

Gerrish (F. G.)

SALICYLIC ACID:

THE EXPERIENCE OF MAINE PHYSICIANS IN ITS USE.

REPORTED BY

*Presented
by the Author*

FREDERIC HENRY GERRISH, M. D.,
OF PORTLAND.



(Reprinted from the Transactions of the Maine Medical Association,
June, 1876.)

PORTLAND, ME. :
STEPHEN BERRY, PRINTER.
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REPORT.

At the last meeting of the Association, I was appointed to report this year on New Remedies. As it would, for various reasons, be extremely undesirable to include accounts of all the new remedial agents which have recently attracted attention, I decided to limit my paper to a consideration of the two which seem to have been most carefully investigated and promise most for the future—Salicylic Acid and Jaborandi. Doubtless a digest of the best articles on these subjects which have appeared in the journals would be of some interest; but, believing that the essay would have a peculiar value to the Association and the profession generally if it could epitomize the experience of all members who had made any trial of these drugs (especially as nothing about them had yet been published by Maine men), I sent to each member of our Association, early in May, a circular from which I quote the following lines:

“I want to ascertain if you have used either or both of these agents in any way; if so, to what extent, in what manner and what doses, for what diseases, with what results, what combinations with other medicines are desirable, what precautions should be observed in administration, what experiments with regard to their physiological action you have performed or witnessed, and any other facts and opinions resulting from your personal observation of these drugs which you may be able to contribute.

“Although a compliance with this request may necessitate a considerable expenditure of your valuable time, I trust you will

not consider it poorly bestowed; for only by means of such reports from physicians can the proper therapeutical position of these remedies be determined, and the more speedily this is done the better will it be for our patients and ourselves."

Two hundred and fifty of the circulars were sent out, and thirty answers have been received. Of this number only seventeen came from physicians who had used either of the drugs, the remainder being simply acknowledgments of the circular. It is, of course, incredible that these are nearly all of our members who have employed either of the agents named; and the small number of replies may fairly be attributed in great part to the indisposition of medical men to report their experience—a trait which is equally proverbial and unfortunate.

Only three—Drs. A. J. Fuller, of Bath, Laughton, of Bangor, and Chase, of Orland—have used jaborandi; and their observations have been so limited, and their results, on the whole, so indefinite, that a publication of them would afford almost no satisfaction. My paper will, therefore, be confined to a consideration of the therapeutical experience of sixteen Maine physicians with salicylic acid.

INTERNAL USES.

Acute Rheumatism. Dr. Pendleton, of Belfast, writes as follows:

"In the treatment of rheumatic fever, I have usually relied on the alkalies, nitrate, acetate and bicarbonate of potassium, with such other remedies as each case might indicate for itself, and have no fault to find with the success of these medicines. Yet I believe that the acid will often break up or shorten the fever. Two years ago I attended a young man through twenty days of acute rheumatism. Two other members of the family had had such attacks. I gave him alkalies, quinia, Dover's powder, lemon juice, etc.; good recovery.

"The first Sunday of January, this year, I was called to him, and found apparently just such a disease upon him. His skin was hot, pulse 108, pain intense in right hip and both ankles, the latter swollen and tender. I dressed the joints in cotton, and

gave him 10 grains salicylic acid; this was at one o'clock p. m.; ordered same dose to be repeated every two hours. At ten in the evening, his pain was so great, I was called again, and under other circumstances should have given an opiate, but ordered the above dose of acid to be given every hour. Before morning he slept quietly, and no more medicine was taken until five p. m. Monday, when the pain returned. The acid was renewed, with excellent effect. Pulse came down, pain subsided, swelling abated, and there was no occasion for my visits after the middle of the week. I attributed all to the acid, and believe it saved him another twenty days' seige.

"In some other cases it has seemed to act as well, but I was not so sure of the disease; that is, the remedy was given and relief obtained before I could be sure that a rheumatic fever would have certainly followed, so I refrain from detail. I have never seen any nausea or dizziness from the doses I have named."

