

arsenic. Dr. TANNER administers the extract internally or with oxide of zinc as a pessary. (F. 459, 461.) A solution of atropia is a convenient mode of administering it, (atropiæ, gr. j, aquæ. f. ʒj.; three to five drops for a dose.) The physiological effects of the drug must be obtained to insure its medicinal influence.

*Camphora* is extremely useful in strangury. It may be given as *aqua camphoræ* in ounce doses, combined with  $\frac{1}{8}$  of a grain of morphia, every quarter of an hour, until four or six doses be taken. When it is feared that strangury will result from the application of a cantharidal blister, this complication can be prevented by wetting the surface of the blister with tincture of camphor before applying it.

*Cannabis Indica* is used by some surgeons.

*Cantharis* is especially valuable in vesical irritability as it occurs in women, without the existence of acute inflammation, and not produced by uterine displacements; also in the vesical tenesmus which sometimes accompanies chronic prostatic disease.

*Carbonicum Acidum*. As a local sedative, carbonic acid gas has been employed with considerable success in relieving pain and checking the constant desire to void the urine. (See under Spermatorrhea for the method of applying the gas.)

*Chloral*, in occasional small doses, is frequently efficacious in relieving the symptoms, especially when dependent on lesions of the brain or spinal cord.

*Colchicum* often succeeds admirably when the patient is of the rheumatic or gouty dyscrasia. The following is a good combination:

465. R.	Vini colchici,	āā	f. ʒj.	
	Spiritus atheris nitrosi,		gr. ʒ.	
	Morphiæ sulphatis,		f. ʒj.	M.
	Aquæ,			

This amount every night at bedtime. (Gross.)

*Copaiba*. The internal use of the balsam of copaiba is particularly called for in irritability from inflammatory causes, after the acute symptoms have measurably subsided.

*Digitalis*. In irritability with suppression a digitalis poultice will often relieve the symptoms.

*Gelsemium* is frequently an efficient agent in allaying vesical irritability.

*Opium*, in the form of laudanum enemata, is very efficient in simple irritability; also as suppositories.

466. R.	Pulveris opii,	gr. j-ij.	
	Butyri cocœ,	q. s.	M.

For one rectal suppository.

*Potassii Bromidum*, and the other bromides, freely given internally, often relieve the pain and spasm.

*Zinci Oxidum* is added to vaginal suppositories for vesical irritability with advantage. (F. 461.)

## LITHIASIS. (STONE, CALCULUS, GRAVEL.)

PROFESSOR JOHN W. S. GOULEY, M. D., OF NEW YORK.

This surgeon, who has given much attention to the removal of calculi by lithotripsy, remarks that there are many cases so treated where the cystitis continues for a long period; and the opponents of the operation are too ready to attribute it to lithotripsy, losing sight of the fact that this inflammatory condition had existed long before the operation, which has often greatly mitigated and rendered it much more controllable.

One of the reasons for the continuance of this cystitis is neglect of after-treatment. The French often begin to treat the cystitis before operating, and continue the treatment after the operation until all traces of inflammation disappear. Stagnation of urine is of very common occurrence in calculous cystitis; patients seldom completely empty the bladder before or after some of the operations for stone, and as long as there is stagnation, even only to a small fraction of an ounce, cystitis will continue, and in a few months may become obstinate, and even give rise to a phosphatic stone. Of late the English have adopted the French practice of constantly withdrawing the residual urine, and of beginning vesical irrigation immediately after lithotripsy.

Many American surgeons now make it a rule to instruct patients to draw off the last drop of residual urine twice daily, and to irrigate the bladder, and enjoin them to continue this practice until the urine is clear and passed at normal intervals, and tell them besides that to neglect this is to render themselves liable to the recurrence of stone. In some cases, it is necessary to irrigate the bladder with nitrate of silver solution (weak), but in the majority tepid water or a borax solution will suffice.

One of the main points in after-treatment is to guard against the recurrence of stone. Whatever may have been the original cause should, if possible, be removed. If, for instance, the stone has been of diathetic origin, such hygienic rules and medical treatment should be prescribed as the case requires. The existing dyspepsia should be relieved, and the chylo-poietic viscera put as soon as possible into their normal condition. In addition to attention to diet, to the functions of the skin, to exercise, etc., Dr. GOULEY is in the habit of

giving a few brisk cathartics, then to prescribe a laxative and alterative pill, after the following formula :

467. R.	Resinæ podophylli,			
	Ext. fl. ipecacuan.,			
	Ext. nucis vomic. alch.,	āā	gr. v.	
	Hydrastinæ,		gr. xxx.	
	Leptandrinæ,		gr. xx.	M.

