

PERINATAL LESSONS FROM THE PAST

Dr Alexander Gordon (1752–99) and contagious puerperal fever

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Alexander Gordon, one of twin boys, was born in 1752 in the parish of Strachan, 20 miles south west of Aberdeen. Little is known of his early life, but he obtained an MA at Marischal College, and after further study at the Aberdeen Infirmary and in Edinburgh, graduated in medicine at the University of Aberdeen. In 1780, at the age of 28, with testimonial letters from the Corporation of Surgeons of London, he entered the Royal Navy as a surgeon's mate. Two years later he was advanced to the rank of surgeon. Put on half pay in 1783, he went to London where for the next two years he studied at the Lying-In Hospital in Shore Street. While there he also attended the lectures of Drs Thomas Denman and William Osborn at the Middlesex Lying-In Dispensary and practised surgery and dissection at the Westminster Hospital. During this period, he married Elizabeth Harvey. They had two daughters, one of whom died in childhood.

In 1785 Gordon returned to Aberdeen, gained an MD from Marischal College and entered general practice. Shortly after he was appointed physician to the Aberdeen Dispensary that had opened in 1781. During the next nine years there were 12 925 admissions for treatment at this institution. 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.^{1 2}

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. (fig 1)³ It was dedicated to his mentor, Thomas Denman, who had himself already made important contributions to this subject. The following 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.

"The observations which I have to offer are of the utmost importance to society, and I am only diffident of my ability to express them in the manner they deserve. I have, however, made an attempt which I hope will meet with a favourable reception from the

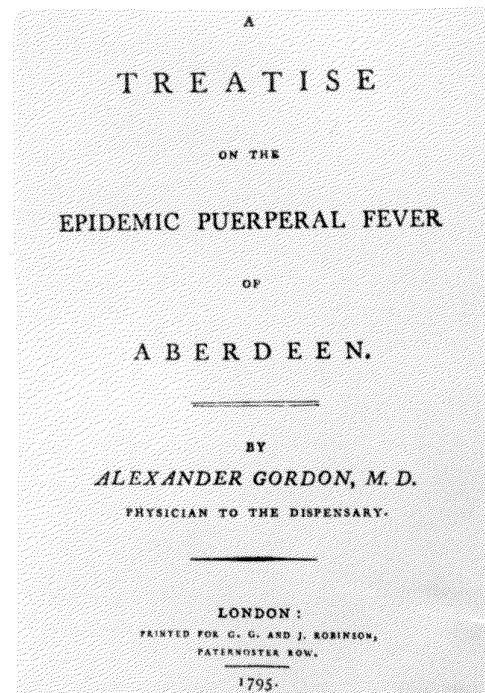


Figure 1 Frontispiece from Alexander Gordon's *Treatise* (1795).

public; especially as I have advanced no opinion that is not an obvious conclusion immediately resulting from the facts, and as all the facts may be depended on." "... that the cause of the epidemic puerperal fever under consideration was not owing to a noxious constitution of the atmosphere, I had sufficient evidence; for if it had been owing to that cause, it would have seized women in a more promiscuous and indiscriminate manner. But 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 with the disease. In short, I had evident proofs of its infectious nature, and that the infection was as readily communicated as that of the small-pox or measles, and operated more speedily than any other infection with which I am acquainted." "With respect to the physical qualities of the infection, I have not been able to make any discovery; but I had evident proofs that every person who had been with a patient in the puerperal fever

