if you were going to take up the ulnar or radial arteries, with this difference, that you are guided by the tumour to the trunk of the nerve, which is raised up with it.

Painful ganglia may also exist in the axilla, above the fascia. Sir E. Home extirpated one of this kind from the axillary nerve, but he relates no particulars; he simply states that the operation excited no immediate bad effects, but that violent inflammation of the axilla came on soon afterwards, and destroyed the patient in eight days. When the tumour occupies, as we have said, the axilla, the surgeon separates the limb widely from the chest, and divides the tissues in the way directed for taking up the axillary artery; to avoid the accident which occurred in Sir E. Home's case, the wound should be dressed with lint and kept open, as is done after removal of the axillary ganglia.

Deep Tumour of the Lower Extremity.

All the nerves distributed to this extremity may be affected with painful ganglia, but little has been said except on tumours of the subcutaneous nerves. Short mentions a case which seems to refer to a tumour seated in the deep region of the thigh; he removed it with a scalpel and pair of forceps. In all cases, however, you must be directed by your knowledge of the anatomy of the nerves of the limb. I have seen many cases of deep tumour of the nerves of the thigh; one patient was affected with several of them beneath the fascia lata; he died, and I examined the ganglia carefully. The tumour of the thigh was exposed by a longitudinal incision of two inches and a half in extent; on dividing the aponeurosis, I had to follow the tumour down between the triceps muscles, where it formed a large mass in one of the branches of the crural nerve. A similar tumour was seated in the upper part of the thigh, completely concealed by the Sartorius muscle. I also saw a case of ganglion which occupied the sciatic nerve; it was seated on the back of the thigh, about four inches below the buttock; it had existed for several years, and acquired the size of a child's head. The tumour was extirpated in the following manner:—The patient was placed on his belly, with the legs separated, and supported by assistants. I made an incision six inches long from the ischium, dividing the subcutaneous fascia and the fascia lata; the tumour was thus exposed, drawn backwards, and dissected with caution from the edge of the biceps; it was now evident that the tumour was confounded with the sciatic nerve. The fear of gangrene or paralysis made me hesitate for a moment, and reflect whether it might not be possible to separate the tumour from the filaments of the nerve. I detached the circumference, and dissected the upper and lower parts of the nerve, as if I were making an anatomical preparation, and found that about one third of its thickness was free, while the remainder was spread all over the bottom of the tumour. The patient bore this painful dissection with the greatest fortitude, and this gave me additional courage to proceed. I, therefore, dissected away each filament, pushed them aside, and at last proceeded in completely isolating the tumour. The cavity which remained was large enough to contain my two fists; I filled it with lint. During the first fortnight the patient complained of numbness and incapability of moving the parts about the foot and ankle, but these gradually disappeared, and she was completely cured in three months. M. Chelius and M. Roux have published similar cases; but in that mentioned by the latter surgeon the tumour was cancerous, and finally destroyed the patient.

Ganglia in the Neck.

I am not aware that authors speak of painful tumours in this region of the body, but the following, observed by M. Berard, appears to be an example:—A woman suffered such agonizing pain from a tumour

seated over the carotid artery, that she earnestly demanded to be relieved from it by operation. A deep-seated small tumour could be felt over the course of the pneumo-gastric nerve; but the woman died before an operation could be performed.

Ganglia of the Thorax.

The chest is frequently the seat of painful nervous tumours; I have often removed them from this part of the body. A lady suffered for many years from neuralgic pains in the right side of the chest. There was a small tumour, about the size and shape of an almond, between the tenth and eleventh ribs; and the pain seemed to originate from this point. In order to expose the tumour I had to divide the integuments to the extent of two inches, the subcutaneous fascia, some fibres of the dorsal and external oblique muscles, and the layer of tissue which covers the external intercostal muscles. When the tumour was raised up by a hook the patient experienced violent pain; it was easily removed, and complete recovery ensued in a short time. A year afterwards, however, I had to perform a similar operation on the same patient for another tumour, which appeared about an inch below and behind the first one. After this the patient had no relapse.

In 1836, there was a young girl at la Charité affected with a painful tumour in the same region, but on the opposite side of the body. In this case, although the ganglion was subcutaneous, I was unable to heal the wound by the first intention. I have seen a third case of painful ganglion in the same region, in a female; and am inclined to think that the friction caused by the petticoat or robe may have been an exciting cause of the disease.