Make twenty pills. One pill every night.

After the patient has taken forty or more of these pills, he should take a small dose of Friederichshall bitter water, or the Hunyadi Janos, every morning half an hour before breakfast, or the following :

468. R.	Sodii sulphatis,		ʒj.	
	Ammonii chloridi,		ʒss.	M.

To be dissolved in a pint of water; dose, one tablespoonful in half a glass of water every morning, half an hour before breakfast. This may be continued for several months. A grain of sulphate of iron may be added to each dose.

DR. GEORGE HARLEY, F. R. S., ENGLAND.

This author has given a series of directions for arresting the formation of uric acid calculi, and facilitating their discharge. Tea, coffee, wines and beers are to be prohibited, or at least used in great moderation. He attaches great importance to the quantity and quality of the drinking-water. Hard water should be carefully avoided. Distilled water is preferable both for drinking and cooking purposes. A patient should take it freely, say from two to three pints of filtered rain-water in the twenty-four hours. As regards the benefits of the natural mineral waters, he believed they are chiefly due to the *alkalies* they contain. Of these, the carbonates, citrates and acetates of soda, potash and lithia, are those in most general use. Ammonia is not suitable, as the salt it forms in the uric acid diathesis is less soluble than any of the others. More depends on the dose than the kind of alkali given. As a general rule, it is unnecessary to render the urine more than neutral, except in cases where we are attempting to dissolve a stone already formed.

DR. DEBOUT D'ESTRÉES, OF FRANCE.

In reference to the prevention of gravel, this writer observes (*Practitioner*, June, 1877,) that he has learned from experience with regard

to the effect of some vegetables, viz., asparagus, sorrel, tomatoes, green beans, in the production of uric acid in all those who are affected with gravel. The absorption of asparagus in a rather considerable number of cases, about 20 per cent., is followed by more or less violent pains in the loins, and sometimes shortly afterwards by nephritic colic. He never noticed that it was followed by a more considerable expulsion of uric acid. He is of opinion that asparagus does not produce uric acid, but that as it determines temporary congestion in a kidney which already contains some red sand, it facilitates the agglomeration of it, and may produce the formation of gravel.

With reference to sorrel, green beans, and tomatoes, they less frequently produce pains in the loins, but their absorption is followed by the emission of uric acid; nevertheless, a small number of patients complain of pain in their loins after having eaten those vegetables; and with some, this is so evident that they spontaneously cease eating them.

In the treatment of the different forms of gravel, he strongly recommends the mineral waters of Contrexeville. It expels the gravel without pain, and is both tonic and restorative.

SIR HENRY THOMPSON, F. R. C. S., ETC., LONDON.

This distinguished surgeon delivered some lectures in 1873 on the preventive treatment of calculous disease, and as nineteen or twenty stones are urates, his especial question was, "How to prevent uric acid calculus?" He condemns reliance on diuretics and strongly alkaline waters, such as Vichy. At the bottom of the tendency to uric acid production, there often lies inactivity of the liver. For this, nothing is so valuable as the *saline* mineral waters, as Pülna, Friederichshall, Marienbad, Carlsbad or Franzensbad, (in order of their strength.) These waters should be given, from three to ten ounces, with half the quantity of hot water, before breakfast. In regard to *diet*, the patient should eschew alcohol, saccharine and fatty articles. Butter, cream and pastry are included in the last mentioned. Fresh, green vegetables may be taken freely, but not sweet fruits, as grapes, pears and plums.

All medicinal agents, secret or professional, are solutions of lime, soda or potash, alone or combined. Of all these, the citrate and the bicarbonate of potash are preferred by our author. The former may

be taken in doses of gr. xl-l, every three or four hours, in aquæ f. ℥iv. The following conditions are essential to success: certainty that the stone is uric acid and of small size; that the urine is acid, and never ammoniacal.

469. R. Potassii bicarbonatis, ℥ xij.  
Acidii citrici, gr. viij-xxiv.  
Aquam, ad f. ℥ xij. M.
- One or two tablespoonfuls in a glass of water, thrice daily. Each ounce contains ℥j citrate of potassa.

DR. YENABLES, LONDON.

470. R. Sodii boratis, gr. viij.  
Sodii bicarbonatis, gr. ix.  
Syrupi aurantii corticis, f. ℥ iss. M.
- To be taken during the day, in soda-water, for the red deposit seen in the urine of persons predisposed to gravel. The borax and the bicarbonate of sodium may be replaced by from four to six grains of carbonate of lithium.

