

Another and larger party camped about a mile further on, near a spring of cool, clear water which was used exclusively; none among these had the fever.

3. The air about the Cypress Hills is so rare and dry, and so constantly in motion that, in my opinion, it is impossible for a malarial cloud, if I may so call it, to accumulate and exist sufficiently long to cause disease.

4. The fact that mountain fever in its worst form of typho-malarial appeared immediately after the freshet of June, 1878, is strongly in favor of my argument; before this, only mild forms of remittent and intermittent occurred in the Hills. It may here be stated that every stream in the Hills "boomed" and overflowed its banks during that same rain storm, and every village situated on one of them suffered from the epidemic.

5. Out of five half-breed hamlets in the Hills, only one escaped the epidemic. At the "Head-of-the-Mountain," twenty-one miles west of Fort Walsh, some twenty and odd families generally gather there in the early fall to make their homes for the winter in a secluded spot, well sheltered by a forest of beautiful firs, and where a *spring* of clear, pure water wells forth in their very midst; not one in this community ever had the fever.

6. During the prevalence of the epidemic, affections referable to the digestive system were very common; affections found to co-exist with the intermittents in all malarious districts. Appendix A shows that these disorders form 35 per cent. of the whole list of diseases, a very large percentage.

The above facts were elicited from personal observation and inspection. I am, therefore, in a position to state my opinion positively, and, if I am not mistaken, it must appear evident that:—1st. The epidemic in question is of miasmatic origin, and, (2ndly) that the water used is the medium of infection. With these views, the words malarial and typho-malarial fever must be misnomers; miasmatic and typho-miasmatic would be more appropriate.

Although the fever did not exemplify a law of periodicity by the appearance of regular paroxysms of febrile symptoms, still one or more of the stages peculiar to miasmatic fevers manifested themselves in the course of the disease. In some very exceptional cases these paroxysms were altogether absent, in which the fever took on the characteristics of latent intermittent, commonly known in the east as *dumb ague*. In the treatment, quinine was the only remedy which gave any hope of success, and if given in large doses at the inception of the disease, it almost invariably "broke" the symptoms and convalescence was immediate. In all cases reporting themselves within forty-eight hours after the manifestation of the first symptoms, the abortive treatment invariably succeeded.

The second important question now arises: What originated the typhoid element in the disease? Are the typhoid and miasmatic germs one and the same organism? or is typhoid grafted on to the other in a constitution reduced by a prolonged and debilitating disease, and incapable of withstanding the onslaught of a new infection? I believe in the latter, and the first cause was found in our very midst. A noxious cesspool was found in a blind alley extending the whole length of "E" division huts, where the sergeants' mess cook was in the habit of throwing his slops, vegetable garbage, etc. The first victims of typho-miasmatic fever were the sergeants' mess waiter and an "E" Division man in the adjoining building, who complained that a "bad smell" came up from underneath the floor in the corner where his bunk stood. It was this complaint that led to the discovery of the cesspool. It must be remembered that I am writing about the epidemic fever as it broke out at Fort Walsh two years ago.

The overcrowding of the huts no doubt was an important factor in producing the typhoid element. Some of the rooms allowed less than 200 cubic feet of breathing space. Experience has taught us that each of a body of men occupying one room should be allowed at least 600 cubic feet.

I have already stated that carcasses of horses and buffalo were strewn along the upper valley where, under favorable circumstances of heat and moisture, it was possible for the typhoid poison to develop and find its way into the stream.