Dr. Shannon, of Cape Elizabeth, reports one case:

"Mr. D., aged 75, feeble and asthenic, was attacked with acute rheumatism. I began to treat him February 14th. At that time his feet, knees, shoulders, elbows and hands were swollen and very painful. I treated him with the usual remedies for rheumatism for a few days, with little or no improvement. I then gave him $7\frac{1}{2}$ grains salicylic acid (in wafers) every hour for twenty-four hours. His symptoms were so much improved that the acid was suspended; but, before the end of twenty-four hours more, all the rheumatic symptoms re-appeared with their former violence. I again gave the salicylic acid, from $7\frac{1}{2}$ to 10 grains every hour for ten or twelve hours, when the pain began to subside, after which we gave it every two or three hours, according to pain, continuing until the patient had taken 75 wafers, with $7\frac{1}{2}$ grains of acid in each (over nine drachms). He had no more acute symptoms."

Dr. Dana, of Portland, says, "I shall not be able to give you the details of my cases, but rather general results and the impressions made upon my mind in watching the effects of the drug," this statement applying to his remarks on all the diseases

of which he makes mention in this paper. He has used the acid in a dozen cases of rheumatic fever, meeting with favorable results in every case, excepting two. "In one of these, the patient, a young man, was unable to swallow the medicine, while in the other, a lady found the effect upon the stomach so disagreeable that its use was omitted. The effect was most marked upon the pain, which was usually considerably relieved within the first thirty-six hours, the redness and swelling of the joints often beginning to subside in the same period of time, the patient being able to walk, without suffering, in a few days more. I had a number of cases of rheumatic fever, which, under the alkaline treatment, I judged likely to last two or three weeks, which were over in five days, and no relapse, under use of the salicylic acid. One man, whom I had seen in his bed with knees and wrists and shoulders swollen and painful to an intense degree, I met, while on my way down to his house on the sixth day, walking up to my office.

"I am inclined to look upon it as the most effective drug known for the cure of rheumatism."

Dr. Price, of Bath, was called to treat a sailor who had been suffering four days with acute rheumatism. The case was well marked in every respect. Large doses of alkalies, quinia and opiates were given, and anodynes were applied to the joints, which were covered with batting; but after eleven days the symptoms had been but little relieved.

On the 9th of April, the doctor ordered ten grains of the acid to be given every hour while the patient was awake, and all other medication to be discontinued. The patient passed a comfortable night. The next morning the joints were less painful and the temperature was reduced. Acid continued in same dose every two hours.

12th of April, marked improvement; acid continued every three hours in five grain doses.

On the 13th, the patient felt so well that he over-exerted and exposed himself, producing a partial relapse; but a renewal of the large doses of the acid speedily restored him, and on the 17th the necessity for medication ceased.

Dr. W. S. Hill, of Augusta, writes that, "in a case of acute rheumatism, where the pain in the joints was very severe, and the heart's action was beginning to be irregular, two doses, of eight grains each, were administered, two hours intervening between the doses. The result was considerable diminution of the pain and soreness in the joints after the first dose, and entire relief after the second. Twelve hours later the heart's action was regular and normal in all respects, and the patient had no further trouble. My partner, Dr. C. E. Norton, had a like experience in a case seen by him and treated in the same manner."

Dr. Everleth, of Waldoboro, reports the following:

"I have used it in three cases of acute rheumatism, arresting the disease and relieving the suffering much quicker than I have been able to do heretofore by use of any other remedies.

"The first case was that of the bass singer accompanying the Hyer troupe on their concert tour through this section last winter. He had been suffering two days, and I found the great toe and first metatarsal joint swollen, red and extremely painful, so that he was unable to sit up. I gave an opiate, and ordered the part packed in an alkaline lotion. In about four hours I was called again, the suffering having returned as severely as ever. Gave salicylic acid, about eight grains, every three hours, in syrup. Next day found him suffering less, having slept some; continued acid every four hours. Next day (forty-eight hours) he was able to resume his journey, and sang the same night in Rockland.

"In another case, a lady was affected with rheumatic inflammation of the left hand and wrist joint; had been suffering two days. Gave salicylic acid, about eight grains, every three hours, in molasses. Next day pain and swelling very much reduced; able to move the hand. Continued acid less frequently, and in three days suspended it altogether, the woman thinking herself well and using the hand.

"The other was a case of rheumatic inflammation of the knee in a lady. Treatment the same, with the same results. Nothing else was given, only as stated above, and no unpleasant results were observed to follow the use of the acid."

Dr. Laughton, of Bangor, has found that, in doses of from ten to fifteen grains every third hour, the acid has allayed the inflammation and relieved the pain in from twenty to thirty hours. In the dozen cases in which he has used it, there have never been any ill effects, but always relief.

