

tive transcendent," says Baglivi (*De Praxi Med.*, lib. i., cap. iv., § 2) of the physicians of his day; and these words may perhaps find their application in the subject before us, but of course completely separated from their other connexion.

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ARTICLE III.—*A somewhat peculiar Case of Fever.* By JOHN BEDDOE, B.A., M.D., Physician to the Bristol Royal Infirmary, etc.

THE case I am about to detail appears to me to have considerable interest, with reference especially to the mode of generation of heat in fever. The most notable point will be found to be the coexistence of an elevated temperature with an abnormally slow pulse, and but a moderate rate of wasting.

Henry Rees, aged 19, brewer, was admitted into the Bristol Royal Infirmary on the 6th August. He was seen by Mr Ludlow, the assistant house-surgeon, who prescribed for him 10 minims of nitro-muriatic acid, three times a day. I did not see him till the 8th.

He stated that he had always had good health until the 3d. On that day, when the weather was hot, he took a long walk in the country, and returned sweating profusely, and very tired, but was able to eat his supper. After supper he began to feel headache and nausea, but had no rigor. On the succeeding days, till his admission, he had headache, slight nausea and debility, and diarrhœa.

On the 7th the diarrhœa had ceased. The morning temperature was 100°; the evening do., 102·4°. I may here mention that the temperatures were taken by the head-nurse of the ward—an intelligent and conscientious woman, in whom I had confidence—except only those mentioned as taken at the time of the visit, for which I am myself responsible.

On examination I found the patient a small but well-made youth, with gray eyes and dark hair. His intelligence, naturally good, was very little dulled; and he was able to give a very good account of himself. He had headache, and had not slept; but the nausea had gone, and he said he could eat meat if he had it. His tongue was red at the edges, with a central line of fur; there were two or three dubious spots on the belly, but no tenderness there; his pulse was 54, regular, of moderate fulness; the heart-sounds presented no peculiarity; temperature, morning, 100°—at visit, 101·5°—evening, 102·6°.

The nitro-muriatic acid was continued. Diet, 8 oz. bread, rice-pudding, a pint of beef-tea, a pint and a half of milk with ice.

9th.—Feels better; no headache; pulse 54, temp. mane 102°, vesp. 102·4°. Urine of 24 hours, 26 ounces, sp. gr. 1017, amber, clear, no albumen. Urea (by Haughton's scale) 208 grains.

10th.—Better; tongue clean, red. Pulse 66 lying, 72 sitting up

in bed; temp. mane 101·4°, and vesp. 101·4°. Urine 38 ounces (one stool, no urine lost), sp. gr. 1007, pale greenish straw, no albumen. Urea (Haughton) 134 grains. Added 1 egg to diet.

11th.—Slept well; is hungry; has no cough, pain, or iliac tenderness; complains of nothing but weakness; sweats sometimes. Spots pretty numerous, of well-marked typhoid character; spleen rather large. Pulse 50; temp. mane 100·4°, at visit 100·5°. Urine 15 oz., sp. gr. 1015, slightly greenish straw; has had one stool, and may have lost a little urine with it, but certainly very little, having carefully emptied his bladder previously. Urea (Haughton) 107 grains. Ordered another egg, and 4 oz. bread extra.

12th.—Having eaten some food smuggled in yesterday by his "friends," he has had several loose stools, but says not much urine has been lost. Says he feels stronger. Pulse 52; temp. at visit, 101·7°, vesp. 101·6°. Urine 18 oz., sp. gr. 1025, amber, clear. Urea (Haughton) 249 grains.

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13th.—Feels "well;" diarrhoea has ceased. Tongue clean, red, rather dry. Pulse 60; temp. at visit 103·7°. Urine 36 oz. (none lost), sp. gr. 1009½, no albumen. Urea (Haughton) 183 grains.

14th.—Two stools. Pulse 59; temp. mane 102·4°, vesp. 102·4°. Urine 48 oz., sp. gr. 1012. Urea (Haughton) 283 grains.

15th.—Sleeps well; appetite good; has had two or three stools, and one dose of the astringent mixture; the nitro-muriatic acid has been continued throughout. There has been a good deal of sweating, but the skin is now dry. Pulse 61; temp. mane 102·6°, at visit 103·2°, vesp. 102°. Urine (some lost once) 48 oz., sp. gr. 1011½. Urea (Haughton) 269 grains.

16th.—One stool; scarcely any urine lost. No fresh spots observed. Pulse 63; temp. at visit 102·3°, vesp. 102·4°. Urine 38 oz., sp. gr. 1015, pale amber. Urea (Haughton) 269 grains.

17th.—Feels "better;" 3 stools; a little urine lost with two of them; sweated last night; one or two fresh spots noticed. Pulse 72, weak; temp. mane 101·4°, vesp. 102°. Urine 24 oz., sp. gr. 1022. Urea (Haughton) 308 grains.

18th.—Feels "better;" tongue still red and clean; good appetite; had one stool in night, and vomited, without previous nausea, a little clear fluid; had not vomited before. Pulse 60; temp. mane 101·6°, vesp. 100°. Urine 44 oz., sp. gr. 1011½. Urea (Haughton) 246 grains.

19th.—Aspect more lively; one stool, and a quantity of urine lost with it. Pulse 53; temp. mane 99·8°, vesp. 100°. Urine 38 oz., sp. gr. 1014. Urea (Haughton) 258 grains.

