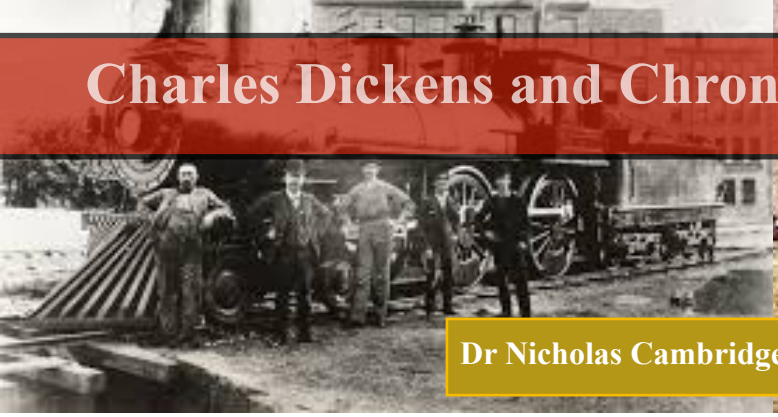
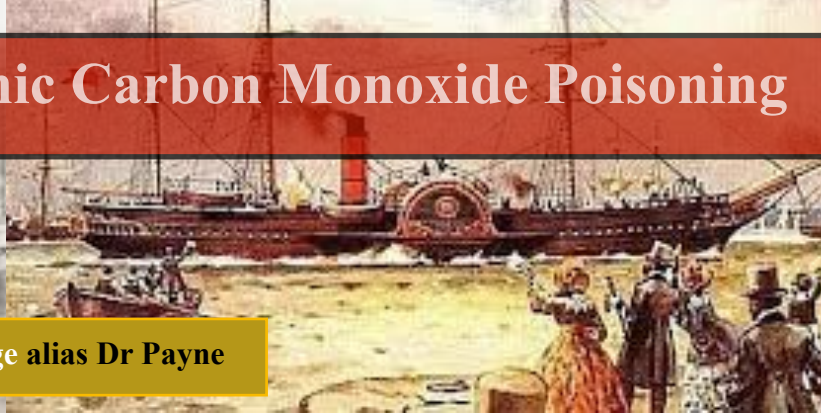
Charles Dickens and Chronic Carbon Monoxide Poisoning





Dr Nicholas Cambridge alias Dr Payne

When I was working as a family doctor I saw a patient in my consulting room for a chest infection. We happened to talk about where he went on a Saturday night. I was informed that both he and his wife always had a bath (not together) and afterwards became so sleepy that they never managed to go out and ended staying at home. This happened over several months. I asked him where their gas boiler was situated and was told that it was in their bathroom. I explained that they could be suffering from carbon monoxide poisoning and urged them to contact a gas engineer immediately. They took my advice and the boiler was found to be faulty and replaced. The couple now enjoy their baths (still separately) and go out regularly together on Saturday nights.

Whilst researching over 14,000 of Dickens's letters I wondered why all the biographers of Charles Dickens kept saying that he had suffered with a cold (American catarrh), which lasted for five months, during his American Reading Tour from 1867-8. Carefully reading all the letters from this period I realised that he must have been suffering with chronic carbon monoxide poisoning,

Dickens enjoyed travelling and made two visits to America - from January to May 1842 and from November 1867 to April 1868. During these visits, he travelled long distances by railway in unventilated carriages heated by stoves which burnt charcoal or anthracite coal. It is now known that such stoves produced carbon monoxide, an odourless and colourless gas. In high concentrations, carbon monoxide can be fatal while in lower concentrations it can cause debilitating symptoms. The commonest symptoms are headache (90%), nausea and vomiting (50%), vertigo (50%), altered states of consciousness (30%) and weakness (20%). During his 1842 visit

Dickens describes what it was like to be a passenger in one of these train carriages. The cars [train carriages] are like very shabby omnibuses - only larger, holding sixty or seventy people. The seats, instead of being placed long ways, are put cross-wise, back to front. Each holds two. There is a long row of these on each side of the caravan, and a narrow passage up the centre. The windows are usually all closed, and there is very often, in addition, a hot, close, most intolerable charcoal stove in a red-hot glow. The heat and closeness are quite insupportable. But this is the characteristic of all American houses, of all the public institutions, chapels, theatres, and prisons.

