

## Milestones

# James Marion Sims and the Repair of Vesicovaginal Fistula

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From the earliest days of recorded medical history, physicians have struggled with the problem of vesicovaginal fistula, exhausting their ingenuity with intravaginal sponges, receptacles, rings, bags, tubes and a host of surgical procedures. Vesicovaginal fistulae followed difficult and traumatic labors and their unsuccessful treatments made these women social outcasts, depressed and in some cases, suicidal<sup>1</sup>. A number of surgeons and gynaecologists had published on the repair of vesicovaginal fistulae including van Roonhuyze, Velpeau and Dieffenbach. Their writings are colored with pessimism and highlight the despair amongst the medical community in curing this condition. Until the middle of the nineteenth century, progress in surgery was greatly hampered by ignorance of asepsis and the absence of anesthesia. Attempts to repair fistulae were further impeded by difficulties of exposure, inadequate instruments and faulty suture materials. In 1845, a young American surgeon, James Marion Sims, (Figure 1) a firm believer in antisepsis and anesthesia turned his attention to the repair of vesicovaginal fistulae.

James Marion Sims was born in 1813 in Hanging Rock, Lancaster County, South Carolina, in the United States. He was the first of eight children and his father was the sheriff of the town. He began his medical education in South Carolina after getting a degree in arts and transferred to the Jefferson Medical College, Philadelphia from where he graduated. He started practice in Mount Meigs, Alabama in 1840. However, there were setbacks early on and he moved to Montgomery after two of his first surgical patients died. He developed a



**Figure 1.** James Marion Sims (1813-1883)

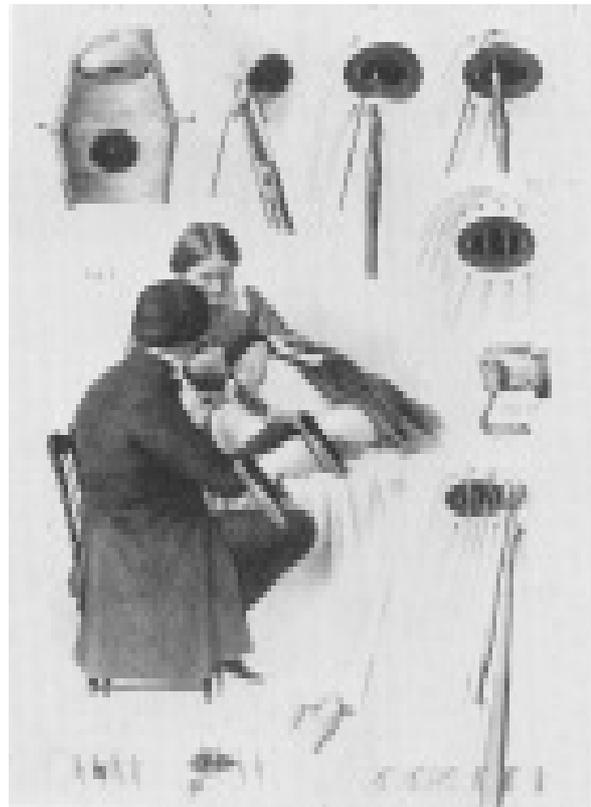
large surgical practice here, successfully performing new operations for clubfoot and strabismus<sup>2</sup>.

In 1845, Sims began his experiments on the repair of vesicovaginal fistula. Amongst the first steps towards successful repair was the discovery of the knee chest position.. He discovered this while correcting a prolapsed and “dislocated” uterus of a woman who had fallen off from horse back. In his own words, the examining fingers swept around “in empty nothingness” as soon as the

air gushed into the vagina due the atmospheric pressure and pushed the uterus into its normal position". The idea that he could now see the vaginal walls and the exact nature of the fistula with a strong light seized him. He wrote "I cannot, nor is it needful to describe my emotions, when the air rushed in and dilated the vagina to its greatest capacity, whereby the whole surface was seen at one view, for the first time by any mortal man."<sup>3</sup> The enhanced visualization allowed him to formulate the other surgical principles of the use of the speculum and silver wire. Even though the vaginal speculum is one the oldest and most frequently modified medical instrument, the Sims speculum holds a special place in clinical practice even today. In its earliest form, Sims used a pewter spoon to retract the vaginal walls. The use of silver wire in fistula repair appealed to Sims due to the possibility of sterilizing it without damage. After the first repair with a silver wire, there was no erosion or inflammation that was commonly seen with the use of silk. This encouraged him to propagate this as one of the most important surgical innovations of the times.

The now legendary story of his experimental surgeries on slaves is a testimonial to his perseverance. It is equally a moving account of the tolerance and fortitude of the African slaves on whom he carried out the initial surgeries. The names of Anarcha, Betsy and Lucy, who were the first to be treated, are engraved in the history of gynecology<sup>2</sup>. Historical accounts vary but about forty procedures were performed on them before success was achieved (Figure 2) Some modern day historians are critical of Sims and his human experimentation and especially about the facts that the African slaves had no free will and were not afforded anesthesia. However, it would not be entirely fair to judge an 19<sup>th</sup> century physician by 21<sup>st</sup> century ethics. He was a product of his times; times that were filled with prejudice and ignorance.

He moved to New York and in 1855 opened a small hospital for women, the forerunner of the famous Women's Hospital of the State of New York. This was a unique concept for the time. In the 1860s, he spent six years in Europe where his patients included the Empress Eugenie of France and royalty of Scotland and Austria. This earned him the epitaph "surgeon to slave and empress". On his return to New York, Sims went on to



**Figure 2.** James Marion Sims repairing a vesicovaginal fistula.

establish a medical facility for women suffering from cancer which evolved into the Memorial Center for Cancer and Allied Disease. He was the recipient of countless American and European honors and decorations before his death in 1883. A statue to Sims memory stands today in Central Park opposite the New York Academy of Medicine.

#### References

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3. Sims JM. On the treatment of vesico-vaginal fistula. *American J Med Science* 1852; 23: 59-82.