To sum up, Gentlemen, what I have said on the subject of painful ganglia, you perceive that this species of tumour, being usually single and isolated, is easily removed by operation. When the nerve with which the ganglion is connected is small, you may remove the nerve and tumour together; when the nervous branch is large, especially if it be the sciatic nerve, you must use every exertion to detach the tumour from it. Should you, however, find this impossible, and the patient suffer greatly, you must divide the nerve at all risks. Experience shows us that the operation is attended with little danger, and the functions of the part but slightly disturbed. Indeed, the sensibility and power of motion often return after the division of large nervous trunks. M. Malagodi excised a considerable portion of the sciatic nerve in a case of sciatica, which had resisted every other means of treatment; the limb was at first paralysed, but gradually recovered its power of motion, and the patient was completely cured at the end of twelve months.

ON

THE USE OF BENZOIC ACID,

IN CERTAIN

AFFECTIONS OF THE URINARY ORGANS

By J. K. WALKER, M.D.,

Physician to the Huddersfield Infirmary.

In one of the former Numbers of the "Provincial Journal" is recorded a very interesting physiological fact, noticed by Mr. Ure, concerning the liability of persons affected with gout, to effusion of a white liquid into many of the internal cavities of the body, consisting of serum and urate of soda, with sometimes a little urate of lime. Other phenomena, also, are detailed, which it is the less necessary for me to describe, as they have, doubtless, attracted the notice of all your readers. My object is to confirm the accuracy of Mr.

Ure's account, so far as relates to the salutary effect of the benzoic acid, when used as a medicine, and especially in many cases where the urinary secretion is in a diseased state, in persons of a gouty habit, where there is some disease of the prostate gland, or where the bladder is in an irritable state, and where catarrhus vesicæ exists, as is often the case in old persons. It is well known that there are from twenty to thirty different ingredients in the urine, but its characteristic component part is urea, usually present in healthy urine; but it is only latterly that any useful results have followed from a better knowledge of the chemical contents of this important secretion. Nor have all the discussions to ascertain whether the urinary organs merely separate the fluids from the blood, or whether entirely new products are formed (no part of the peculiar secretion previously existing in the blood), or whether the elements previously existed in the blood, added much to our stock of knowledge, or given rise to any practical improvement in the treatment of disease. In certain conditions of the urine, both alkalies and acids are used by all practitioners, but few have made trials of the efficacy of benzoic acid with a view to modify the chemical composition of the urine.

There are few more distressing complaints than those seated in the bladder, which so often occur in the decline of life, as well as in persons much engaged in sedentary employments. There may be no gouty diathesis, no affection of the prostate gland, no calculus in the bladder, no hæmorrhoidal tumours, or any other affection of any viscus adjacent to the bladder, yet the functions of the bladder itself may be impaired, and more or less difficulty in passing the water may arise, so as to embitter the declining years of life, and gradually superinduce constitutional decay. Such instances occur to every practitioner, and are amongst the most intractable as well as painful he has to encounter. Nor is this distressing affection peculiar to those who have led an irregular and intemperate life, but occasionally attacks the most regular and temperate men, as they advance in years. Sometimes the mucous membrane of the bladder becomes thickened, indurated, or ulcerated, and a considerable quantity of mucus or pus passes off with the urine, giving to it the appearance of whey, and now and then blood is discharged. The dysuria, of which I am now speaking, is of a chronic kind, and incidental chiefly to persons in the decline of life—the "dysuria senilis," if I may so term it—and is not always accompanied with excess of gravel in the bladder. In some instances there is little or no gravelly sediment; in others the contrary, with a large deposit of urates. Sometimes there is mixed with the mucous sediment some particles of gravel. But all these circumstances are familiar to the profession. Indeed, the natural tendency to disease of the urinary organs in advanced life is a circumstance remarked by Hippocrates himself, who observes, "*Renum et vesicæ dolores difficilius sanantur in senibus.*" But if there is no stone in the bladder it may go on for years, if proper care is taken to avoid any undue source of irritation in the mode of living, and where there is no material pain or fever. It more frequently happens, however, that, with the strictest attention to every precaution, a very slight cause, even *sudden change* in the weather, will be followed by increased dysuria. Many are the remedies usually had recourse to. The *uva ursi*, *buchu*, *balsam. copaiba*, with other similar medicines, are sometimes useful. With others, gentle aperients taken from time to time, and anodyne glysters, are more beneficial; and even the injection into the bladder, now and then, of some emollient decoction, by means of a vesicæ lotura, with a view to allay irritation, have been found very useful. But the use of benzoic acid is among the latest of the modes of treatment; and so far as I can judge from its exhibition in several cases of *dysuria senilis*, under my own

