

An Army Operating Room Tableau Dissected: Hiroshima, 1904

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To even the casual observer, this photograph is immediately recognizable as a surgical operating room. Yet on closer inspection some people may find the setting unusual or strange--a sense that there is something not quite right about the moment captured by the photographer. Perhaps it is the “staged” nature of this photographic tableau: is this a pictorial record of a real operation, or are the surgical personnel (including the patient) merely posing for a professional group portrait? Is it the unexpected mixture of Asian and Caucasian faces discernible around the table? Or, is it that the people and things in the picture appear to be “modern” yet look “old fashioned?” What is intriguing to both professional and lay audiences is that the image’s elements and composition are both familiar and foreign at the same time. Part of the explanation lies in the fact that this archival document is a century old, yet we, today, occupy the same intellectual universe (noting obvious technical advancements) as those frozen here in photographic time. Expressed differently, and to throw this point into relief, the surgeons and nurses in the photograph are more akin to *our* surgical era, than they were to *their* colleagues of only a generation before.

How can we account for this? Briefly stated, the historical answer lies in the development of aseptic technique and its requirement of absolute cleanliness and sterile dressings and equipment, which began in the 1890s. As will be shown, the photograph reproduced is pictorial testimony to the revolution that took place in civilian and military surgery around the turn of the nineteenth century and around the world. But first, let’s put this image into a more general context. Herbert G. Ponting (1870-1935) took the

photograph in 1904 at the Japanese army's Hiroshima Reserve Hospital. A commercial photographer on assignment in Japan to cover the war between that country and Russia, Ponting would later become famous for his photographs of Scott's 1911-12 Antarctic expedition. While in Hiroshima he met Anita Newcomb McGee (1864-1940), a physician from Washington, DC, who, along with a team of nine American nurses, acted as diplomatic emissaries as well as health care practitioners on behalf of the Japanese government. Dr. McGee is second from the right in the photograph; she had been an Acting Assistant Surgeon during the Spanish-American War and was the driving force behind the establishment of the Army Nurse Corps. From McGee's publications and her personal photographs, along with those of Ponting, we know much about military medicine of this era. [1]

The operating room scene shown here exemplifies that of any self-respecting hospital by 1904. At this time, the ideas and reforms related to surgical wound management, first introduced by Joseph Lister in the mid-1860s, gave way to the more practicable and sophisticated methodology of aseptic technique. The desired goal now became the exclusion of bacteria from the operating environment by as many means as possible. Floor and wall surfaces, for example, were to be smooth and impervious to permit thorough cleaning and disinfection—gone were the old days of wooden planking. Operating room furniture was to be made of glass and steel and protected with glossy white enamel paint. The clothing of surgical personnel was also transformed. No longer did the master surgeon perform in his civilian clothes or uniform, for now he and all others in the operating room would be draped in clean, flowing white robes. White surgical caps were also *de rigueur*. [2]

Enameled furniture, ceramic tiled walls, and aseptic surgical garb are clearly visible in this photograph, along with other examples of turn-of-the-century, cutting-edge surgical technology. To the left of the surgical group, a surgeon anesthetizes the patient by dripping ether or chloroform on to an open mask placed over the mouth and nose. Centrally located in this tableau another surgeon is apparently poised to amputate the left leg of his patient. While this surgeon grips the patient's knee in his left hand, he holds the amputation knife with his right hand. This knife, too, heralds the new surgical technology of the twentieth century and as such demarcates this generation of surgical technique from earlier "pre-anti/aseptic days." It is made of a single piece of steel, including the handle, allowing it to be boiled or autoclaved to sterilize it. This construction contrasts with earlier edged surgical tools, which had wooden or ivory handles that could not withstand sustained moist heat treatment; the rough, wooden surfaces also harbored tissue fragments and germs. [3] Note, too, the Schimmelbusch drum sterilizers located at the extreme right of the photograph. Invented by the Berlin surgeon Kurt Schimmelbusch (1860-95) just before his death, these steel canisters allowed dressings, sponges, and other materials to be steam sterilized, stored, and transported in their sterile condition. One of the stands supporting a Schimmelbusch drum also has a foot-operated pedal to open and close the lid, thus allowing the surgeon or an assistant to remove sterile dressings conveniently and aseptically. This type of drum sterilizer is still manufactured and used today. (At this time, Schimmelbusch also designed an anesthetic inhaler that bore his name and remained in use well into the twentieth century.)

Although this is a modern OR scene, there are some obvious omissions. Rubber gloves are not in use; they were available and hospital suppliers did sell them, but it would be a few more years before they became mandatory. (Hospital administrators often balked at the cost of providing rubber gloves to all operating room staff for every operation performed.) [4] Similarly, surgical masks or “mouth-pieces” are not in evidence here. Again, they did not become universally worn until about the era of World War I. (McGee, herself, in this picture wears no surgical cap or any other headgear but is still present at the surgeon’s side.)

To conclude this historical dissection, one final question needs answering: Why was the photograph taken? Possibly it was for educational purposes. Or, it could have been taken as an official record of McGee’s presence in Japan. But it is perhaps more likely that the image was taken by Ponting to make a critical point to his large audience back in the West. To dispel any popular perception that Japan and its people could not break the bonds of ancient ways and traditions, the photograph suggests that some practices were indeed modern and highly “westernized” —medicine being one example. This was a nation not to be dismissed or underestimated as Russia learned all too quickly when its armed forces were routed by Japanese troops and it was forced to officially capitulate in September 1905. This photograph, then, entwines the military and medicine in several ways.

CAPTION

Japanese and American military medical personnel attending an amputation at the Hiroshima Reserve Hospital, 1904. The impact of aseptic equipment and fittings is readily visible in this photograph by Herbert Ponting. *Courtesy*, Otis Historical Archives, National Museum of Health and Medicine, Armed Forces Institute of Pathology, OHA 227 McGee Collection, 1904-08, photograph no. 205.

REFERENCES

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