

and minimal amounts of lysine, pyridoxine, and tryptophane in tablet form for 8 months.

2. The tendency for sperm concentration to increase was as great in the untreated group as in the treated groups.

3. Although no pregnancies occurred in the treated groups, 2 pregnancies were recorded among the wives of 2 of the control subjects.

4. It appears that amino acid therapy for

oligospermia should be reserved for those patients who exhibit or give the history of inadequate protein intake.

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### 15901 P

#### Effect of Para-Aminobenzoic Acid on Fever and Joint Pains of Acute Rheumatic Fever.

HERMAN ROSENBLUM AND L. E. FRASER. (Introduced by Douglas H. Sprunt.)

*From the Division of Pediatrics of the College of Medicine, University of Tennessee, Memphis, Tenn.*

Para-aminobenzoic acid has been shown to be beneficial in the treatment of the rickettsial group of diseases.<sup>1-4</sup> With the idea in mind that acute rheumatic fever shows a vasculitis<sup>5</sup> which is similar in some respects to that produced by the rickettsial diseases, and that both diseases are again similar in that they may be aggravated by the use of the sulfonamides,<sup>6-8</sup> para-aminobenzoic acid has been used experimentally to determine what effect, if any, it would produce on the fever and

joint pains of acute rheumatic fever. There is one report<sup>9</sup> in which it was used to sustain the salicylate level in the blood, and in which case the para-aminobenzoic acid, when used alone, apparently exerted no effect for the time during which it was administered.

**Material and Procedure.** Nine patients in which the diagnosis conformed to accepted criteria<sup>10</sup> have been given the drug. These were all colored children ranging in age from 6 to 12 years. Eight of them had joint pains. In some cases they were mild and in others they were severe to the point of incapacitation. Sick cell anemia was carefully excluded in each instance.

Para-aminobenzoic acid powder was used and an immediate dose of 3-4 g was given, followed by a maintenance dose of 1-3 g given at 2-3-hour intervals. Blood levels were taken within an hour of the administration of the drug. Alkalis were given to prevent the development of acidosis. Salicylates, penicillin, and sulfonamides were withheld, except prior to the establishment of a definite diagnosis, or when they were necessary

<sup>1</sup> Yeomans, A., Murray, E. S., Zarafonitis, C. J. D., and Eeke, R. S., *J. Am. Med. Assn.*, 1944, **126**, 349.

<sup>2</sup> Tierney, N. A., *J. Am. Med. Assn.*, 1946, **131**, 280.

<sup>3</sup> Smith, P. K., *J. Am. Med. Assn.*, 1946, **131**, 1114.

<sup>4</sup> Flinn, L. B., Howard, J. H., Todd, C. W., and Scott, E. G., *J. Am. Med. Assn.*, 1946, **132**, 911.

<sup>5</sup> Von Glahn, W. C., and Pappenheimer, A. M., *Am. J. Path.*, 1926, **2**, 235.

<sup>6</sup> Topping, N. H., *Pub. Health Rep.*, 1939, **54**, 1143.

<sup>7</sup> Swift, H. F., Moen, J. K., and Hirst, G. K., *J. Am. Med. Assn.*, 1938, **110**, 426.

<sup>8</sup> Massell, B. F., and Jones, T. D., *New Eng. J. Med.*, 1938, **218**, 876.

<sup>9</sup> Dry, T. J., Butt, H. R., and Scheifley, C. H., *Proc. Staff Meet., Mayo Clin.*, 1946, **21**, 497.

<sup>10</sup> Jones, T. D., *J. Am. Med. Assn.*, 1944, **126**, 481.