Chronic Articular Rheumatism. Dr. Dana has treated eight cases with the acid. "I will mention one, the most favorable example. A gentleman had his left knee swollen and painful, especially at night, and troubling him about standing or walking much. The synovial fluid was in marked excess, and he limped. The case was of many months' standing. I gave him two drachms daily, for two days, when he reported himself better in general feeling, and especially in condition of knee, but he 'felt as if he had a first-class brass-foundry in his head.' On reducing to one drachm a day, the roaring in head abated, and the use, with occasional intermissions, of two or three scruples a day for several weeks, was attended not only with a great improvement in the knee, which has been nearly well now for two or three months, but also in an improved tone of his general health. It has not, however, proved by any means so useful in this class as in the class of acute cases."

Sub-acute Rheumatism. Dr. Thayer, of Portland, writes:

"I have used the acid in several cases of sub-acute rheumatism, and have been very much pleased with its action. Have administered it in wafers, in doses of from seven to ten grains every two hours, until it affected the organs of hearing, then decreasing the frequency of the dose from two hours to four or six hours. The pain and soreness of the joints have almost invariably been relieved as soon as the system has been brought under its influence.

Rheumatic Neuralgia. Dr. Dana has tried the acid in a dozen or fifteen cases, and says, "I have been pleased with its effects. Shifting muscular and darting pains along the tract of nerves have repeatedly yielded to its use. In two cases of paralysis, one general, the other hemiplegic, in which erratic, but very distressing pains paroxysmally occurred, I found more relief from the use of this than of any other drug."

Lumbago and Sciatica. Dr. T. A. Foster, of Portland, contributes the following:

“The case in which I used salicylic acid was that of a lady between fifty and sixty years of age, who had been rather feeble for some months. For a week or more before I was called to see her, she had been suffering from lumbago and sciatica. The tract of the left sciatic nerve was very tender, and the pain most intense from back to foot. I gave her seven grain doses of the acid in wafers, every two hours, until she had taken two drachms, then every four hours, until she had taken as much more, using for immediate relief hypodermic injection of morphia night and morning. I could not perceive that the acid produced any effect, unless it caused a disagreeable feeling at the pit of the stomach. I consequently left it off and gave quinine and iron instead, which, with my hypodermic injection continued for some ten days, relieved the patient from pain and lameness in about three weeks.”

Diphtheria. Dr. Weeks, of Portland, reports that, during the epidemic of this disease which prevailed in this city and vicinity in the winter of 1875-6, he used the acid internally, and also as a local application in a few cases, without any apparently beneficial effects.

Chronic Diarrhœa. Dr. Price reports one case. “Patient, aged 39, has passed continually since August, 1875, bloody, slimy, dark and tenacious stools, with pain, some days having as many as five evacuations. Dr. Bibber and myself have treated him most of the time, and had nearly exhausted the materia medica without benefit, when it occurred to me to test the merits of salicylic acid in intestinal disease. I prescribed it in five grain doses every four hours while awake, discontinuing all other treatment. Patient has now taken the acid about twelve days; says he has not felt so well for a year; has only one stool a day, and no pain, blood or mucus.”

Periostitis. Dr. Laughton, having had satisfactory results from the use of the acid in rheumatic fever, was led to test its power as an antiphlogistic in a case of periosteal inflammation of

the fibula. Large doses, frequently repeated, "exerted a remarkable influence in arresting inflammation of the tissues covering the diseased locality."

LOCAL USES.

Gangrene. Dr. Pendleton writes :

"I have recently had under my care a ragged wound, produced by the discharge of some thirty buck-shot into the soft part of the leg inside the tibia. The boy was healthy, the bone apparently not injured, the wound was trimmed and dressed promptly, not neglected subsequently, and yet it would not heal, but persisted in sloughing, until I applied salicylic acid, mixed with starch (about half and half), dusting the mixture over the surface after washing it. The effect was all that could be desired. The discharge became healthy, granulations formed, and the new cuticle is now rapidly spreading from the edges."

Dr. Holt, Surgical House Pupil at the Maine General Hospital, reports that the acid "has been used quite freely and successfully as a disinfectant at the hospital. I will cite three cases where it was found far superior to other drugs. J. A. M., aged seventy-six, entered the hospital with an erysipelatous inflammation of the ankle and foot, resulting in extensive sloughing of the leg and destruction of the ankle joint. The discharge was profuse, ichorous in character, and very offensive. Under the use of salicylic acid solution the odor disappeared, and the discharge was very much lessened.

