A Brief History of the Use of Silver in Healthcare

B.C.E.

- According to Herodotus, no Persian king would drink water that had not been transported in silver containers. The containers are said to have kept water fresh for years.
- Macedonians applied silver plates to wounds, possibly as first attempt to treat surgical infections.
- Hippocrates treated ulcers with silver preparations.
- Early Egyptians, Greeks, Mesopotamians, and Arabs used a mixture of metals such as mercury, zinc, silver and copper to treat inflammation.

C.E. to 1800s

- 980 AD – Avicenna uses silver filings as a blood purifier, to prevent heart palpitations, and as a treatment for offensive breath.
- 1520 – Paracelsus uses silver internally and initiates practice of applying silver nitrate as a treatment for wounds.
- 1614 – Angelo Sala administers silver nitrate internally as counterirritant, purgative, and for the treatment of brain infections.
- “Early pioneer days” in America – Silver coins are dropped into vessels containing water and milk to keep them fresh and free of bacteria.
- 1800s – Wine, water, milk, and vinegar are stored in silver vessels for longer “shelf life.”
- 1852 – Dr. Marion Sims employs his silversmith to produce fine silver wires which he uses to suture vesico-vaginal fistulas. Sims became the first American surgeon to achieve international renown.
- 1880s – Dr. Carl Siegmund Franz Crede of Germany first utilizes silver nitrate eye drops in newborns to prevent ophthalmia neonatorum, reducing its incidence from 7.8% to 0.13% in 13 years.
- 1890s – B.C. Crede first employs colloidal silver for wound antisepsis after observing Dr. William S. Halsted (pioneer of sterile surgical techniques and co-founder of Johns Hopkins) apply silver foil to wounds to treat infections.

The 20th Century

- Halsted uses silver foil and silver sutures.
- 1920s – Silver is approved for medical use by the United States Food and Drug Administration.
- A. Legge Roe successfully uses colloidal silver to expand ophthalmologic treatments to include corneal ulcers, interstitial keratitis, blepharitis, and dacrocystitis.
- Colloidal silver is applied in treatments ranging from tonsillitis to staphylococcal sepsis and other infectious diseases.
- Concerns begin to arise regarding Argyria, a bluish-gray discoloration of the skin created from the deposition of silver in normal skin and other tissues. By 1939, 357 cases had been documented,
239 of which could be traced to medicinal uses of silver, but Argyria was deemed to have “no important physiologic consequences,” and not to alter the functioning of the organs involved.

Present Day

- Silver in various forms continues to be used effectively for water purification, wound dressings for the promotion of healing, the prevention and treatment of infection, dental hygiene (the prevention and correction of pyorrhea, gingivitis, and bad breath), eye conditions (primarily the prevention of ophthalmia neonatorum) and other infection complications.

- 2007 – The US Food and Drug Administration approved the use of an endotracheal tube with a fine coat of silver to reduce the risk of ventilator-associated pneumonia.

- Silver is now firmly established “as an effective and well-known treatment modality for and in the prevention of high-risk infection in clinical wound care.”

SOURCES:
