parish in Brandenburg, 1 in 45 of the inhabitants die annually; and at Stoke Dainarell in Devonshire, 1 in 54; whereas in Vienna, and Edinburgh, the yearly mortality appears to be 1 in 20; in London 1 in 21; in Amsterdam and Rome 1 in 22; in Northampton 1 in 26; and in the parish of Holy Cross, near Shrewsbury, 1 in 33. In the Pais de Vaud, the proportion of inhabitants who attain the age of eighty, is 1 in  $21\frac{1}{2}$ ; in Brandenburg 1 in  $22\frac{1}{2}$ ; in Norwich 1 in 27; in Manchester 1 in 30; in London 1 in 40; and in Edinburgh 1 in 42. These facts afford a striking but melancholy proof, of the unfavourable influence of large towns on the duration of life.—From the most accurate computation, London is found to contain 601750 inhabitants; and from 1759 to 1768, the burials have exceeded the christenings every year up-

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wards of 7000; which is the recruit the metropolis requires annually from the country, to support the present number of its people. In 1757, a survey was made of Manchester and Salford. The number of inhabitants then amounted to 19839; and the burials, exclusive of those amongst Dissenters, were 778. But since that time the populousness of Manchester has considerably increased. Half of all that are born in this town die under five years old. The island of Madeira is so remarkably healthy, that two thirds of all who are born in it live to be married. Autumn is the most healthy, and summer the most sickly season there. The mortality of spring and summer, is to that of autumn and winter, as 115 to 100. In Manchester, diseases are most frequent and fatal in the months of January, February, and March; and least so in July, August, and September. The mortality of these two seasons is as 11 to 8; and of the

the first six months of the year, compared with the last six months, as 7 to 6. M. Muret, Secretary to the Oeconomical Society at Bern, informs us, that he had the curiosity to examine the register of mortality in one town, and to mark those whose deaths might be imputed to intemperance. And he found the number so great, as to incline him to believe that drunkenness is more destructive to mankind than pleurifies, fevers, or the most malignant distempers. (a) Such are the important uses, to which Tables of Human Mortality have been applied.

THE following plan of a more exact and comprehensive register, than has hitherto been kept, is submitted to the consideration and correction of those who

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(a) Vid. a very valuable Treatise on Reversionary Payments, by the Rev. Dr. Price; the Bern Observations for the year 1766; Philosophical Transactions, vol. 57 and 59; and Dr. Short's new Observations.

undertake the charge of the BILLS of MORTALITY in *Manchester*.

1. LET a table of *christenings*, *marriages*, and *burials* be kept in every church, chapel, and place of religious worship in the town, and delivered at certain stated times, to the clerk of the parish church, to be formed into one general BILL, and quarterly or annually published. It is of importance that the *still born* children, and those who die before *baptism*, should also be registered; and the midwives should be desired to deliver an account of them. Perhaps the sextons may assist in ascertaining their number, as they are usually interred in church yards, or other public burial grounds.

2. LET the table of *christenings* specify the *males* and *females* who are baptized; and the table of *deaths* express the *males* who die, under the several denominations of

of children, batchelors, married men, and widowers; the *females* who die under the corresponding denominations of children, maidens, married women, and widows. An observance of these distinctions will determine the comparative number of *males* and *females* who are born; the difference between the sexes in the expectation of life; and the proportion which the annual births, deaths, and marriages bear to each other. Thus by the BILLS of MORTALITY which have been kept at Vienna, Breslaw, Dresden, Leipzig, Ratisbon, and other towns in Germany, it appears that the proportion of *males* to the *females* who are born is as 19 to 18: But the proportion of *boys* to *girls* who die under ten years of age, is as 7 to 6; and of *married men* to *married women* in Breslaw as 5 to 3; in Dresden as 4 to 1. At Vevey, in Switzerland, for 20 years, ending in 1764, there died in the first month 135,

R. 3

*males*

*males* to 89 *females*; and in the first year 225, to 162. The same accounts shew likewise that both at Vevey and Berlin, the *still-born males* are to the *still-born females* as 30 to 21. In the parish of Holy Cross, Salop, an account was taken by the Vicar, A. D. 1760, of the number of *males* and *females* of the age of seventy and upwards: The latter amounted to *thirty-five*, the former only to *eight*. At Paris, and in Sweden, it has been observed, that *women* not only live longer than *men*, but that *married women* live longer than *single women*. And in Switzerland it appears particularly, from the calculations of M. Muret, that of equal numbers of *single* and *married* women, between the age of 15 and 25, more of the former died than of the latter, in the proportion of 2 to 1. (b)

3. LET the ages of the dead, under *five*,

(b) Vid. Dr. Price's Observations on Reversionary Payments.