care during the last few months, I am inclined to augur very favourably of its utility. In some instances we may account for the benefit resulting from its use by its chemical action on the urates, which, if in excess, may add to the acrimony of the water, and thus prove a source of irritation to the mucous membrane of the bladder. But it is often of service where the gravel in the *urine* is inconsiderable, and where the irritation and pain would seem to have arisen from some other cause. Amongst other instances where I have witnessed the beneficial influence of the benzoic acid, I have selected the following, of a recent occurrence:—

Joseph L—d, aged 77, a dissenting minister, residing in this neighbourhood, became my patient some months ago, in consequence of a very painful and often difficult passage of his water, an affection under which he had laboured for years, but especially during the winter season. He has been a widower for many years, and his habits have been uniformly and strictly regular and temperate. He has been remarkably free from illness of every description previously to the present complaint. There is no perceptible disease in the prostate gland, and he has never been troubled with gouty symptoms. He has undergone a variety of treatment from his professional advisers, from which he occasionally derived partial and temporary relief. There appears to be a glairy mucous sediment in the urine, in which, on examination, some gravelly particles may be discovered. The pain, however, at this time (which was early in December last), especially in voiding his urine, was very great, and did not yield to fomentations, anodynes, and detergent balsams, which were very judiciously resorted to. The benzoic acid, in doses of from five to ten grains, was ordered along with the balsam of copaiba, three or four times a day, with the addition of a small quantity of the tinctura camphoræ composit., and by persisting in its use for several weeks, the urine became less turbid, and the pain and frequent desire to make water gradually left him; and, at the distance of two months from the day he commenced the benzoic acid, he described himself as free from his troublesome symptoms, and is at this time improved in his general health, in a manner which has surprised as well as gratified all who know him.

Among a considerable number of cases of patients of the Huddersfield Infirmary, to whom I have successfully administered the benzoic acid, I will select the following, all occurring within the last four months:—

CASE II.—William Hastings, aged 64, a widower, and formerly a man of very intemperate habits, applied for relief for frequent pain in the loins and distress in voiding his urine, which had, especially of late, been loaded with gravelly particles, and considerable deposition of mucus. Had been treated with mercurials under an impression that his symptoms were in a great measure, if not entirely, dependant on hepatic derangement; but though relieved in many respects, yet he continued to experience frequent pain in the loins and in the region of the bladder; nor did his dysuria abate in the smallest degree for several months, though under medical treatment and in the use of the usual remedies, until he had for a considerable time taken the benzoic acid mixture, varied from time to time, according to circumstances. On the 14th of this month he visited the infirmary, with *all* his symptoms effectually relieved, and considers himself as in a state to be dismissed as cured from the institution.

CASE III.—Robert Harley, aged 68, residing at Henley, was admitted an out-patient of the infirmary, January 3, with a complaint in his bladder, as he termed it, accompanied with occasional rigors and pain in the loins. He parts with his water with great difficulty, and it is usually turbid; attributes his com-

plaint merely to cold, as he has enjoyed a good state of health, and is, from his own account, a man of temperate habits. Except occasional aperients he took no other medicine than the copaiba and benzoic acid mixture, and at his last attendance at the infirmary considered himself quite relieved in all his symptoms. This was one of the milder description of cases, arising from his age more than from any other cause.

CASE IV.—John Brook, aged 57, was troubled last winter with great uneasiness in making water, for which he received relief from medicine and dietetic treatment. He was admitted an out-patient of the infirmary in the early part of this winter, with an attack of his old complaint of more than ordinary severity. The pain was very great in passing his water, which, he says, comes away in drops; says that he has been more or less troubled with this affection for three or four years, although a man of temperate habits; apparently no part is affected but the urinary organs, and his bowels have been kept regular by occasional aperients. The use of linseed-tea and barley-water causes less distress in passing water, though there is still a considerable sediment. This man took little else than the balsam of copaiba mixture, with the benzoic acid, for about six weeks, when he expressed himself as decidedly relieved, and in the enjoyment of more ease than had fallen to his lot for the last few years past.

