Papers Presented at the Hip Society Meetings 2010

Editorial Comment

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This symposium is composed of selected papers delivered at the Fall 2009 Closed Meeting of the Hip Society in Palo Alto, California, and the Open Scientific Meeting of the Hip Society in conjunction with the 2010 Annual Meeting of the American Academy of Orthopaedic Surgeons in New Orleans. The focus of these meetings was on contemporary topics related to joint conserving procedures, new technologies and materials for primary and revision total hip replacement, complications associated with hip arthroplasty, and longer-term followup of alternative bearings.

The treatment of intraarticular pathology of the hip in younger and middle-aged patients with open and arthroscopic joint preserving surgical procedures is becoming more common. If the joint is salvageable - e.g. if there is a symptomatic labral tear, femoroacetabular impingement or dysplasia—surgical options are available to treat these conditions. However, these operations are challenging, and probably best performed by clinicians experienced in these specialized techniques. Longer-term outcome studies are also important to document efficacy in preserving the original joint.

Primary total hip replacement is a highly successful procedure, however the operation can be improved by more accurate placement of the components, especially the acetabular cup. Recent studies have shown a wide variation in cup position, even in the hands of experienced surgeons. Careful identification of anatomical landmarks and newer technologies such as computer-assisted navigation may

Fig. 1 Stuart B. Goodman, MD, PhD is shown.

decrease the incidence of hip dislocation post-arthroplasty. In addition, surgeons are recognizing the importance of reestablishing normal biomechanics during hip arthroplasty. This has stimulated thorough preoperative planning and more modularity to reestablish femoral length and offset. However, this often increases hospital inventory even further. The socioeconomic issues associated with total hip replacement are also being scrutinized, especially as the “baby boomer” population with high expectations for this procedure become of “Medicare age”.

Alternative bearing surfaces for hip replacement continue to generate enthusiasm. Intermediate term results for highly cross-linked polyethylene are very encouraging. Appropriate acetabular cup positioning is crucial. Decreased polyethylene thickness used in conjunction with larger metal heads may reduce the dislocation rate but places high stresses on the plastic, especially in cases in

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which cup position is suboptimal. There may be less enthusiasm for metal-on-metal bearing surfaces of specific types due to concerns related to potential adverse immunological effects of metallic wear debris and metal ions. Careful patient selection, preoperative planning, surgical technique and continued followup are important to optimize outcome and avoid adverse events and complications. Ceramic-on-ceramic bearings continue to be used successfully in carefully selected younger, higher demand patients. This hard-on-hard bearing is very sensitive to proper alignment to avoid edge loading, striped wear, and acoustic phenomenon.

Specialists in adult reconstruction commonly perform revision hip surgery. Recent studies have substantiated the use of cementless acetabular components and morselized cancellous bone grafts to fill bone defects. These constructs have demonstrated intermediate term success even if host bone contact is less than 70% in some cases. Traditional reconstructions using metal cages, large structural

allografts and cemented cups are being used less; instead, impaction grafting techniques and the use of cementless cups with porous metal surfaces and multiple screws has demonstrated high success rates at intermediate term followup. The use of porous metal acetabular augments to replace deficient bone is under current review, but short-term followup is only available. On the femoral side, modular implants are being used more frequently to tailor the prosthesis to the patient's proximal and distal femoral anatomy.

This symposium contains the latest clinical and basic research studies performed by members of the Hip Society, and constitutes an important resource for orthopaedic surgeons engaged in surgery of the hip. Moreover, as new techniques and technologies are introduced, it is important to surgeons and their patients that these advancements (or associated problems) be reported in a credible scientific format. On behalf of the Hip Society, we are pleased to present this information for your consideration.