LATE RECOGNITION FOR MEDICAL PIONEER

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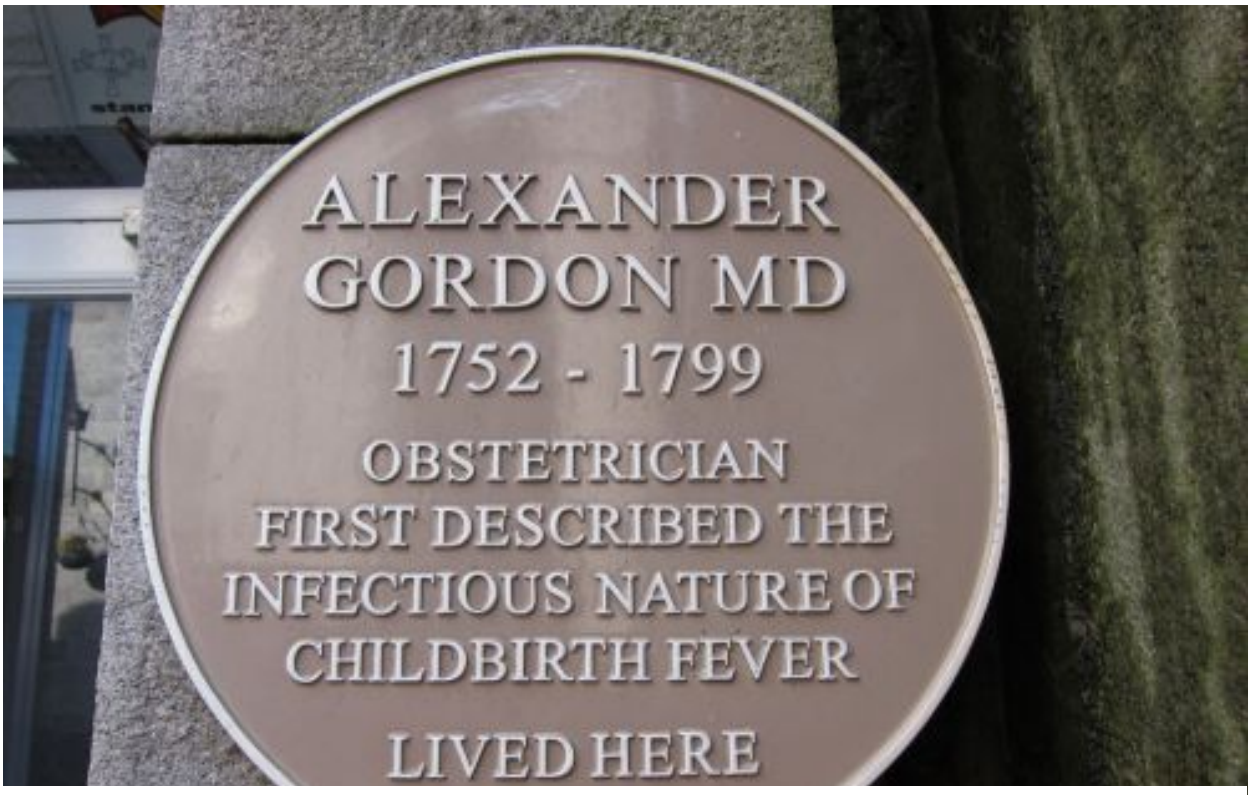
by Vienna Richards

"Neither life nor history treated Gordon kindly....medical colleagues, midwives and the public of Aberdeen were openly hostile to his ideas."

– C.John Scott, MB, BS, MBA, FRCP(Edinburgh), FRCP(London) in Hektoen International, Journal of Medical Humanities, Volume 9, Issue 1-Winter 2017.



This plaque hangs outside the former home of Alexander Gordon, 18 Belmont St, Aberdeen, Scotland.

If you're familiar with the medical breakthrough discovery in the early 1800s by Hungarian doctor Ignaz Semmelweiss (born 1818 - died 1865), you may be wondering who Alexander Gordon is.

Firstly, Semmelweiss is widely accepted as the physician who saved the lives of mothers during childbirth in 19th Century Vienna, Austria, after discovering that hand washing stopped the spread of infection from puerperal (childbirth) fever in those days, resulting in death.

Puerperal fever, a septicaemia that occurred in mothers following childbirth and with a high mortality rate, first emerged as a major problem in the first half of the 19th Century, according to medical textbook *Microbiology and Infection Control for Health Professionals* by Gary Lee and Penny Bishop.

Attendant doctors and midwives at the births were the unknowing carriers of infection due to their lack of hand hygiene between patients. Instead of embracing a life-saving discovery, the medical profession of his time vigorously resisted and rebuked Semmelweis' discovery. They refused to listen to him. It was only after his death that Semmelweiss earned the hallowed title of *Saviour of Mothers*.

Fast forward to the last decades at least, and the United Kingdom's Aberdeen medical archives have uncovered a fact that challenges Semmelweis' place in history. At least 50 years earlier, one of their own local doctors raised the same issues and made the same discovery as Semmelweiss did. This forgotten doctor was Alexander Gordon, born 1792 and died in 1799.