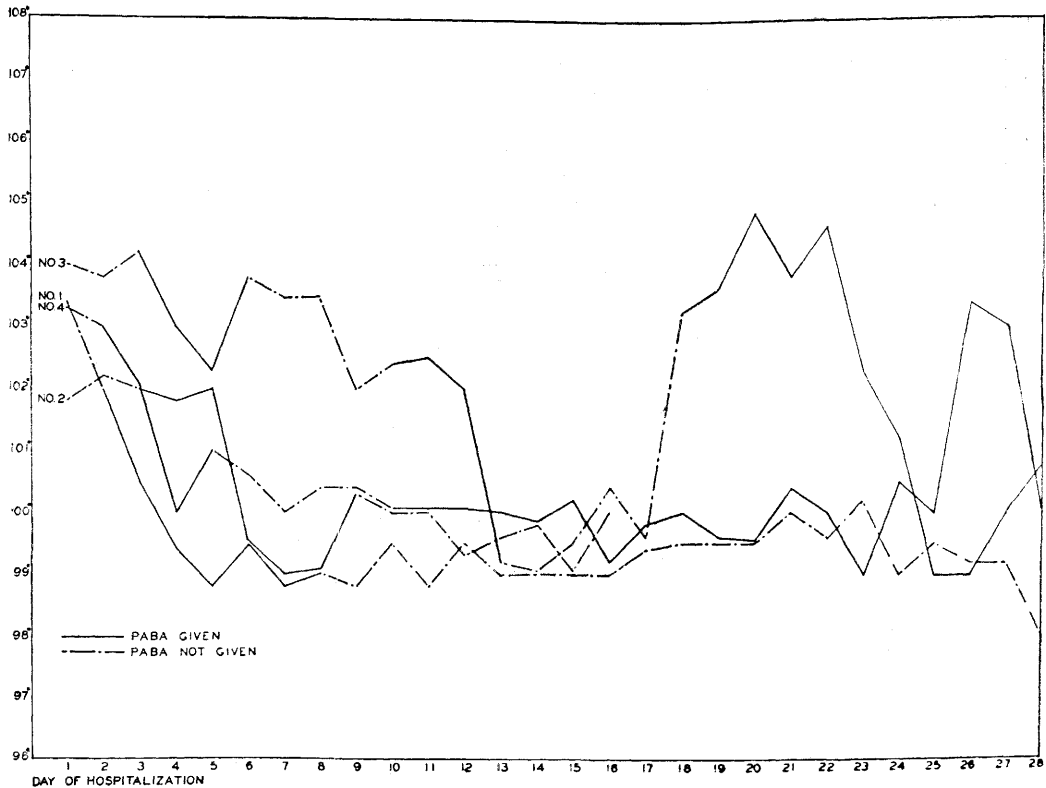


Chart 1.

to treat intercurrent complications. All temperatures were taken rectally.

**Results.** In 7 of the cases, which received para-aminobenzoic acid on the 1st or 2nd hospital day, there was apparently a prompt and definite response characterized by a fall in temperature and relief of the joint pains. The temperature became normal in these cases on the 3rd to the 7th day (Charts 1 and 2) and the joint pains were relieved on the 2nd to 5th days after the drug was started, usually on the 2nd or 3rd day. In Case No. 3, sulfadiazine was given for the 1st hospital day only, penicillin was given from the 2nd through the 7th day, and salicylates were given from the 7th through the 14th day. No response was obtained under this therapy. During this time para-aminobenzoic acid was given for 3 days, but in probably inadequate dosage. Following the reinstitution of this drug on the 11th day the temperature dropped to normal on the 13th day, when a level of 173.2 mg per

100 cc was obtained. It is possible that the effect in this case may have been due to a combined action of salicylates and para-aminobenzoic acid. In Case No. 7, there seemed to be a sustained suppression of the temperature while the drug was being given, followed by a prompt rise when it was discontinued and an immediate drop when it was reinstituted. In this case the joint pains persisted but were vague. In Cases No. 5, 6, 7, and 8 the only drug used was para-aminobenzoic acid. Case No. 9 received penicillin on the 2nd hospital day only, in addition to the para-aminobenzoic acid.