"J. B. W., aged fifty-four, entered the hospital with an extensive bed-sore over the sacrum and coccyx. The application of a solution of salicylic acid destroyed the odor, cleansed the wound and reduced the discharge rapidly. In this case it is thought it prevented granulations, for this reason: as long as it was used there was no attempt at granulation, but as soon as carbolic acid was substituted granulations sprung up at once. However, the odor reappeared to such an extent that the salicylic acid was considered far superior as a disinfectant. Unfortunately, the patient left before the salicylic acid could be tried again.

"T. B., aged fifty, entered the hospital last January, with complete luxation of the spinal column between the eleventh and twelfth dorsal vertebræ. He was obliged to lie upon his back for a long time. He was transferred to a water-bed, but, in spite of all precaution, extensive bed-sores formed on the sacrum, side of the legs, over the fibula, heels and external malleoli. About the first of March, septic matter was absorbed to such an extent that he had chills, profuse sweats, head-ache, vertigo, etc. The sores were discharging profusely in spite of treatment, and the odor was almost unbearable. He was fast losing flesh and strength, and all looked forward to a speedy dissolution. A solution of salicylic acid was applied, and immediately the odor disappeared, the discharge subsided and he rapidly began to rally. His appetite came back, and he gained flesh and strength so rapidly that he did not appear like the same person in two weeks. Carbolic acid and chloral hydrate, chlorinated soda, etc., have been used in this same case, and were found far inferior.

"In regard to the salicylic acid preventing granulations in this case, it might be said that the change of disinfectants made but little difference to the granulations, for they have always been below par, owing to the fact they are seated below the point of injury, where sensation and motion have been entirely suspended since the accident.

"Whenever a saturated aqueous solution did not seem strong enough, borate of sodium was used to facilitate the solution of a larger quantity of the acid. The solution was applied usually by means of cloths saturated with it, sometimes by the atomizer."

Diphtheria. Dr. Small, of Portland, has made use of the acid in several cases. In the mild form, no benefit was noticed; but he is confident that he "did see good results from its use where the false membrane had been formed two or three days and had undergone those changes which impart to the breath its peculiarly offensive odor, and give to the fauces the appearance of being the seat of a sloughing ulcer." The fetor was controlled and granulation promoted. It should be borne in mind, however, that iron was given internally in all these cases, and in some of them salicylic acid, also.

Dr. Thayer reports as follows :

"I have used a solution varying in strength from five to twelve grains to the ounce, combined with an equal amount of borate of sodium, in order to have the acid completely dissolved. By means of a camel's-hair brush, I have had this solution applied freely over the tonsils and fauces every two or three hours in some cases; in others, instead of using the brush, I have made use of the spray, by means of the steam atomizer. Am unable to say that I have ever derived any benefit in a single case from its use, other than in destroying the fetid odor of the breath."

Dr. A. J. Fuller, of Bath, has employed it as a substitute for the antiseptic carbolic applications in diphtheritic and many other cases; but is not yet prepared to relinquish the carbolic acid altogether, although there is an undoubted advantage in the salicylic acid in its freedom from odor.

Pharyngitis. Dr. Price has of late prescribed the acid "almost to the exclusion of other medicines, as a local application to the ulcerated throats of scarlet fever, and with good results, sometimes using the powder alone, blown through a tube direct upon the parts. When children are old enough to gargle, I often use a solution as a wash."

Dr. Bibber, of Bath, has likewise used the acid extensively in cases of this kind, with the happiest results. He mentions a severe case of scarlatina anginosa, in which "the tonsils, soft palate and pharynx were covered with false membrane so thickly that it was impossible for the child to swallow, drink and food being thrown out through the nostrils." Three local applications of a solution of the acid were followed by the loosening and discharge of the membrane.

Dr. Harlow, of Augusta, has noticed good results from the use of the acid as a gargle in inflammatory sore throat.

Ulcers of Os Uteri. Dr. Pendleton says :

"I first used it as a local application to the ulcerated os uteri, in the form of powder, and though it is far from displacing, in my estimation, any of the old remedies, yet, when the ulceration

was superficial and the discharge thin, sanious and fetid, like that from a gangrenous sore, I found it would clean the abrasions admirably and heal them quicker than other applications upon which we usually rely."

