

MARSHALL. (B)

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MEDICUS

ANTIPYRINE

BY

BENJAMIN MARSHALL, M. D.
SAN FRANCISCO, CAL.

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ANTIPYRINE.

By BENJAMIN MARSHALL, M. D., San Francisco.

Occasionally there is made known to the medical world the discovery of some new medicine or new power in an old one, which is so startlingly promising for good in a new direction, as to enlist universal interest and investigation. The medical and laity journals teem with its wonderful properties from numberless observers. The warnings of wiseacres come in and then the sum total of its power is approximated, and the remedy drops into its proper niche in all the text-books. Such has been the history of late years with, for instance, chloroform, cocaine, and later antipyrine.

This substance had been in common use as an antipyretic for several years, but about one year since Germain Sée published his experience in its use, announcing a new property which was so promising for good, as to challenge criticism from the least skeptical. Subsequent experience has not only fulfilled that promise, but shown that the half had not been told. This drug has now about run the usual course. Six months ago no medical journal was without from one to many notices of its uses, whereas, now, it is seldom mentioned, and already is it relegated to its presumably proper place as an antipyretic and analgesic.



One object of this paper is to protest against a too summary verdict upon this medicine. For although the literature on the subject has been very profuse, too much so against it perhaps, it is by no means certain that it is exhausted in the other direction, for continued experimentation is rapidly broadening its field for usefulness and in directions which must make us search for other modes of action than those already accorded to it. We call chloroform an anesthetic and apply it in the ranges covered by that effect. We call cocaine a local anesthetic and nerve stimulant, and it takes its place as such; but antipyrine, what shall we call it? Antipyretic? Yes. Analgesic? Yes. But what else? This part of the field though partially is not yet fully explored and the question, how else may it act? is still an unknown quantity to the thinking mind which recognizes its broadening effects. I say then; let us not through fear of seeming to deal in a subject which is trite, or through prejudice against a remedy which is proprietary and used to a large degree empirically, relegate it to the text-books on its present reputation, but keep the matter in discussion until its full power for good is known.

It is not within the scope of this present paper to elaborate this portion of my subject, but rather to epitomize my own experience and that of others, as to its dangers, uses, and possibilities.

I have said that too much has been written against it. I say this conscientiously, for I cannot help but feel convinced that all or nearly all the direful consequences laid against its use are easily explained away. By coincidence, as, for instance,

when a patient suffering with peritonitis dies in collapse, after taking an insignificant dose of the medicine. The most noticeable case on record being of that character, the editor very justly interpolating an interrogation mark (though in the wrong place). Or again, when the medicine has been improperly administered. As in combination with spirits nitre in which a deadly compound results, the aniline being set free. Of course, I do not forget that many persons have idiosyncrasies, which render them obnoxious to its use in the way of urticarial eruptions and other discomforts, all of which is true of many other very simple things,—shell-fish, strawberries, etc., merely the reflex expression of some local irritation, and easily avoided with antipyrine by giving it in plenty of water. For this reason it should not be given by the mouth without adding at least \bar{z} ii. of water to every ten grains. I have never known of any inconvenience when given in this way. The greatest danger yet to come probably will be when it is thrown upon the market by irresponsible manufacturers. This danger is greater from the delicacy of its composition and the absence so far of any true test of its purity. I have known twenty grains to be taken inadvertently for eight consecutive hours without any bad effect, and although it might not be advisable with our present knowledge to give it in large doses in advanced heart disease, yet I could not say why, since the records do not show that it has any effect on the normal temperature, or that in fever it lowers it more than one or two degrees below that mark, proving it to be as harmless as *veratrum viride*, against which the first fatal

collapse, even in advanced heart disease, remains to be recorded.

What the effect of antipyrine might be when continued for a long time, is as yet conjectural, but probably not more serious than that of the continued suffering which would make such a use of it desirable.

It has been a question of much anxiety to learn what effect we might expect upon the kidneys. That it diminishes the quantity of urine is observed by all. In diabetes insipidus it acts sometimes marvelously well, but in glycosuria, although the amount of urine is greatly diminished, and in some cases the sugar also, the rapidly increased elimination of albumen has given halt to its continued use. Upon the normal kidney it has but little effect, except in most instances lessening the secretion slightly. The induced presence of albumen has not been noticed even after continued use. Upon all the other secretions its influence is apparently nil.