Three patients, Cases No. 3, 4, and 6 had secondary rises of temperature while taking the drug. Case No. 3 had an elevation for 6 days continuously, No. 4 for 5 days and No. 6 for 11 days. All of these patients retained a sense of well being out of proportion to their temperature. The throat was found to be moderately inflamed in Case No. 4 which may have accounted for his eleva-

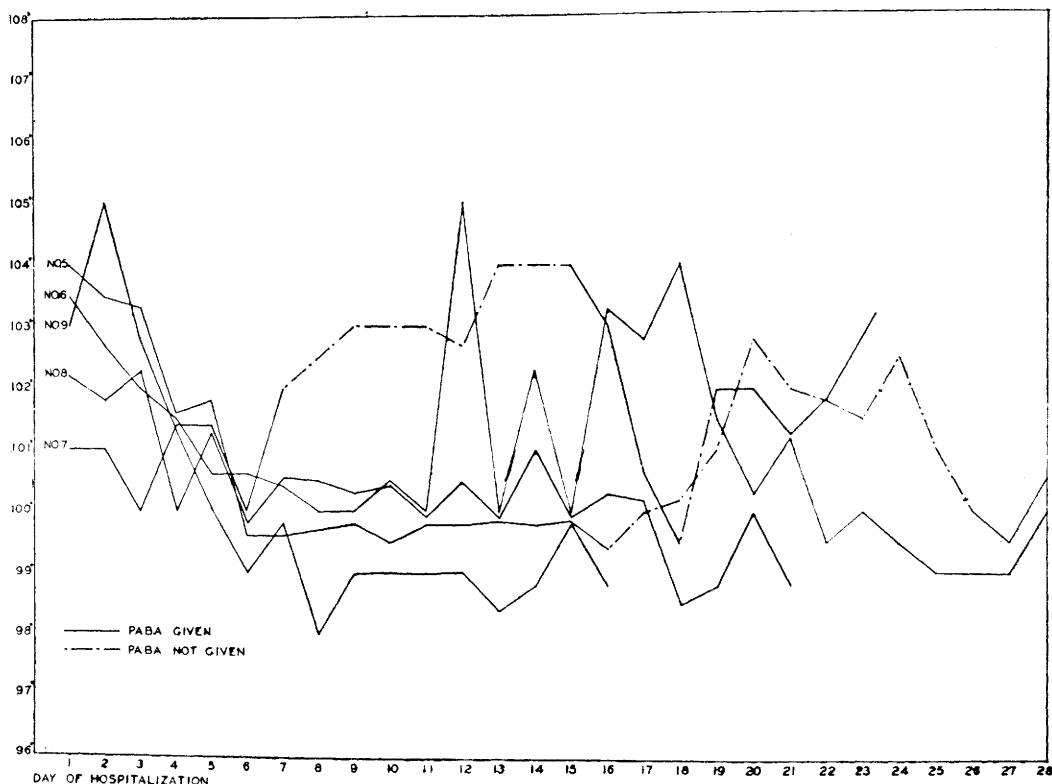


Chart 2.

tion. An unidentified reducing substance was found in the urine in the majority of these cases.

*Conclusions.* Para-aminobenzoic acid, in

the small series of 9 cases of acute rheumatic fever presented, appeared to have a definite effect on the fever and joint pains.

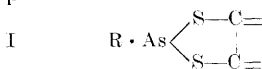
## 15902

## Effect of BAL on Trichomonacidal Activity of Some Organic Arsenicals.

ERNST A. H. FRIEDHEIM AND ROSE L. BERMAN. (Introduced by M. B. Sulzberger.)

*From the Laboratory of E. A. H. Friedheim, New York City.*

The inclusion of an aromatic trivalent arsenic radical in a 5-membered ring of the type



does not preclude a chemotherapeutic effect with an index of the same order of magnitude, characteristic for the parent compound



This conclusion was reached in a previous study on the trypanocidal effect of the condensation product of Mapharsen and BAL, i.e., 2-amino-4-[methylolcyclo-(ethylenedimercaptoarsino)]-phenol hydrochloride<sup>1</sup>

<sup>1</sup> Friedheim, E. A. H., and Vogel, H. J., *Proc. Soc. Exp. Biol. and Med.*, 1947, **64**, 418.