ON THE USE AND DOSE OF ANTIFEBRIN FOR CHILDREN.

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ANTIFEBRIN and antipyrin have not long waited for official recognition, being both included in the *Additions, 1890, to the British Pharmacopœia*. The statement of an official dose should make rare in future the experience, frequently recorded in the past, of witnessing a result more intense than was expected, sometimes even fatal, from what the physician regarded as an ordinary dose. This will be the case only if the usage is strictly followed with these, which we adopt with other powerful drugs, namely, to give in the first instance, to an unaccustomed patient, a dose near the minimum of the *Pharmacopœia*. The dose there authorised of antifebrin (acetanilide) is 3 to 10 grains, and of antipyrin (phenazone) 3 to 20 grains.

Several notes on antifebrin which have very recently appeared in the *BRITISH MEDICAL JOURNAL* illustrate the different degrees of freedom with which it is administered. Caution is carried to the furthest point in a report of cases by Drs. Sahli and Favrat, of Berne,¹ where 3 grains are spoken of as a dose larger than it is prudent to give, before trial has been made with less. On the other hand, 10 grains have been recommended as a safe quantity. Mr. Readman, in one of the notes referred to,² advises in typhoid fever a dose of 5 to 10 grains to begin with, followed by smaller doses. A case was recorded in the *JOURNAL* of the previous year,³ in which the temperature fell to 95°, and remained below normal for more than twelve hours, with shivering, coldness of the surface, extinction of pulse at the wrist, deathlike pallor, and sighing respiration, after a dose of 10 grains. Recovery only occurred under the most vigorous stimulation continued all night. Here 2 grains afterwards proved sufficient.

The above observations, and others by Mr. Hawkins-Ambler⁴ and Surgeon Rose,⁵ have reference to adults. Dr. Herman Bronner,⁶ describing a case of purulent pericarditis, mentions that he gave to the patient, 11 years of age, 7½ grains in a dose, with the result of producing distinct collapse. Dr. Gordon lately recommended antifebrin as a hypnotic in bronchitis and broncho-pneumonia, and stated the dose for children as 2 to 5 grains, depending on the age.⁷ For permission to report the following cases, which occurred in the Wirral Children's Hospital, Birkenhead, while I was house-surgeon there, I am indebted to Drs. F. Johnston and Alice Ker, hon. medical officers of the hospital.

CASE I.—Child, aged 8 years, suffering from acute pulmonary tuberculosis. Having given to this patient one dose of 3 grains, I considered that an effect greater than was quite safe had been obtained, although there was no shivering. The temperature did not fall below 97°. The boy, who on

preceding nights had been kept awake by violent cough, slept heavily, so as to be aroused with some difficulty. He perspired much more profusely than usual. His lips were of their natural colour. The pulse was 105, and respirations 38 per minute, both showing a decline less marked than the fall in temperature. The antifebrin was not repeated for a week, during which the two lowest temperatures (taken every four hours) were 100.4° and 101°. On subsequent occasions, 1½ grain was given, at different periods of the day, and was followed each time by a fall of temperature in two hours to normal, as appears in the table here given.

CASE II.—Child 4 years old, suffering from scald. In this case (which had occurred before that described above) 3 grains produced a satisfactory and not an excessive result. The temperature was 102.4°, and the child had had two convulsions when this dose was administered. After four hours it was 98.4°. It having risen again four hours later to 102°, the dose was repeated, and produced a fall in the next four hours to 96.2°. The child slept well, but not too heavily; there was no more twitching nor any signs of collapse. When the temperature returned, after another four hours, to 103.6°, the third dose of 3 grains brought it down only to 101°. There was no important rise afterwards, and the child recovered.

CASE III.—An infant, 9 months old, badly scalded over the chest and arms. The temperature was high, and the condition generally most unpromising for many weeks. In the course of the third and fourth weeks, when some very high temperatures occurred, antifebrin was used. The dose at first was one-third of a grain, but the action was slow and insufficient. Thus on one occasion the temperature was 105.6°, when this quantity was given, and four hours afterwards was still 105°. The same dose then repeated brought down the temperature in four hours more to 97.6°. A few days later a temperature of 107.2° was verified by trial with a second thermometer, and the child appeared to be on the point of convulsions. The skin over the whole body was extremely dry and covered with thick hard scales, the sequel of a papular eruption. In a hot pack these were shed, there was profuse perspiration, and the temperature two hours afterwards had fallen to 101.2°. Half a grain of antifebrin had been given at the same time, but the successful result and the preservation of the child's life were clearly due to the pack. On several days before recovery was established half a grain was administered, and sometimes repeated after four hours, without producing any great or rapid decline of temperature. It appears that doses large in proportion to the age would have been well borne in this case as in the second.

I have not in any case adopted the plan favoured in several communications—that of giving the antipyretic in small doses at regular intervals, so as to keep the temperature always below a certain point. It appears preferable to reserve any antipyretic for occasions when the higher degrees of fever are causing discomfort and danger, which call specially for relief. Consequently I have not yet used antifebrin for children suffering from typhoid, in whom it is seldom necessary to reduce the temperature by drugs unless it exceeds 104° F., and tepid or cold sponging alone fails to bring it down. When in any febrile condition of childhood a remedy of this class is admissible, a moderate dose of antifebrin—prescribed with directions for its repetition, after an interval of at least two hours, only in the event of the first dose having failed to take effect—can be employed with good result, to which its diaphoretic and sedative actions contribute.

UNIVERSITY OF GÖTTINGEN.—On April 25th a new medical clinic and a new pathological institute were formally opened in the University of Göttingen. Professor Ebstein, the head of the former, had the Order of the Red Eagle, Fourth Class, conferred on him in honour of the occasion. Professor Orth, director of the Pathological Institute, received the Royal Crown Order, Third Class, at the same time.

THE Superior Sanitary Council of Austria has recently called the attention of the Minister of the Interior to the necessity of establishing special institutes for the study of the nature, causes, and means of prevention of infectious diseases. It is urged that the institutes should be situated in the neighbourhood of large public hospitals, from which they could be supplied with abundant clinical and pathological material.

Date.	Hour.	Temperature preceding.	Dose.	Temperature after Antifebrin.					
				1 Hour.	2 Hours.	4 Hours.	6 Hours.	8 Hours.	10 Hours.
Mar. 22	6 P.M.	104.6	3 grs.	—	103.2	98.6	97.0	100.0	104.1
„ 29	2 A.M.	104.8	1½	101.2	99.0	99.4	100.0	101.4	102.6
„ 29	10 P.M.	104.2	1½	100.6	97.0	96.8	100.6	104.4	—
„ 30	6 P.M.	104.2	1½	100.8	98.4	100.2	—	104.2	—
Apr. 1	2 A.M.	105.2	1½	100.0	98.2	99.0	—	104.8	—
„ 1	10 P.M.	104.4	1½	101.0	98.0	99.0	—	103.2	—

¹ *BRITISH MEDICAL JOURNAL*, SUPPLEMENT, November 22nd, 1890, p. 59.

² *BRITISH MEDICAL JOURNAL*, November 29th, 1890, p. 1238.

³ *Ibid.*, September 14th, 1889, p. 600.

⁴ *Ibid.*, January 24th, 1891, p. 172.

⁵ *Ibid.*, February 7th, 1891, p. 284.

⁶ *Ibid.*, February 14th, 1891, p. 350.

⁷ *Ibid.*, January 4th, 1890, p. 13.