S. W. BUTLER, M. D., PHILADELPHIA.

471. R. Fresh root of hydrangea arborescens, 2 pounds.  
Water, 6 quarts. M.
- Boil down to two quarts; strain, and add one quart of honey, and boil down to one quart. A teaspoonful twice or three times a day.

Dr. BUTLER highly recommends this remedy in cases of sabulous and gravelly deposits in the bladder. Under its use large quantities of sand and gravel have been removed.

A fluid extract of the hydrangea arborescens is prepared by the leading pharmacutists, and may be readily obtained.

C. W. FRISBIE, M. D., NEW YORK.

472. R. Sodii biboratis, ℥ ij.  
Extracti uvæ ursi fluidi, f. ℥ j.  
Spiritus ætheris nitrici,  
Tincturæ opii deodoratæ, āā f. ℥ ss.  
Aquæ, f. ℥ iij. M.
- A teaspoonful from three to six times daily, in uric acid diathesis or brickdust deposit.

The celebrated *Haarlem oil*, used in Holland as a remedy against stone, is :

473. R. Olei cadini, f. ℥ iv.  
Olei terebinthinæ, f. ℥ iij.  
Sulphuris loti, ℥ j. M.
- Make one hundred and twenty capsules. One three times a day.

#### RÉSUMÉ OF REMEDIES.

*Acidi.* The mineral acids render important service in the oxalic and the phosphatic varieties of calculus. The nitric or nitro-muriatic acids should be given for a length of time in small, repeated doses. Citric, benzoic, and dilute phosphoric acids have also been prescribed with advantage.

*Alkalies.* Dr. ROBERTS, of Manchester, has shown that uric or lithic acid calculi may probably be dissolved in the bladder, if the urine is maintained alkaline for some weeks. This treatment is especially useful in renal calculus (kidney or nephritic colic) which is generally composed of uric acid only. Large doses of citrate of potash will often cure patients complaining of much pain in the back, passing bloody urine containing a large quantity of uric acid crystals, and a little pus. One point regarding the medicine given to check the formation of a lithic stone is well worthy of being borne in mind, *i. e.*, that the profuse administration of alkalies when the urine is acid tends to cause a rapid deposit of phosphates upon the surface of the stone, and thus to increase its size. The reaction of the urine should be kept at the *neutral* point, and not *alkaline*. (DRUITT.)

*Aqua.* An important agent in the prevention of the formation of calculi, is water taken pure and in large quantities. Hard water should be avoided and filtered rain-water preferred. (HARLEY.) Alkaline mineral waters should not be taken very freely.

*Ammonii Benzoas* is of great value when the urine is ammoniacal and loaded with phosphates. Phosphatic calculi may be dissolved by the long-continued use of this remedy.

*Belladonna* has been recommended to relieve the spasms during the passage of renal calculi. Given by the mouth or by inhalation, it relieves pain without interfering with that muscular contraction which probably assists in the onward propulsion of the stone. The same remark applies to *ether*.

*Boracite*, the borate of magnesium, was the secret remedy of Paracelsus for stone. Dr. KÖHLER (*Berlin Klin. Wochenschrift*, Nov., 1879,) has found an allied substance, the *boro-citrate of magnesium* in doses of ℥j in water, to promote the discharge of gravel.

*Gelsemium* has been employed in vesical calculus. Copious diluent drinks are given for twelve or fifteen hours, followed by gelsemium every two hours until general relaxation occurs. The patient is then placed in the knee-elbow position and directed to void his urine forcibly.

*Hydrangea Arborescens* is valuable to prevent sabulous deposits. (See page 346.)

*Lacticum Acidum.* When the presence of an excess of the phosphates, uric acid and the urates, and of oxalates of lime in the urine is due to imperfect digestion and assimilation, as is frequently the case, lactic acid has been found of service through improving the digestion.

*Lithii Bromidum.* This substance, according to M. ROUBAUD (*Bulletin Generale de Therapeutique*, 1876,) possesses, in a high degree, those lithotriptic properties attributed to the salts of lithia, and, in addition, like other bromides, affects reflex sensibility most energetically. It has not, however, the inconvenient action on the heart displayed by bromide of potassium. Consequently, its place in therapeutics is in the first rank among lithiasics and among sedatives, and its action is particularly valuable in the uric acid diathesis, which is accompanied by painful symptoms, and in neuroses, which are so often complicated by the presence of uric acid. The alkaline salts of lithia have also been largely employed in the uric acid diathesis.

*Nitricum Acidum*, in dilute solution, gtt. j. to aquæ f. ℥ j has been employed with success by some eminent surgeons for the treatment of phosphatic calculi.