Evidence
In 1998, Professor Peter Dunn, from the University of Bristol, published a paper in the British Medical Journal titled *Perinatal lessons from the past - Dr Alexander Gordon (1752-99) and contagious puerperal fever which* sheds further light on the unsung pioneer of modern infection control:

> *"Gordon's main interest was midwifery and obstetrics and, in addition to a considerable private practice, he regularly gave lectures on this subject to the University students.*
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> *In 1789 and 1792 Aberdeen experienced serious epidemics of puerperal fever. Gordon himself cared for 77 such patients, 25 of whom died, usually around the 5th day. Following this experience he published his Treatise on the Epidemic Puerperal Fever of Aberdeen in 1795. It was dedicated to his mentor, Thomas Denman, who had himself already made important contributions to this subject.*
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> *...extracts from his treatise show Gordon's insights into the contagious nature of puerperal fever, its epidemiology, pathology and the means of prevention. His account is all the more remarkable in that it preceded that of Semmelweis by more than half a century."*

In 2010, the United Kingdom's Medical Journal, *The Lancet*, published the following comments by Dr Ian M Gould from Aberdeen's largest hospital. :

> *"Ignaz Semmelweis...is widely believed to be the father of modern infection control...In fact, such ideas had circulated in the medical world for at least a century before Semmelweis' work. Moreover, it is well documented that Alexander Gordon, an obstetrician working in Aberdeen, UK, was the first to prove the contagious nature of puerperal sepsis. He also advocated the need for good hygiene for its prevention in a thesis published in 1795."*

He adds that Gordon's thesis was reprinted three times in Edinburgh, Philadelphia, and London over the next 55 years after 1795, "suggesting that Semmelweis (1847) could well have known of his work. Like Semmelweis, Gordon was persecuted for his findings."

The Aberdeen Medico-Chirurgical Society, founded in 1789, records that during the epidemics of puerperal fever suffered by Aberdeen from 1789 "Gordon carefully gathered statistics on these and published the results in *A Treatise on the Epidemic Puerperal Fever of Aberdeen* in 1795."

> *"Fifty years before Semmelweis he showed that it was not caused by 'a noxious constitution of the atmosphere' as doctors then believed but only 'seized such women only as were visited, or delivered, by a practitioner or taken care of by a nurse who had previously attended patients affected by the disease'.*
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> *"He recognised that he was not blameless. 'It is a disagreeable declaration for me to mention that I myself was the means of carrying the disease to a great number of women.' He argued that spread could be prevented by attendants carefully washing their hands and wearing clean clothes after attending patients with the disease. His views were ridiculed by medical and nursing colleagues and soon after the publication of his book Gordon was recalled to the Navy."*

Sadly, Gordon experienced a similar fate professionally to Hungarian physician Semmelweis in his time in Vienna, Austria.

In this New Year's issue (2017) of *Hektoen International -A Journal of Medical Humanities*, retired Aberdeen physician C.John Scott provides detail on Gordon and his experiences in Aberdeen.

> *"The epidemic of childbed (puerperal) fever that struck the city of Aberdeen, Scotland, between December 1789 and March 1792 was*

unusual. It occurred not in the dirty, crowded and ill-ventilated wards of lying-in hospitals, but throughout the city and surrounding villages. Serendipitously, one doctor cared for most of the patients. This was Alexander Gordon...Gordon was not a simple provincial practitioner but a doctor with wide experience in medicine and specific training in obstetrics.

"He used his knowledge and experience to identify the means of transmission and proposed preventive measures for the disease half a century before Oliver Wendell Holmes and Ignaz Semmelweis.

"When an outbreak of puerperal fever began in Aberdeen in 1789 Gordon recognized it for what it was, having seen cases in London hospitals, but he had no more idea than any other doctor of the time as to what caused it and how it was transmitted. Getting up too soon after childbirth, too rapid a delivery, changes in the weather, strong drink, spices, metastasizing milk, and obstructed perspiration had all been suggested. Perhaps the most popular belief was that it arose from poisons in the atmosphere (miasma). This would have been credible for outbreaks in hospitals, but seemed to Gordon unlikely for an outbreak in a scattered community affecting women of all classes and a variety of living conditions.

He noted that women in outlying villages who were delivered by local midwives did not get the disease, whereas if a city midwife was involved in the birth most were affected. Using Dispensary records and his own notes he was able to construct a table of almost all cases, in which he recorded which health professionals had been involved and the date the disease had its onset. Thus he was able to track the course of the disease from patient to patient via a midwife or a doctor. His findings, which he published in 1795, both surprised and shamed him.

Gordon's data collection and analysis clearly helped to answer his own questions.

C. John Scott:

"He found that "this disease seized such women only as were visited or delivered by a practitioner or taken care of by a nurse who had previously attended patients affected by the disease." So certain was he

of this that he "could venture to foretell what women would be affected with the disease upon hearing by what midwife they were to be delivered." It was not only midwives who transmitted the disease. He admitted, "I myself was the means of carrying the infection to a great number of women." He went on to recommend, "Nurses and physicians who have attended patients afflicted with the puerperal fever ought carefully to wash themselves and get their apparel properly fumigated before it be put on again."

As C. John Scott noted, neither life nor history treated Gordon kindly. The medical profession including midwives and the people of Aberdeen criticised his findings in the published Treatise. As a result, Scott says Gordon never practised again. He was recalled to the navy and died at the age of 47 after contracting tuberculosis, shortly after retiring from the navy.

Scott asserts that Alexander Gordon "deserves recognition as the first doctor to appreciate the contagious nature of puerperal fever and its prevention by hygiene of health professionals." Strong argument, indeed.

> **"His contribution to medicine has been overshadowed by the more heart-rending story of the life, suffering, and death of Semmelweis...No likeness of him exists and the only public memorials in his home city are a small plaque on the house he occupied and a neglected gravestone in an Aberdeen churchyard."**
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> – C.John Scott, Retired Physician, Aberdeen, Scotland, UK.

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I must also acknowledge University of Cambridge's Professor Mary Dixon-Woods because it is her words in a media interview four years ago that first alerted me to Alexander Gordon's existence, and the challenge to Semmelweis' place in medical history.

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