

Symposium: 2015 International Hip Society Proceeding

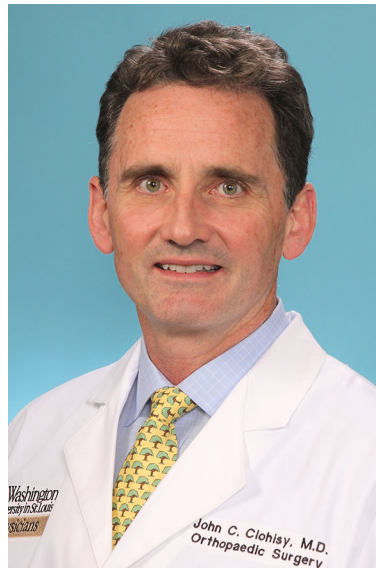
Editorial Comment: 2015 International Hip Society Proceedings

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Founded in 1976, The International Hip Society is focused on the exchange of ideas among expert hip surgeons from around the world with the objective of improving the life of patients afflicted with hip diseases [2]. The 40th anniversary of the society was celebrated in September 2015 in conjunction with the closed meeting in Chicago, IL, USA. John J. Callaghan presided over the meeting, which included more than 75 presentations addressing the most innovative and controversial issues in hip surgery.

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Topics included hip preservation surgery, primary THA, health policy, complications of hip arthroplasty, bearing surface issues, and hip revision topics. Thirteen selected papers from the meeting are included in this issue of *CORR*®. A variety of additional concepts highlighting both progress and challenges in the field were the source of healthy discussion.

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Primary THA holds its position as one on the most effective surgical interventions in the history of medicine [7]. Incremental advancements over time have resulted in continued refinement of the procedure. Recent work with bearing surface materials has established outstanding performance of highly-crosslinked polyethylenes and ceramic-on-ceramic articulations. Metal-on-metal devices have been associated with inconsistent outcomes and have fallen out of favor worldwide. Remarkable innovations in perioperative care (anesthesia, pain management, and accelerated rehabilitation) have diminished the recovery

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phase and enhanced return to function. Efforts with surgical approach, implant design, blood management, and multidisciplinary care will further advance this procedure.

Prosthetic infection and instability are two persistent complications that remain an ongoing challenge. Additional areas of current focus include intraoperative guidance technologies (computer, robotic, and intraoperative radiography) to improve the accuracy and consistency of implant positioning. The variability in functional pelvic position and pelvic mobility add another layer of complexity that will ultimately lead to patient-specific considerations in surgical technique. Perhaps the most pressing future challenge is the increasing worldwide demand and associated cost of arthroplasty procedures. Heightened attention to value of care, cost reduction, and alternative payment models is needed to optimize future delivery of care for the worldwide hip arthroplasty population.

Parallel advancements in revision hip arthroplasty have focused more on implant fixation, management of periprosthetic bone loss, and complication avoidance. Primary arthroplasty failure related to metallosis and corrosion has become more commonplace and has introduced additional challenges related to timely diagnosis and revision surgical technique. Surgical

decision-making regarding implant retention, and management of taper corrosion in the setting of a well-fixed stem continues to evolve. Severe muscle deficiency from adverse soft-tissue reactions poses additional complexity to revision procedures and carries long-term risk of hip dysfunction and instability. Collectively, these “newer” failure mechanisms underscore the need for continued investigation regarding the mechanisms of implant failure and optimization of revision surgical techniques.

In addition to innovations in hip arthroplasty surgery, the International Hip Society has been a tremendous forum for the presentation and discussion of hip preservation concepts and innovations. The collective work from Reinhold Ganz and colleagues [3, 4, 6] has had a tremendous impact on the recent innovations and improvements in hip preservation care. This burgeoning subspecialty is now positioned to take a front seat in the field of hip surgery. During the past 15 years, we have witnessed remarkable advancements in the understanding of hip osteoarthritis (OA) etiologies, as well as innovations in the diagnosis and treatment of prearthritic hip disease. The fundamental concept that structural hip disease is a dominant factor in hip OA pathophysiology is now supported by a large body of work from around the world and a sound mechanistic explanation [5].

Consensus is strong regarding the link between hip pathomorphologies (developmental dysplasia of the hip, femoroacetabular impingement [FAI], residual slipped capital femoral epiphysis, and Legg-Calvé-Perthes disease) and eventually, secondary osteoarthritis. Developmental dysplasia (structural instability) and FAI are the two most common conditions and will be the focus of intense future investigations. Specifically, we are now faced with the challenge of advancing the field with improved understanding of the genetic and biologic basis of disease, as well as improved strategies for disease screening, early diagnosis, articular cartilage staging, and optimization of hip preservation treatments. Identification of predictors for successful long-term outcomes will also be critical to the refinement of these recently adopted procedures. The future role of biologic augmentation of surgery hold additional promise in expanding the application of hip preservation strategies and will enhance our abilities to preserve the “at risk” natural hip joint.

An additional contemporary challenge in hip surgery is the use of hip arthroscopy and the apparent increase in failed arthroscopic procedures [1]. The enhanced understanding of intra-articular hip abnormalities and FAI, coupled with the remarkable advancements in hip arthroscopy techniques and instrumentation, have led to an exponential

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increase in the utilization of this procedure worldwide. While this procedure holds great promise in the treatment of various hip disorders, successful outcomes are dependent upon an accurate preoperative diagnosis, appropriate indications for surgery and precise surgical technique. We are now increasingly faced with patients who have failed hip arthroscopy procedures due to poor indications and/or inadequate surgical technique. Thus, there is a major need to better define the role of hip arthroscopy. The limitations of arthroscopy must be emphasized and appreciated. Structural instability (developmental dysplasia), complex FAI, sequelae of severe slipped capital femoral epiphysis, and Legg-Calvé-Perthes deformities are seldom appropriate indications for hip arthroscopy. If treated arthroscopically, early failure and revision surgery are common. Moving forward, we need to refine our indications, improve surgeon education, training and skills, and acknowledge the

safety and power of open hip-preservation procedures for more complex prearthritic hip disorders.

The future introduction and implementation of new technologies and procedures both for hip replacement and hip preservation surgery will need close monitoring with registries and large multicenter research consortiums to assure that potential innovations actually improve these procedures that already provide excellent solutions for our patients with hip disease. Scientific dialogue at the level of national and international organizations committed to the study of the hip, including the International Hip Society, should help to assure this surveillance occurs.

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