Biographical Sketch

John Royal Moore, MD 1899–1988

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Abstract This biographical sketch on John R. Moore corresponds to the historic text, *The Classic: Cartilaginous-cup Arthroplasty in Ununited Fractures of the Neck of the Femur* (1948), available at DOI [10.1007/s11999-011-1974-z](https://doi.org/10.1007/s11999-011-1974-z).

John Royal “Dinty” Moore was born in Elko, Nevada, in 1899 [8]. His father was a sheriff and his mother taught school and ran a stage-coach hotel. The family subsequently moved to Texas, then to Salem, Oregon, where he graduated from Willamette University. Moore received an MD degree from the University of California in 1925. He served as a house officer in orthopaedics, and spent 2 years at the Shriners Hospital in San Francisco, then traveled about the United States visiting major centers, including the Shriners Hospital in Atlanta where he met Hiram Kite and Michael Hoke. On the recommendation of Dr. Hoke, in 1928, at a very young age, he was appointed chief surgeon at the Shriners Hospital in Philadelphia, where he stayed for the duration of his career.

Moore was active in national organizations, serving as President of the American Orthopaedic Association in 1960 and Vice-President of the American Academy of Orthopaedic Surgeons [8]. He also received an award from the City of Philadelphia as the outstanding physician in the area. He was an avid pilot, and made one transcontinental solo flight across the United States.

He published relatively few articles, the last of which I could find was in 1960, but each was thoughtful and related to a separate problem. This month we reproduce his study, “Cartilaginous-cup Arthroplasty in Ununited Fractures of the Neck of the Femur” [6]. It reflects an early attempt at preservation of the natural articular cartilage of the femoral head when there was no reasonable way to heal the fracture. He removed what remained of the femoral head and reamed it out to remove the trabecular and most of the subchondral bone, creating a cartilaginous shell. He then reamed the femoral neck and placed the cartilaginous shell over the femoral neck, much as one would do for a

Fig. 1 John Royal Moore is shown (1940) (Photo reprinted courtesy of Temple University School of Medicine).

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Smith-Petersen mold arthroplasty of Vitallium [9, 10]. Postoperatively, he placed patients in a 1½ spica cast for 4 weeks, then removed the cast below the knee on the affected side. At 6 weeks, Moore removed the cast over the thigh on the unaffected side and at 8 weeks, removed the entire cast. He then instituted balanced suspension for 2 more weeks to regain motion before allowing the patient out of bed at 10 weeks. Moore performed the operation in 19 patients between 1938 and 1947. Autopsy from the hip of a patient who died of a cerebral hemorrhage 6 weeks postoperatively showed a firmly adherent and histology showed viable cartilage. Moore acknowledged the similarity of his method with those proposed earlier by Wagner and Brackett, but used the native cartilage as an autograft.

The concept of cartilage transplantation is not new. Louis Ollier described successful experimental grafting of cartilage and perichondrium in 1867 [3, 7], while in 1908, Lexer described whole joint allograft transplants with articular cartilage [4, 5]. However, attempts usually failed and Keith, in 1919, commented, “It is possible that the failure to obtain reproduction and growth in the cells of transplanted cartilage is due to the fact that such grafts are not subject to normal strains and stresses” [3]. Attempts to repair isolated defects are more recent. Campbell, in 1939, recommended curetting isolated defects to “normal bone” [1] while DePalma, in 1954, suggested making multiple drill holes and curetting to bleeding bone [2]. Virtually all methods to repair articular cartilage have, to date, met with limited success, except in very small lesions. This month’s symposium describes contemporary attempts, primarily with tissue engineering approaches: using cells, biomaterials (scaffolds), and sometimes biologics combined with

appropriate mechanical environments to stimulate the development of new cartilage. Although many of these attempts have produced either fibrous or hyaline cartilage in vitro and in vivo with limited defects, they have not been successful in repairing large defects or entire damaged joint surfaces (eg, osteoarthritis). While it seems current techniques allow cells to survive and produce the proper matrix molecules, they do not yet allow the matrix to organize in a durable way comparable to the organization of natural hyaline cartilage.

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