

Doctor Norris of Stourbridge: The John Snow of the Midlands

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In 1848 Dr William Francis Soltau of Plymouth reported upon an outbreak of cholera. A milkman's wife had died from cholera; within twenty-four hours between thirty and forty of his customers had become sick with cholera. It was discovered the milk he was selling had been stored in an open pan in a room beneath the one where his wife had died. The floor of the room was rotten and the victim's discharges of diarrhoea and vomit had dripped down and contaminated the milk. Based upon this, Dr William Lascelles Norris of Stourbridge concluded that cholera could be transmitted through liquids. He wrote a report detailing his conclusions for the members of the General Board of Health who were responsible the implementation of the Public Health Act 1848 which aimed to improve the sanitary condition of towns and cities.

Dr Thomas Hunt (1850) in *The Provincial Medical and Surgical Journal* observed:

The most curiously interesting point is, that without being at all aware that Dr Snow had published a pamphlet on the cholera, and without ever having heard of the original and (to say the very least of it) plausible theory; of that most esteemed author, Dr Norris adopts, to a great extent, the same views and reveals a history which, if the facts can be substantiated, throws the greatest credit on the theory of the propagation of cholera era, by the introduction of choleraic discharges of one person into the stomach of another (p99-100),

In 1849, the English physician John Snow (1813-1858) had published his essay *On the Mode of Communication of Cholera*. In it, he refuted the - commonly held - belief that cholera was a disease transmitted through Miasma - or poisoned air, postulating that it was a disease spread by water contaminated by an unidentified germ cell.

While Dr Norris's discovery was eclipsed by that of Dr Snow - who is still the better known - he made major contributions to the field of medicine.

William Norris was born in 1792, the eldest of the four sons of William Norris, Esq. of Enville, Stourbridge. He attended Stourbridge Grammar School and later attended St. Bartholomew's Hospital, London, where he studied under the medical luminaries: the surgeon John Abernethy (1764 – 1831); the medic Henry Clutterbuck (1767-1856); the surgeon Sir Ludford Harvey (1759-1829) and the surgeon John Painter Vincent (1776–1852). He then undertook further training at the London Infirmary and Edinburgh University and received his M.D. from the University of St. Andrew's in 1823. He returned to Stourbridge and set up practice, becoming physician for the Stourbridge Dispensary; serving on the Sanitary Association for Stourbridge and acting as a surgeon for Kingswinford.

He wrote a number of articles for learned medical journals based on his cases: the successful treatment of Thomas Price, a cab driver at the Talbot Hotel, Stourbridge, for an abscess of the liver (Norris 1846); his treatment of Thomas Smith, 19, who suffered a hernia of the diaphragm (Norris 1837) ; a fatal case of melanosis of the lungs at Oldswinford (Norris 1849b) and his self-treatment of a bowel problem (Norris 1868).

One of his articles - which was reprinted in Europe and the United States - detailed the accidental poisoning of nearly a thousand people in the towns of Stourbridge and Kidderminster and in neighbouring villages, of whom he treated around one hundred and twenty (Norris 1849a).

The servant of a Miller (who also had a paper making business) accidentally mixed thirty pounds of acetate of lead (used for the bleaching of paper), with between sixty and eighty sacks of flour, instead of alum. Alum is an aluminium-based compound, which was used to make bread whiter and heavier. This led to malnutrition and bowel problems such as constipation or chronic diarrhoea; the latter often proving fatal for children (Goodman 2014).

Those who ate the bread complained of a peculiar taste. Their tongues became covered with a darkish cream-coloured mucus and their gums were swollen, with a blue tinge which extended around the inside of the mouth. There was excessive salivation, digestive problems, vomiting, violent painful abdominal spasms and a number of cases proved fatal. Norris also confessed to having unknowingly eaten some of the poisoned bread but to have only been mildly affected.

Norris was well acquainted with lead poisoning and recognized the appearance of sufferers:

In this neighbourhood we have numerous glass houses, and many hundreds of men are constantly employed in the fumes of lead, and we know them by a sallow, thin, unhealthy aspect, with soft and flabby muscles (p.206 Norris 1849a).

His most famous contribution was to the study of melanoma, a skin cancer that can spread to other organs in the body. His papers: *Case of Fungoid Disease* (1820) and *Eight Cases of Melanosis* (1857) made significant contributions. In the *Case of Fungoid Disease*, Norris followed the progress of a 59-year old male patient with melanoma for over three years, documenting his disease, its progression and making detailed anatomical observations upon his autopsy. He made several seminal observations regarding the condition which continue to interest present day researchers of melanoma. Including the following:

It is remarkable that this gentleman's father, about thirty years ago, died of a similar disease. A surgeon of this town attended him, and he informed me that a number of small tumours appeared between the shoulders, which were severely cauterized, soon after which death took place. This tumour, I have remarked, originated in a mole, and it will be worth mentioning, that not only my patient and his children had many moles on various parts of their bodies, but also his own father and brothers had many of them. The youngest son has one of these marks exactly in the same place where the disease in his father first manifested itself.

These facts, together with a case that has come under my notice, rather similar, would incline me to believe that this disease is hereditary (p.565 Norris 1829).

Norris was the first to note how some melanomas could be inherited - this was fifty years before Gregor Johann Mendel presented his work on inheritance (Hecht 1989). It was also the first description of *Familial Atypical Multiple Mole Melanoma Syndrome*: an inherited condition characterized by the presence of multiple moles. Atypical moles, which are called dysplastic nevi, are benign - but are associated with an increased risk of melanoma (Rebecca et al 2012). In his *Eight Cases of Melanosis* (1857) his findings included: proposing a relationship between melanoma and environmental factors such as industrial pollution; observing that most of his patients had pale complexions and light coloured hair and that melanoma could spread to other organs. To control recurrence he advocated cutting out the tumour and surrounding unaffected skin to prevent regrowth. All are accepted today (Rebecca et al 2012).

In June 1823, he married Anne Lascelles, at Abbey Church, Malvern; they had three sons and two daughters. His eldest son, John, became a surgeon at Brierley Hill. Dr. Norris died from hemiplegia and apoplexy (i.e. a stroke), at his home in Stourbridge on March 23rd 1877, having served the people of Stourbridge for sixty years. He never became as famous as Dr Snow and has been forgotten in Stourbridge. However, textbooks and studies on melanoma and its history all pay tribute to his work - which is not a bad legacy.

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