20th.—Two stools, very little loss. Pulse 68; temp. mane 100°, vesp. 100°. Urine 48 oz., sp. gr. 1010. Urea (Haughton) 246 grains. Custard pudding added to diet.

21st.—Two stools. Pulse 60; temp. mane 100·2°, vesp. 100·2°. Urine 44 oz., sp. gr. 1020 (?). Urea (Haughton) 530 grains (?).

22d.—Two stools. Pulse 60; temp. mane 99·6°. Urine 48, sp. gr. 1010. Urea (Haughton) 246 grains.

23d.—One stool. Pulse 80, sitting in bed; temp. mane 99°. Urine 56 oz., sp. gr. 1010. Urea (Haughton) 288 grains.

24th.—One stool. Pulse 60; temp. mane 98·8°, vesp. 98·8°. Urine 58 oz., sp. gr. 1010. Urea (Haughton) 298 grains.

After this no particular change occurred till the 28th, when I saw him again after an absence of a week. For the notes from the 20th to the 28th, I am indebted to Mr Rudge.

28th.—No stool. Pulse 60 in bed; temp. 98°. Urine 60 oz., sp. gr. 1008. Urea (Haughton) 255 grains. Got up this evening for the first time.

31st.—Walking about the ward, weak, but otherwise well. Pulse 130 standing, 102 sitting; temp. vesp. 98·4°.

Sept. 1st.—One stool. Pulse 120 standing, 102 sitting. Urine 44 oz., sp. gr. 1016. Urea (Haughton) 332 grains. Ordered a slice of meat. His diet hitherto had been 12 ounces bread, 2 eggs, custard pudding, rice do., 1 pint beef-tea, and 1½ pint milk; and he had had no stimulant of any kind.

2d.—Pulse 123 standing. Urine 64 oz., sp. gr. 1012. Urea (Haughton) 378 grains. Ordered 4 oz. sherry.

3d.—Pulse 105 standing, 96 sitting; temp. 97·4°, vesp. 98°. Urine 58 oz., 1011. Urea (Haughton) 308.

4th.—Pulse 114 standing, 96 sitting; has sweated copiously. Urine 48 oz., sp. gr. 1017½. Urea (Haughton) 427 grains. Weight 106 lbs. To go into the garden daily.

5th.—One stool; sweated freely in the night, but is stronger. Pulse 114 standing, 105 sitting. Urine 36 oz., sp. gr. 1016. Urea (Haughton) 271 grains.

6th.—Pulse 120 standing, 96 sitting.

7th.—Complaining of headache; in bed. Pulse 108 lying; temp. 97°. Urine 56 oz., sp. gr. 1014. Urea (Haughton) 380 grains. Ordered effervescing citrate of potash thrice a day. To continue the meat, milk, and beef-tea, and leave off the wine and other extras.

8th.—Better; no headache. Pulse 120 standing. Urine 40 oz., sp. gr. 1011. Urea (Haughton) 212 grains.

9th.—Pulse 120 standing.

10th.—Pulse 108 standing.

11th.—Urine 48 oz., sp. gr. 1015. Urea (Haughton) 340. Made out-patient.

Oct. 8th.—Returned to show himself. Is quite well, but complains that his legs ache after moderate exertion. Pulse sitting 80; weight 114½ lbs.

The symptoms and physical signs—viz., headache, diarrhœa, debility, elevated temperature, enlargement of spleen, and scanty rosy rash appearing in successive crops and disappearing under pressure—leave scarcely any doubt that the case was one of enteric fever; yet

the pulse during the first twelve days of observation averaged under 58, and remained at or near 60 for nine days more, until he was allowed to get up. And this did not depend on his heart's action being constitutionally slow; for it was capable of beating at the rate of 130, consistently with perfect comfort to himself, and did beat as high as 80 long after he had considered himself perfectly well, and acted accordingly. Nor did it result from any peculiarity in the treatment. Nor yet was it altogether dependent on the recumbent position; for, on the 7th of September, when he was lying in bed on account of a headache apparently caused by over-feeding, the pulse was as high as 108. Still the variations in the pulse dependent on changes of posture were very considerable; and the sudden rise from 60 to 102, or even 130, which took place between the 28th and 31st of August, could be attributed to nothing but the change from lying in bed to the erect posture with comparative activity.

The second noteworthy point is the almost complete absence of any apparent relation between the variations of pulse and of temperature. It is true, that on the 11th August there was a coincident depression of pulse and temperature (as well as of waste, as evidenced by the urine), but with that exception the course of these two lines on the accompanying chart is quite unconformable. The increased production of heat during the first three weeks of the illness did not depend in any way on increased rapidity of circulation, but, we may suppose, on the retention of a greater quantity of blood in what Dr Sanderson calls "the heat-producing organs." I have already said that the enlargement of the spleen, so usual in typhoid fever, was in this case very well marked.

Again, the bodily waste, as evidenced by the urine, was not so closely connected with the temperature as might have been expected. Still, the estimated amounts of urea and of urinary solids may perhaps be tolerably well accounted for, if we take into consideration, 1st, the temperature; 2d, the loss of waste products by and with the stools; 3d, the gradual increase of the quantity of food consumed; and, 4th, the probable detention of part of the waste products for some little time previous to excretion.

The very small amount of urea excreted on the 10th and 11th August is noteworthy. It was not much above 1 grain per lb. of body-weight, whereas 2 grains per lb. is the minimum allowed by Haughton and others for the products of vital work alone. The small quantity (also below 2 grains per lb.) excreted on the 13th may be more readily accounted for by the diarrhoea that had just occurred.

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