\**Opium*, in full doses, given by the mouth, or in the form of enema or suppository, is a remedy of great value. But *morphia*, hypodermically, is usually more effectual than any of these modes of administering opium.

*Stigmata Maidis.* Dr. DUPONT, of Buenos Ayres, states that in uric and phosphatic gravel the best results are obtained from infusions of this substance. (*Rev. Med. Chirurg.*, 1879.)

*Potassii Acetas* is employed in uric acid calculus.

*Potassii Bicarbonas*, employed as the last mentioned. (F. 469, 470.)

*Potassii Citras.* A valuable alkaline remedy. (See Alkalies.)

*Potassii Permanganas.* This salt favors the conversion of uric acid into urea, and thus prevents the formation of uric acid calculi. Pain in the lumbar region, frequent micturition, acid urine, brickdust sediment, and intestinal indigestion, are associated symptoms relieved by the permanganate. (BARTHOLOW.)

*Triticum Repens*, in decoction (℥ ij to aquæ O j, boiled for fifteen minutes and strained), is said to have afforded great relief in renal calculus.

\**Baths.* The hot bath or hip bath is a useful, soothing remedy.

*Ice.* Dr. W. PROUT states that in protracted suffering in the passage of renal calculi he has occasionally obtained relief from the application of pounded ice to the region of the kidney. It is chiefly applicable when the calculus is of oxalate of lime, or the phosphate, but is not to be employed in plethoric, gouty patients suffering from lithic acid and calculi.

## PROSTATIC DISEASES.

DRS. VAN BUREN AND KEYES, OF NEW YORK CITY.

*Prostatic Hypertrophy.*—The catheter is the natural specific for enlarged prostate. The patient should be instructed to use it himself, to draw off the residual urine. The bowels should be kept soluble with a gentle laxative, such as senna confection, and he should take a mild alkali, as potassii citratis, gr. x-xxx, three times a day. Merino should be worn in summer, flannel in winter, the feet kept warm, and moderate exercise (except horseback riding) enjoined. "It is a rule with no exceptions that a patient with hypertrophied prostate is never safe unless he can pass a catheter for himself." He should also be taught how to wash out his bladder. Simple warm water may be used for this, or if the cystitis does not diminish and there is a free secretion of pus, nothing better can be suggested than this formula of Sir HENRY THOMPSON:

474. R. Plumbi acetatis, gr. ʒj. M.  
Aquæ, f. ℥ j.

Or:

475. R. Acidi nitrici diluti, m j-ij. M.  
Aquæ, f. ℥ j.

Or:

476. R. Potassii chloratis, gr. v-xv. M.  
Aquæ, f. ℥ j.

For a continuous soothing injection, one which has power to check the pus formation, the combination of Sir HENRY THOMPSON, of borax and glycerine, is excellent. (See page 330.)

When there is much pain, opium in suppository may be used, divided into small doses.

477. R. Extracti opii aquosi, gr. ss-ij. M.  
Butyri cocœæ, q. s.

Make six suppositories. One every four to six hours.

Atropinè in injections is uncertain in its action, but occasionally

gives relief by lengthening the period of urination and modifying pain.

478. R. Atropiæ sulphatis, gr.  $\frac{1}{2}$ .  
 Aquæ, f.  $\frac{3}{4}$  vj. M.  
 For a vesical injection. The amount may be cautiously increased.

Cystitis must also be combated by the usual remedies.

*Prostatitis*.—In follicular prostatitis, or prostaticorrhœa, no remedy is so efficacious as repeated mild blistering of the perinæum. It is best applied by painting cantharidal collodion upon one side of the perineum, confining the patient for forty-eight hours to bed, and painting the other side of the raphe as soon as the soreness of the first application begins to subside. In applying the collodion, great care must be taken not to involve the scrotum and anus. The former had best be bound up tightly and the blistered surface covered with cold cream and lint. The diet should be supporting and tonics given if needed. The urine should be modified by alkaline diluents. As a tonic Dr. BUMSTEAD commends:

479. R. Acidi phosphorici diluti, f.  $\frac{3}{4}$  j.  
 Strychniæ sulphatis, gr.  $\frac{1}{4}$ .  
 Aquæ, f.  $\frac{3}{4}$  ss. M.  
 This amount two or three times daily.

DR. F. MAGENDIE, PARIS.

