Osteopathy and the Influenza Pandemic 1918

Christian Fossum, DO Associate Professor
School of Health Sciences
University College Kristiania Oslo, Norway

Medical historians and epidemiologists would argue that the influenza of 1918 caused by the H1N1 virus is the most severe in modern history. First identified in military personnel in the spring of 1918, it ended up infecting one–third of the world population, around 500 million people, resulting in an estimate of 50 million deaths. One of the unusual features of the 1918 pandemic compared to the current COVID–19 pandemic, is that the H1N1 had a high mortality rate in younger people: younger than 50 years old, 20 – 40 years old, as well as those over 65. The current pandemic have higher mortality rates in the over 60, especially if they have co–morbidities such as cardiovascular disease, respiratory disease or diabetes.

In 1918 there were no vaccines to protect against infection, and there were no antibiotics to treat secondary pulmonary bacterial infections, or pneumonia. Controlled efforts to prevent contagion were isolation, quarantine, good personal hygiene, use of disinfectants and restricting public gatherings. Unfortunately this was not effectively applied and adhered to. Physicians treating the afflicted followed these recommendations, and ensured in addition proper fluid–intake. They also relied on drugs to treat the symptoms, and they could give a dose of calomel during the day to open the bowels, aspiring to reduce fever, and opium–derivatives to reduce aches and pains.

Osteopaths in the United States would in general follow this medical regiment in the care of their patients, but many would substitute the use of drugs with manipulative measures to support the body through the course of the illness. After the pandemic, osteopaths and osteopathic organizations would champion their effectiveness in the management of influenza and pneumonia, relying mainly on self–reported data from practitioners in the field. 2,445 osteopaths mailed in a general description of their treatment approach and a numerical summary of their patient results. Of 11, 120 influenza cases reported, the osteopaths reported only a 0.2% mortality rate. Of the 6,258 cases developing into pneumonia, the osteopaths reported a 10.1% mortality rate. This was then compared to the national average mortality rates for influenza and pneumonia (which was 12 to 15% and 25% respectively), and the osteopaths claimed superiority in the care of patients during the pandemic of 1918, and these claims were used by organizations to lobby for osteopaths to serve in the military medical corps (full commissioning of US osteopaths as physicians in the military medical corps did not happen until 1966 and the Vietnam War). It also changed the narrative of the US osteopathic profession regarding scope of practice, practice standards and policies and the incorporation of pharmacology in education and practice.

The data collected and presented by the osteopathic profession was quickly challenged. Probably its biggest bias was the reliance on self–reported data from practitioners by a governing body. The American Osteopathic Association charged George O. Riley with administering the “influenza questionnaire” to the profession with instructions of use. The questionnaires were not for individual cases, but a total summary of cases handled by the osteopath. Including recoveries and fatalities. The questionnaire were not

returned anonymously, but with the full name and address of osteopath filling out the questionnaire. The journal *Osteopathic Physician* conducted a similar, but extended survey in 1919 to collect information of the specifics of care during the pandemic by osteopaths. This was also returned with full names of the practitioner. It also included questions on number of deaths with influenza and pneumonia. It is unsure if data from this collection was summarized, but the names of practitioners and presentations cases were frequently also used in osteopathic journals to illustrate success.

Even though the practitioners were asked to only report "genuine well developed cases", they were instructed to report all their cases and deaths. How accurate this was is purely speculative. Reporting was not made anonymous, was conducted by a governing body, and was often used in journals (with name of practitioners) to illustrate their success in managing patients during the pandemic.

There has in recent decades been an interest in evaluating the possible effectiveness of osteopathic manipulative interventions as an adjunct to standard medical care in elderly hospitalized patients with pneumonia. But due to the limited numbers of studies, it is difficult to conclude anything with regards to effectiveness. More research is needed. These studies have been carried out in the United States where current osteopathic physicians have full practice rights and hospital privileges, were care is given in a controlled medical environment, not during an epidemic nor a pandemic.

Our recommendations are:

1. The use of historical reporting to substantiate any claim for effectiveness in the osteopathic treatment of influenza and pneumonia are speculative at best, and misleading at worst
2. The limited number clinical studies on the effectiveness of osteopathic manipulative intervention on pneumonia are inconclusive
3. Even though there may be a scope for osteopathy in hospital services, the current priority of the health care system is to handle the pandemic. This is not a time for healthcare politics

References:

Gevitz N. The DOs: Osteopathic Medicine in America. Baltimore: John Hopkins University Press, 3rd edition 2019: pages 92–94

Peterson BS. How we treated "flu" epidemic influenza. *The Osteopathic Physician,* May 1919

Riley GW. Report to chairman Riley on the flu–pneumonia questionnaire. No excuses accepted. *The Osteopathic Physician,* November 1918

Epidemic questionnaire reports tabulated by States to February 28, 1919. *The Osteopathic Physician,* March 1919