Dickens goes on to describe the effect such stoves had upon passengers' health: 'From the constant use of hard anthracite coal in these beastly furnaces, a perfectly new class of diseases is springing up in the country. Their effect upon an Englishman is briefly told. He is always very sick and very faint; and has an intolerable headache, morning, noon and night.' From this statement Dickens was aware of the effects such stoves had on his health as well as on others.

On Dickens's second American visit, 25 years later, over five months from 1867-68 he undertook a reading tour giving 76 readings which entailed travelling extensively by train and staying in hotels. In one letter, he says that as well as having a frightful cold he felt exceedingly depressed and miserable. He goes on to say: 'But it is a bad country to be unwell and travelling in; you are one of say hundred people in a heated car, with a great stove in it, and all the windows closed, and the hurrying and banging about are indescribable. The atmosphere is detestable, and the motion often all but intolerable.' Following this train journey, he mentioned that he was unable to get out of bed until two o'clock the following afternoon. Throughout his correspondence during this second American visit, he regularly mentions that he suffered with a variety of

debilitating symptoms including headaches, poor sleep, loss of appetite, lethargy and hair loss – all of which would support a diagnosis of carbon monoxide poisoning. It is possible that Dickens believed his symptoms were all due to what he called 'American catarrh' [a persistent cold] which he developed at the beginning of his five-month visit rather than from the effects of carbon monoxide from these stoves. He may also have attributed his tiredness and other symptoms to travelling long distances while staying in different hotels plus the effort required for his readings. The hotels were also heated by stoves which would have given off carbon monoxide too.

When Dickens gave his readings, he had his own 'Reading Set' which consisted of a screen placed behind him which assisted in projecting his voice and a lighting rig with gas fittings to illuminate the area around him. Sometimes a metal reflector was positioned along the top row.' This gas lighting would have produced carbon monoxide also.

Carbon monoxide binds itself to the haemoglobin in blood 240 times more tightly than oxygen. This means that all parts of the body requiring oxygen would be unable to function properly due to reduced oxygen levels, thereby causing the associated symptoms previously described. Regular exposure to carbon monoxide from these stoves would result in an individual always having a significant level of carboxyhaemoglobin in their blood stream until they were free of exposure. In Dickens's case, this would have been on his return journey to England by sailing ship. This fits with Dickens's case, since he mentions in a letter after only four days at sea that 'the "true American" seems to be turning faithless at last; and I made a Gads Hill breakfast this morning.' Three weeks earlier, while still in Boston, he wrote to his daughter Mary Dickens, that his appetite was poor and he was having to rely on the following regime:

> I cannot eat (to anything like the ordinary extent), and have established this system: At seven in the morning, in bed, a tumbler of new cream and two table-spoonfuls of rum. At twelve, a sherry cobbler and a biscuit. At three (dinner time), a pint of champagne. At five minutes to eight, an egg beaten up with a glass. Between the parts, the strongest beef tea that can be made, drunk hot. At a quarter-past ten, soup, and anything to drink that I can fancy. I don't eat more than half a pound of food in the whole four-and-twenty hours, if so much.

Although Dickens had suffered with a cold, or 'American catarrh,' when he first arrived in America, it is highly unusual for a cold to persist for five months and suddenly resolve after four days at sea. Therefore, a likely diagnosis of his prolonged symptoms would fit with chronic carbon monoxide poisoning.

Editors note: We are indebted to Nicholas for sharing this paper. It comes from some fascinating research where he has extensively researched the Dickens Letters archive and applied modern medical understanding to the symptoms set out in the correspondence. It includes the diagnosis of PTSD after the Staplehurst train crash in 1865 and the likelihood of childhood asthma affecting Dickens - as it affected me in my own childhood. ID/SP