other plans of treatment. Dr. Broadbent and Dr. Fagge did not believe that heart complication cases were increased by the salicylate. Dr. Broadbent said it was exceedingly rare to see heart disease springing up during the administration of this remedy, and Dr. Fagge could hardly find one case in which there was reason to believe that pericarditis set in at a time when the action of the remedy was fully established. Sir William Gull and Dr. Sutton state that "if the patients pass the first few days of the rheumatic fever without the heart becoming involved, then they do not contract heart disease during the later period of the rheumatic attack."²

I quote these opinions since the evidence of the above cases, while giving support to some points, supplies deficiencies in others. They would seem to show a connexion between tonsillitis and rheumatic fever, and that salicylate of soda in large doses gives marked and speedy relief to certain cases of acute tonsillitis. Mr. Hormazdji will here find a case he was in search of—viz., one of tonsillitis not only treated with but still under salicylate of soda followed by rheumatic fever. Here, too, is a case such as Dr. Broadbent said was exceedingly rare, and Dr. Fagge could hardly find—viz., one of heart disease springing up during the administration of the salicylate. If we consider the nine days before Case 2 was attacked with acute pains, as "the first few days of the rheumatic fever," then its result is opposed to the statement of Sir W. Gull and Dr. Sutton. Both these cases raise the question, When is the action of the remedy fully established? In Case 1 twenty grains three times a day were not a preventive of acute tonsillitis. From Case 2 it would appear that the salicyl reaction in the urine cannot be taken as a criterion of the physiological dose having been reached. Here it was present after the patient had been taking the drug for nine days, and while the dose was still twenty grains every six hours. Yet this was not sufficient to prevent or in any apparent way modify the attack of rheumatic fever. In both cases good effects were only obtained by the full dose of twenty grains every four hours. It might seem presumptuous to found any opinion on the evidence of only two cases; but as the rare opportunity was afforded of carefully observing them for days before the supervention of the acute attack, I trust they may not be without value.

Gloucester-terrace, Kensington, W.

CASE OF

AGUE TREATED BY BATH MINERAL WATERS AND BATHS.

By A. B. BRABAZON, M.D.,

PHYSICIAN TO THE BATH MINERAL WATER HOSPITAL.

IN THE LANCET of Oct. 27th, 1883, my colleague, Dr. J. K. Spender, gave an interesting account of a case of ague, apparently successfully treated with baths and mineral waters at the Bath Mineral Water Hospital. Since the publication of this case in your columns, I have had under my care in the same hospital a case which, if not regular ague, at least belongs to that class of which ague is the typical form—I mean the class comprehending all fevers of the intermittent character. I beg to submit the history of this case to the readers of THE LANCET, the notes of which have been carefully taken by the present resident medical officer, Mr. Mercet. I regret that having a wholesome dread of the editorial scissors, I am obliged to abbreviate the carefully noted history of the case.

Wm. H—, aged thirty-three, a platelayer in the Underground Railway, near Chadwell, was admitted to the Bath Mineral Water Hospital on Dec. 28th, 1883, for ague. He had been a perfectly healthy man until he enlisted in an infantry regiment nine years ago. Immediately after joining the regiment he was ordered to the South Coast of Africa, where he was on active service for five or six months. In Cape Town he had an attack of acute rheumatism, which confined him to bed for nearly nine weeks. He attributed the attack to the low and marshy condition of the surrounding country. He perfectly recovered from this attack.

After this illness he served for six months in South Africa, being in good health; amongst other places, at the Orange River, whence he was ordered to Cape Town, thence to Durban. The weather was very warm and changeable, and vegetable decomposition abundant in the districts through which he marched with his regiment. Thence he was ordered to the Mauritius, where, after the second week of his stay, he had an attack of fever extending only over seven or eight days. His medical attendant pronounced it to be remittent fever. The patient himself graphically describes the symptoms of such fever. His next service was in India, where he continued for three years. He suffered here occasionally from diarrhoea, but was otherwise in good health. He was then sent home and got his discharge. His home being in London, he got employment on the Underground Railway, where he had an attack of ague on Sept. 24th, 1883. He describes his condition at the time of the attack as follows:—A day or two previous to the attack he suffered from frontal headache, malaise, and feeling of cold water being poured down his back. He was suddenly seized with shivering so severe that his teeth shattered and his whole body shook; pain in his back and head. Bowels were confined, and he passed large quantities of pale urine. He continued in this stage for about half an hour. He then gradually got warm, and in less than half an hour felt comfortable, but very weak and languid. The skin then became very hot; he experienced great thirst; perspired freely about the head and neck, and then all over the body. After this he felt better, but still weak and inclined to sleep. These attacks recurred about every twenty-four hours, with sufficient precision to enable him to state when the next attack would come on. About a week after his first attack he applied as an out-patient at Guy's Hospital. He was treated with quinine, and told he had ague and enlargement of the spleen. He remained in attendance at Guy's Hospital for eight weeks. He was admitted as a patient into the Bath Mineral Water Hospital on Dec. 27th, 1883. His general condition on admission was that of a fairly nourished man, of sallow complexion. Heart and lungs healthy and sound. Abdomen rather contracted. Liver dulness normal; edge of spleen to be felt below the costal arch. Urine amber-coloured; sp. gr. 1028, acid, abounding in lithates; no albumen. The patient commenced taking baths on Dec. 28th, with the use of waters internally; he continued the use of them three times a week until his discharge on Jan. 21st, 1884. The recurrence of attacks of ague were as follows:—Dec. 30th, not so severe as previous attacks.—31st: Severe attack.—Jan. 1st, 1884: Attack, but milder, splenic enlargement continues.—3rd: Attack still less severe.—10th: Has had one attack since Jan. 3rd, very mild; splenic enlargement has disappeared; from this date to his discharge on Jan. 21st he had no attack.

I trust I may be pardoned for giving in *extenso* a rather prolix account of the history of the patient previous to admission. My reason for doing so is to place beyond doubt that this was a case of genuine ague or intermittent fever. I am aware that many so-called cases of intermittent fever are really not ague. The history of this case, with the climatic changes and tropical surroundings attended with everything locally favourable to the development of the effects of malarious influence, points to the identification of the disease; even when he took to civilian life and labour in the underground railway, these conditions to some extent continued, so I am impressed with the idea that this "underground" work would be likely to reproduce the intermittent symptoms. Then, again, we have the diagnosis of the physicians of Guy's Hospital of ague and splenic enlargement. According to the patient's account the ague appears to have been generally of the quotidian type; and it is rather an interesting fact that after commencing the mineral water baths, the first three attacks were quotidian in type, and the three following tertian, in accordance with the well-known rule of intermittents—viz., that improvement is marked by the postponement of the periods of attack.

I may be accused of drawing my inferences too much in the *post hoc ergo propter hoc* fashion, but I do not think a perusal of the case will afford sufficient grounds for that accusation. I have honestly laid down the premises, and I leave my readers to draw their own conclusions.

Bath.

THE salary of Dr. Sutton, medical officer of the Streatham district of the Wandsworth and Clapham Union, has been increased by £40 per annum

² Medical and Chirurgical Transactions, vol. lii., p. 80.