*five*, be specified by single years; and afterwards, by periods of five or ten years.

4. LET the BILLS of MORTALITY contain not only a list of the diseases of which all die, but also express particularly, the number dying of each disease, in the several divisions of life and different seasons of the year. To accomplish this it will be necessary for the Physicians of the town, to consider the present list of distempers; to reject all synonymous and obsolete terms; and to give a short and easy explanation of those which are retained. And whenever a person dies, who has been attended by any of the faculty, the Physician, Surgeon, or Apothecary, should be desired to certify in writing the age, and distemper of the deceased.

THE following TABLES are constructed upon this PLAN; and if the scale be

R 4 enlarged,

enlarged, will serve for the *Church Register*, as well as for quarterly or annual publication. It appears to be unnecessary, and in many instances would be exceptionable, to insert the names of the deceased: Their *denomination* and *disease* therefore, may be expressed, in the columns allotted to each, by dots or units, which are to be summed up at the end of every three months, and set down in figures.

THE LISTS of *Marriages* and *Christenings* may be kept in the common method.

THE additional trouble which this more comprehensive and accurate REGISTER will occasion to the Clerks of the several churches, &c. may be compensated by distributing amongst them, at the discretion of any judicious clergyman, the money which arises from the sale of the quarterly BILLS. If a hundred of these

these be subscribed for, or sold at the price of one shilling each, the sum of twenty pounds per annum will thus be raised, without imposing any new burthens on the town. Every second, third, fourth, or fifth year the bills may be collected into a volume, and published, under the direction of two or more Physicians, with observations on the state of the weather, the prevalence of epidemic diseases, their symptoms and method of cure, and the increase or decrease of population during that period. Such a work will afford the most important instruction to the public; and from the profits of it, a fund may be established for the benefit of the Clerks, and the support of the institution.

N. B. It is obvious that the plan here proposed is not local, and that it may be executed with equal facility and advantage in every town and parish in the



# 250 PROPOSALS FOR, &c.

the kingdom.—BILLS of MORTALITY might be rendered more useful in a political view, by taking sometimes the number of houses and inhabitants, under and above particular ages, wherever such registers are established.

It is proposed that a Bill should be introduced into the House of Commons, for the purpose of establishing a more accurate and complete system of registers of births, marriages, and deaths, throughout the Kingdom. It is further proposed that a Bill should be introduced into the House of Commons, for the purpose of establishing a more accurate and complete system of registers of houses and inhabitants, throughout the Kingdom.

It is further proposed that a Bill should be introduced into the House of Commons, for the purpose of establishing a more accurate and complete system of registers of houses and inhabitants, throughout the Kingdom. It is further proposed that a Bill should be introduced into the House of Commons, for the purpose of establishing a more accurate and complete system of registers of houses and inhabitants, throughout the Kingdom.

TABLE

I.

## T A B L E of D E A T H S.

January, February, March.

Ages.	Males.	Females.	Ages.	Bachelors.	Married Men.	Widowers.	Maidens.	Married Women.	Widows.
1.			20.						
2.			25.						
3.			30.						
4.			35.						
5.			40.						
10.			45.						
15.			50.						
Total under 15.			60.						
			&c. &c.						

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T H E E N D.

# ERRATA.

In various places for *hemorrhage* read *hemorrhage*.

Page.	Line.	
13,	3,	for <i>are</i> read <i>is</i> .
33,	last,	for <i>indisposed</i> read <i>not disposed</i> .
43,	6,	for <i>beat up</i> read <i>beaten</i> .
46,	9,	for <i>draft</i> read <i>druff</i> .
72,	9,	for <i>thirty</i> read <i>twenty</i> .
105,	2,	for <i>hasted</i> read <i>hastened</i> .
116,	12,	for <i>minute</i> read <i>small</i> .
125,	11,	for <i>beat</i> read <i>beaten</i> .
185,	9,	for <i>chorea f. vitæ</i> read <i>chorea S. Viti</i> .
224,	9,	for <i>tupilago</i> read <i>tuffilago</i> .

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