As enlargement of the prostate is a so frequent and annoying affection, which does not admit of cure by the knife, our attention is the more drawn to therapeutic measures. Dr. MAGENDIE believes that *muriate of ammonia* has a decided effect in reducing the gland. He gives:

480. R. Ammonii chloridi, ʒj.  
 Extracti conii, gr. ij. M.  
 This amount, in any appropriate vehicle, thrice daily.

MR. R. A. STAFFORD, F. R. C. S., LONDON.

This surgeon believes that he has succeeded in diminishing simple prostatic hypertrophy by the use of:

481. R. Potassii iodidi, gr. ij-iv.  
 Extracti hyoscyami, gr. v-vij. M.  
 Make a suppository. One every night.

When the urine is acid, the liquor potassæ or other alkali should be administered to restore its alkalinity.

Later writers speak highly of suppositories of *iodoform*. Professor BARTHOLOW remarks, "the iodoform diffuses into the neighboring organs and acts directly upon them."

PROF. S. D. GROSS, M. D.

If the patient is plethoric, apply leeches to the perinæum, and unload the bowels by saline purgatives (sulphate of magnesia or bitartrate of potassa.) Condiments and alcoholic drinks must be renounced, also horseback exercise and venery. The patients must seek the horizontal position, wear flannel next the skin, and avoid exposure to cold.

DR. WASHINGTON L. ATLEE, PHILADELPHIA.

482. R. Fluidi extracti ergotæ, gtt. xxx.  
 This amount is to be given at first every four hours, its action being supplemented by the use of the catheter twice daily, until the patient regains entire control of the bladder. As this is restored, the frequency of the dose is gradually reduced to a single administration, at bedtime.

This treatment has been very successful in the hands of this late eminent surgeon. (See *Med. and Surg. Reporter*, May, 1878.)

PROF. HEINE, INNSBRUCK, GERMANY.

483. R. Potassii iodidi, ʒj.  
 Tincturæ iodinii, f.  $\frac{3}{4}$  ij.  
 Aquæ destillatæ, f.  $\frac{3}{4}$  ij. M.  
 Of this solution, twelve to twenty drops are to be thrown into the substance of the gland, to a depth of two lines, the operation to be repeated every seven or fourteen days.

Great care is required to avoid parenchymatous suppuration. The median line of the prostate is to be avoided.

PROF. DITTEL, VIENNA.

This surgeon, in advanced prostatic disease, has recourse to a form of supra-pubic puncture. Having anæsthetized his patient, he forcibly distends the bladder with water, unless it should be capable of being

filled by allowing the urine to accumulate. For this purpose he injects sometimes as much as forty ounces of water. He then punctures the bladder just above the pubes with an ordinary trocar, leaving the canula in the bladder during four, five, or six days. At the end of this lapse of time, the parts traversed by the canula having become consolidated, a tubular tract is formed, through which, on removal of the canula, a soft rubber catheter can readily be passed into the bladder. This is permanently secured in place by means of a perforated plate of hard rubber, through the central opening of which the catheter protrudes, being fastened to the margins of the orifice by means of a pin; the plate itself is kept in place by a belt, the extremities of which are fastened to the ends of the plate. Such an apparatus is, however, not indispensable, as means of retention can easily be improvised in various ways, the simplest consisting in the use of a long pin which traverses the catheter transversely at its point of emergence above the pubes, and across the ends of which strips of adhesive plaster are placed.

## XII. LESIONS OF THE ORGANS OF REPRODUCTION.

*Balanitis—Hydrocele—Impotence—Masturbation, (Self-Abuse, Onanism),—Orchitis (Epididymitis)—Spermatorrhœa—Varicocele.*

### BALANITIS.

AUGUSTE CULLERIER, OF PARIS.

When it is possible to uncover the glans, make three or four dressings a day with a piece of fine linen or lint, (inserted between the glans and prepuce,) wet with one of the following

#### ASTRINGENT SOLUTIONS :

484. R.	Argenti nitratis, Aquæ destillatæ,	gr. iij-ivss. f. ℥ iv.	M.
485. R.	Aluminis, Aquæ rosæ,	℥ ij-iv. f. ℥ iv.	M.
486. R.	Acidi tannici, Vini aromatici, Aquæ rosæ,	gr. xv-xxx. f. ℥ xj. q. s. ad f. ℥ iv.	M.
487. R.	Tincturæ iodinii, Aquæ destillatæ,	℥ xv-xxx. f. ℥ ix.	M.

SILAS DURKEE, M. D., BOSTON.

The best topical application in this disease for slight abrasions and small patches of apthæ is the following :

488. R.	Liquoris sodæ chlorinatæ, Aquæ,	f. ℥ ss. f. ℥ viij.	M.
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This solution is to be applied on pieces of lint between the prepuce and the glans, three or four times a day.

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