Dr. Snow, of Winthrop, reports a similar experience, and also esteems the acid in the treatment of chronic ulcers in other situations.

Otorrhœa. Dr. Laughton has used the acid in solution, with good effect in this affection.

Gonorrhœa. Dr. Thayer, of Portland, has employed this remedy to a limited extent in urethritis, "and, from the favorable results thus far obtained, is inclined to continue its use still further as opportunity offers." Dr. Laughton has likewise made use of it, but has not had as satisfactory results as in otorrhœa.

Conjunctivitis. Dr. A. J. Fuller has found the acid a reliable remedy when used in weak aqueous solution.

Pruritus of Skin Diseases. Dr. Snow has had excellent results from the use of a solution of the acid in alcohol and glycerine, in cases of cutaneous disease attended with heat and itching.

Cystitis. Dr. Everleth writes, "I have two cases of cystitis now under treatment, in which I am using a solution of one drachm to a pint, dissolved by the aid of borax, to rinse out the bladder thoroughly twice a day. I also give three grains three times a day, in molasses. Both are improving finely. In the first case, the man, from taking cold, was unable to pass water, and a catheter had to be used every four or six hours for seven weeks. The urine was very offensive and ropy, and he suffered severely after each catheterization. He now passes his water naturally, the fetor is gone, and there is very little ropiness when the urine is allowed to stand. Has but little pain and is able to walk about the farm.

"The other, is of a gentleman aged 92. When I first saw him I found him wearing a gum catheter, introduced by another physician two weeks previously. Bladder required to be emptied every hour; urine highly alkaline, thick and very offensive;

ordered the bladder washed out with the same solution as in the previous case, and gave tincture of iron with nux vomica. The patient lives ten miles away, and has to be attended by his son; and, as they were afraid of difficulty in re-introducing the catheter so often, I allowed it to remain, and used the acid wash as a palliative, hoping to ease the old man down to the grave; for it seemed impossible he could live long. I saw him this week, and found him improving in every particular; can retain his urine three hours without inconvenience; fetor gone, appetite good, strength increasing, and the old man may yet live to celebrate his own centennial, particularly as he is of a hardy stock, a sister living next door to him having scored 102 last month."

ADMINISTRATION. The most of my correspondents seem to favor the administration of the acid in the wafers, which can now be had at any apothecary's. Cachets are liked by some, and others give it in molasses or syrup. Nobody reports any serious derangement of the alimentary organs from its use in substance. The solution of the acid in water is promoted by the addition of borate of sodium or phosphate of sodium. Alcohol will make a better solution, but is itself objectionable in very many cases. The substitution of glycerine for a third of the water facilitates the solution of the acid.

CONCLUSIONS. From so small a number of cases it is not justifiable to draw any definite and absolute conclusions. But we have enough evidence to warrant us in believing that we have in salicylic acid an agent which promises so well in certain directions as to make it desirable for us to industriously prosecute our researches into its action in health and disease, and this with a reasonable hope that it will in time be accorded an honorable position in our materia medica. It has been most extensively and satisfactorily used in rheumatism, especially in the acute form of the disease, and its administration has been followed by relief in various rheumatoid affections. Its resemblance in certain of its physiological effects to quinia, and its apparent control over inflammation in some cases, encourage us to expect decided advantage from its use as an antipyretic. There is yet

much disagreement as to its value as a topical application, though it is conceded by nearly all that it is very useful as a deodorant. More experience with reference to every point of this subject is needed, and this *resumé* of the work of a few of our members is presented in the hope that it may help to call attention to a medicinal agent of great possibilities, and encourage a more general and thorough examination of the claims of this and future New Remedies.

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OFFICE OF
FREDERIC HENRY GERRISH, M. D.,

624 ~~St.~~, CONGRESS ST., ~~CORNER BROWN ST.~~

PORTLAND, MAINE, 16, 11, 77.

Nov 19. 77
Dear Sir,

Your favor of the 14th inst., requesting a copy of my report on the Sanitary Condition of Portland, is at hand. It gives me pleasure to forward by this mail the desired pamphlet. As I learn that medical publications of all kinds are welcomed in your library, I also enclose a few other little things in which I have been interested. If they are considered unworthy of your notice, I shall not be grieved.

I have the honor to be

Very respectfully yours,

Frederic Henry Gerrish.

To

Dr. J. S. Billings,

Librarian,

Surgeon General's Office,

War Department,

Washington, D.C.