There are some other cases of a similar description, occurring in patients at an advanced stage of life, which I find in my note-book, but differing so little either in the symptoms or the treatment, from those already described, that I should be inexcusable in occupying your pages with mere repetition. I may mention, however, that in one of the cases the use of the benzoic acid mixture was followed by a rash over a great part of the body. This, however, is a circumstance by no means peculiar to benzoic acid, as other medicines have in some instances, from some peculiarity of temperament, produced the same effect. Permit me to recommend, therefore, to your readers a further trial of the utility of this powerful acid. It is very sparingly soluble in cold water, but is soluble, without change, in alcohol. The benzoates, however, I believe, are soluble in water, and the benzoate of ammonia may, in some instances of dysuria senilis, prove more efficacious than the simple acid. The benzoic acid is a constituent of balsam of Tolu, of Peru, benzoin, storax, &c. &c. It will probably be found that, in other complaints as well as diseases of the urinary organs, its efficacy may be much greater than we have hitherto been led to expect.

CASE OF SUCCESSFUL

AMPUTATION IN SPREADING GANGRENE,

FROM

GUN-SHOT WOUND.

By JONATHAN TOOGOOD, Esq., Surgeon, Bridgwater.

As every additional fact illustrating a doubtful point of practice must possess some value, I hope the following corroboration of the soundness of the practice adopted by Mr. Dodd, in a case of spreading gangrene, as related in your Journal of the 22nd of January, will be acceptable to your readers. Until M. Larrey proposed amputation in cases of traumatic gangrene, I believe the unfortunate subjects of that disease were abandoned to their fate. Such has been my experience in public and private practice. The idea of an operation under such circumstances was universally reprobated, and the surgeon who ventured to propose it, subjected himself to the imputation of rashness and inexperience, and was considered to have acquired but a very imperfect knowledge of his profession. I

confess that it has always appeared to me better to offer the patient the chance which a doubtful operation would afford than leave him to certain death, and I have never ceased to regret having yielded an opinion to others in two cases in which subsequent experience justifies me in believing that the operation would have been successful. It was, therefore, with great satisfaction that I found the opinion of so high an authority as M. Larrey coinciding with my own, which at once determined me to carry the plan into effect whenever an opportunity offered. The following case occurred in the practice of Mr. John G. Toogood about two years since.

Charles Tuck, a farm servant, aged 24, received the contents of a common fowling piece in the hand on Friday, the 4th of February, which passed up the flexor muscles and through the integuments of the forearm about three inches above the wrist. A neighbouring surgeon saw him soon after the accident, and directed cold applications and rest. On the following Monday he was admitted into the Bridgwater Infirmary. There was a ragged wound at each opening, the limb was but little swollen, and the only unfavourable appearance was, that the nails looked rather dark coloured. There was very little constitutional disturbance. He was put to bed, a poultice applied over the whole limb, and the usual treatment directed. On the next day the aspect of the limb was the same; but as there was more swelling in the evening and some heat, leeches and fomentations were ordered. He slept perfectly well until five o'clock the following morning (Wednesday), when he was awoken by pain, which rapidly increased and became very severe. At seven o'clock the limb was found to be gangrenous to the elbow, and before his consent to its removal could be obtained, and the necessary preparation made, it extended so high up, as barely to leave room to amputate close to the shoulder joint. There was no line of demarcation, but I cannot, at this distance of time, recollect the precise point to which the crepitus extended, but I am inclined to believe it was quite up to the joint, as it was debated whether it would not be the safest plan to remove the bone from the socket. Very little blood was lost during the operation; the constitutional irritation subsided in a few hours; the patient became tranquil and soon recovered.

The result of this case proves, that it would have been better to have removed the arm below the elbow on his admission; but the appearance of the limb, and the state of the patient, warranted the attempt to save it, although the discoloration of the nails excited some suspicion in my mind, and occasioned me to watch its progress with great anxiety. The rapidity with which the gangrene spread was very remarkable. There was no such appearance at five in the morning, the operation was decided on and performed soon after eight.

February, 1842.

CASE OF OVARIAN DROPSY.

By J. B. KISSAM, M.D.

Mrs. D., aged thirty-five years, is the mother of ten children, had enjoyed good health till Feb. 1840, when she discovered an enlargement in the right side of the abdomen, and œdema of the lower limbs; in two months after she ceased to menstruate. Fluctuation being perceptible in the tumour, the use of calomel, squills, and digitalis was determined on. Under this treatment there was a decided diminution of size, and a single return of the monthly secretion. In September, however, the abdominal swelling again showed itself, with extensive anasarca of the lower half of the body, and of the abdomen, so great as to