I would therefore claim that in antipyrine we have: First, an anti-pyretic which is effectual and safe, differing from most other anti-pyretics in being more or less curative; as such it is most useful in traumatic and rheumatic fevers, and in the first stages of all fevers or acute diseases not of septic origin, its usefulness for permanent relief being in proportion to the stage of the disease. For instance in acute rheumatism, I believe it to be curative; in sub acute, less so, and in chronic palliative as a rule only. I do not believe that its usefulness ends at the absence of positive indications for its employment, as an anti-pyretic but that it may be valuable long after that or through-

out the course of a disease to palliate the discomforts attending the febrile condition. It has been found especially serviceable in the acute diseases of children, who tolerate the medicine well, requiring larger proportional doses to obtain the same effect.

Second. As an analgesic it stands pre-eminently above all others. Free from the accompanying or after effects of opiates, anesthetics and other like remedies, and more rapidly effectual. Whether given by the mouth, the rectum or hyperdermically, it subtly removes pain of the most agonizing nature. Not stimulating or exhilarating to the nervous system, there seems to be no danger of forming habits uncontrollable, as evidenced by the fact that although in common use for so long that contingency is not even considered. One hundred grains in twenty-four hours in divided doses, may be given by the mouth, seven to ten grains, at intervals of thirty minutes, six or seven times hyperdermically, and per rectum it is said that equal or smaller doses than given by the mouth produce the same effect. A sitting posture is preferable if the pain is in the upper extremity, and a recumbent one if in the lower, as well as a darkened room, avoidance of conversation or other mental occupation

There remains something else to be said in this direction, and that as to its external uses. Little has been recorded as yet, but that there are possibilities for good is beyond question. It has been used much in the same way as *Hamamelis* and appar-

ently with about the same effect, notably in hæmorrhoids and as a local hæmostatic.

Third. What else is it? I have already claimed that together with its anti-pyretic effect it has a curative power. I will say more. I claim that it will prove to be a specific for some diseases hitherto considered troublesome if not intractable—migraine for instance. And I have in mind several cases of gout, all typical, where the explosion was sudden and excruciatingly painful and when I remember that in twenty or thirty minutes the pain was rendered bearable—if not entirely relieved—and that these attacks under a proper continuance of the medicine were cured more certainly and more permanently than with colchicum, without the disagreeable consequences so frequently attending the use of that medicine, and also that the diathesis seemed to be so modified as to render the attacks less severe and less often, I cannot help hoping for a bright future for this remedy in this direction, if the future experience of others and myself should verify these experiments. In which event, if, as it is claimed, uric acid is not eliminated under its use, the etiology of gout is still a mystery. What this power is I do not pretend to say. I leave this part of my subject for future discussion, but the varied and contradictory uses to which this medicine has been applied is bewildering to those who are accustomed to look for a reason for everything. Sthenic, asthenic diseases, epilepsy, labor pains, hysteria, carbuncles, all yield more or less to its potent influence, while the field is still widening; and yet there

is an acknowledgment to be made, which is, that occasionally a most simple and obvious indication for its application arises, in which we are disappointed and must resort to something else. But these exceptions are rare and not of sufficiently frequent occurrence to affect the general rule. In closing this article let me again earnestly urge the continued reporting of new successes or unique results in the use of this medicine, and also to pay my tribute to the genius of the man who first made known the value of this remedy. Numberless people now thank the one who has brought relief to their sufferings, and in future time the name of Germain Sée will stand with that of the discoverer of the anesthetic power of chloroform.

The following cases taken from my notes will give some idea of the varied conditions in which this medicine has proved useful in my hands, and is mostly in accordance with the experience of others as reported in the Medical Journals.