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became charged with an atmosphere of infection, which was communicated to every pregnant woman who happened to come within its sphere. This is not an assertion, but a fact, admitting of demonstration ..." "... I plainly perceived the channel by which it was propagated and I arrived at that certainty in the matter that I could venture to foretell what women would be affected with the disease, upon hearing by what midwife they were to be delivered, or by what nurse they were to be attended during their lying-in; and in almost every instance my prediction was verified." "It is a disagreeable declaration for me to mention, that I myself was the means of carrying the infection to a great number of women ..." "I will not venture positively to assert that the puerperal fever and erysipelas are precisely of the same specific nature: but that they are connected, that there is an analogy between them, and that they are concomitant epidemics began in Aberdeen at the same time, and afterwards kept pace together; they both arrived at their acme together, and they both ceased at the same time." "The analogy of the puerperal fever with erysipelas will explain why it always seizes women after and not before delivery. For at the time when erysipelas was epidemic, almost every person admitted into the hospital of this place with a wound, was, soon after his admission, seized with erysipelas in the vicinity of the wound. The same consequence followed the operations of surgery; and the cause is obvious, for the infectious matter which produced erysipelas was at the time readily absorbed by the lymphatics, which were then open to receive it, just so with puerperal fever, women escape it until after delivery, till that time there is no inlet open to receive the infectious matter which produces the disease, but after delivery the matter is readily and copiously admitted by the numerous patulous orifices, which are open to imbibe it, by the separation of the placenta from the uterus." "If in the dissection of a putrid body, a surgeon scratch his finger, the part festers, that is, inflames and suppurates; and if a fever should be the consequence, it is inflammatory in the beginning and only ultimately putrid. And further, if such a fever be properly treated in the beginning it never becomes putrid at all. In like manner if putrid matter be applied to the uterus, it inflames that organ and the contiguous viscera; that is, it gives rise to the puerperal fever, which is ushered in with a cold stage and succeeded with a very rapid pulse and acute pain in the abdomen." "The dissections which I made prove that the puerperal fever is a disease which principally affects the peritoneum and its productions and the ovaria. The peritoneum, or investing membrane of the abdomen was inflamed; and the extension or production of the same membrane which constitute the omentum,

mesentery, and peritoneal coat of the intestines, were all promiscuously affected." "Whether the infection of the puerperal fever is capable of being destroyed by the same means as that of other fevers, I cannot affirm with certainty, but think it very probable, and that they ought to be tried. That fresh air and cleanliness are insufficient for the destruction of contagion, and that there is no certain antidote but fire and smoke, has been demonstrated by the ingenious Dr Lind ... The methods which he recommends for the purification of infected chambers, and for the fumigation of infected apparel, may be seen by perusing his ingenious papers on fevers and infection, to which I refer the reader. The same means ought to be practised for preventing the infection of the puerperal fever. The patient's apparel and bedclothes ought either to be burnt or thoroughly purified; and the nurses and physicians who have attended patients affected with the puerperal fever, ought carefully to wash themselves and to get their apparel properly fumigated before it be put on again." "The benevolent reader must observe, with displeasure, the ungenerous treatment which I met with from that very sex whose sufferings I was at so much pains to relieve; for, while I was using my best endeavours to mitigate the calamities of many miserable sufferers, several others were very busy traducing my character, who, prompted by prejudice, very uncandidly proclaimed the deaths, and concealed the cures, on purpose to raise an odium against my practice." "But I consider it as a sacred duty, a matter of conscience, to mention every circumstance relating to the subject. And as the lives of thousands are at stake, the less apology is necessary. The maxim of every author ought to be the same with that of Aristotle, who says 'Plato is my friend, but truth is much more.'"

Soon after the publication of his Treatise, Gordon was recalled by the Admiralty to active service in the war with France. However, in 1799 he contracted tuberculosis, and after being invalided home, died on 19 October that year in his brother's home at Logie. He was 47 years old. Among his personal possessions he left a large collection of manuscripts, including three volumes of his lectures on midwifery and the diseases of women and children, and a further four volumes on the practice of physic. So died a remarkable physician-accoucheur who discovered a new truth of the utmost importance and had the courage to proclaim it in the face of strong opposition and criticism.

- 1 Thoms H. Gordon of Aberdeen. *Am J Obstet Gynecol* 1928;15:229-33.
- 2 Graham H. Puerperal pestilence. In: *Eternal Eve*. London: W Heinemann, 1950:375-420.
- 3 Gordon A. *A treatise on the epidemic puerperal fever of Aberdeen*. London: G G & J Robinson, 1795.