1st—Gout. Mr. E. M., æt. 55, has been subject to attacks of gout for years, which were gradually becoming more frequent, and of late at intervals of four or five weeks; was depending upon a patent remedy composed, evidently, largely of colchicum, and from which he did not usually receive any relief under twenty-four hours. I was called at the beginning of one of his attacks and requested to give him an hypodermic injection of morphine to ease his suffering until his usual remedy should take effect. His right wrist and elbow were swollen and excruciatingly painful. Disregarding his request, I ordered antipyrine; gave him twenty-five grains; turned down the light;

told him to keep quiet; have no one in the room to talk to; and left myself. In thirty minutes I returned and awakened him from a sleep; the pain was immensely relieved. I then ordered ten grains to be given every two hours, and left him for twelve hours. Upon my next visit he was around the house. Feeling delighted at being so quickly relieved, for the pain was quite all gone, I then put him on ten grains every four hours for six days—pain or no pain. At the end of that time the pain and swelling had entirely disappeared. When I was first called he was about to make his usual yearly visit to Carlsbad and now started East for that purpose. He was detained in New York longer than expected, when he felt so much better that he postponed the continuance of his trip and returned to California. He has now for over three months had no attack, and thinks that he is not only free from their frequency, but hopes that he has become altogether cured.

2d—Gout. Mrs. E. H., aet. 50, was subject to occasional attacks of gout affecting the first joints of both hands, at which times the joints would be swollen, hot and painful, and of late deflected more or less after each explosion. I was called at the beginning of one of her acute attacks. I gave her antipyrine x grains every two hours until the pain was relieved; taking fifty grains. I then gave her ten grains four times a day for ten days. She continued to improve, and at the end of that time all pain and most of the swelling was gone. I then ordered ten grains once a day for one month, and since then the same quantity twice a week. It is now six months since I saw her. She has

had no more attacks; the swelling which had become chronic, is removed, and her fingers though not all quite straight, are wonderfully improved. It looks as though she had escaped a disease which was progressive and becoming markedly chronic.

3d—Carbuncle. Mrs. T. P., aet. 53, suffering with glycosuria, has had carbuncles before; consulted me about one week after the beginning of a recent attack. I found a well defined carbuncle on the left side of the back, just above the crest of the ilium; the mat portion was three inches long and two and a half broad, the center was already assuming a dusky hue with several little points, showing beginning of the honeycombing process, the edges red and an areolar ring an inch or more wide over the surrounding tissue, and the whole thing exceedingly painful. I did not use the knife as my experience with that line of treatment in previous attacks had not been satisfactory, but used poultices. The next day it was worse; I continued the treatment. On the third day she was still worse, the mat evidently growing larger, and I began to fear for the ultimate recovery of my patient. As the pain was very severe (although apparently contraindicated), I concluded to give her antipyrine. As an analgesic, simply, it acted promptly. She took ten grains every hour until she had taken forty grains. The next day in addition to the relief of pain, I found to my surprise, that the congested areolar had almost disappeared. The edges were not as marked, and there was a perceptible shrinking of the whole abscess. Taking the hint, I gave her five grains every three hours, for several days. She continued to

improve, the carbuncle grew smaller, the center suppurated and healed rapidly by granulation. The poultices were discontinued, and nothing done but the occasional application of spirits camphor, and keeping it well covered with ung. amyli, together with nourishing diet and a fair quantity of stimulus.

4th—Cerebro spinal meningitis. I was called in consultation with Dr. C. C. Vanderbeck, to visit a boy of about eleven years, whose symptoms pointed conclusively to an abrupt attack of this disease. Delirium, opisthotonos, etc., were present. It was the second day of the disease, and he was becoming rapidly worse. He had been under the usual course of treatment recommended in such cases. We decided to try antipyrine, and ordered five grains to be given every hour for several hours, and watch the effect. We saw him again the next day, he had taken eight doses before any perceptible effect was manifest, when there was a marked mitigation of the symptoms. The medicine was continued at longer intervals. He continued to improve, quieting down, becoming rational and taking food, and made a rapid recovery.

5th—Dysmenorrhea. Miss A. D., hair dresser, aet. 19, had been for two years or more a great sufferer from this trouble. The pain was present during most of the menstrual period, and was so severe that she was obliged to remain in bed. Her general health began to suffer in consequence, and she was fast becoming a confirmed invalid. Upon consultation, I advised the use of antipyrine, and powders of ten grains each were ordered with directions to take two when the pain began, and one

every hour after until six had been taken, if required, and then report. At the next period she took the two and one, one hour afterwards. She was so much relieved that she did not take any more until reporting. She was then told to take one three times a day for the rest of her time. She had no further trouble, and at each period anticipates the pain at the first warning, and is able to continue her vocation comfortably.

I will close this record with these few cases taken from many, but they are sufficient to show the value of this medicine in diseases not usually or readily amenable to other lines of treatment.

