

Minimally Invasive Total Hip Arthroplasty

A misleading innovation

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- ✓ Are these approaches better?
- ✓ Do they work?
- ✓ Should they be generally adopted by the orthopaedic surgeons ?

JBJS Am, Nov 2003

James Heckman

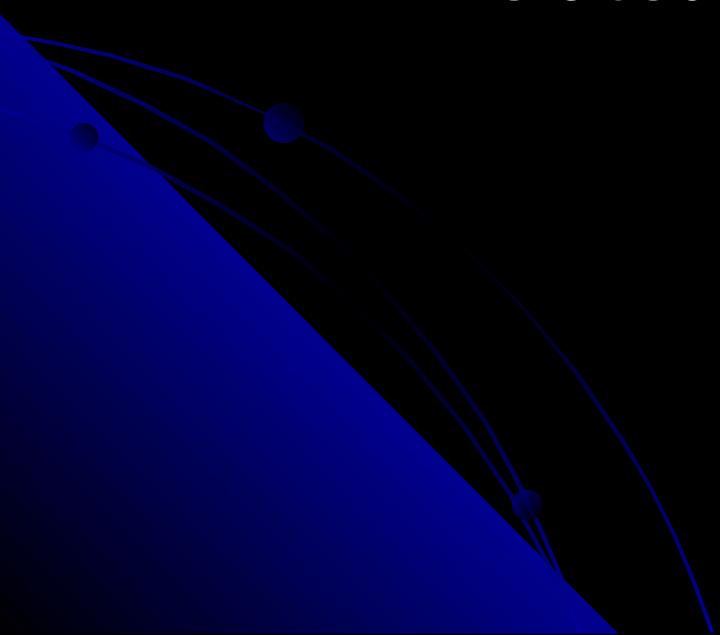
Editor-in-Chief

As of yet, we do not know the definite answer
of these questions, and we will not know
them for many years

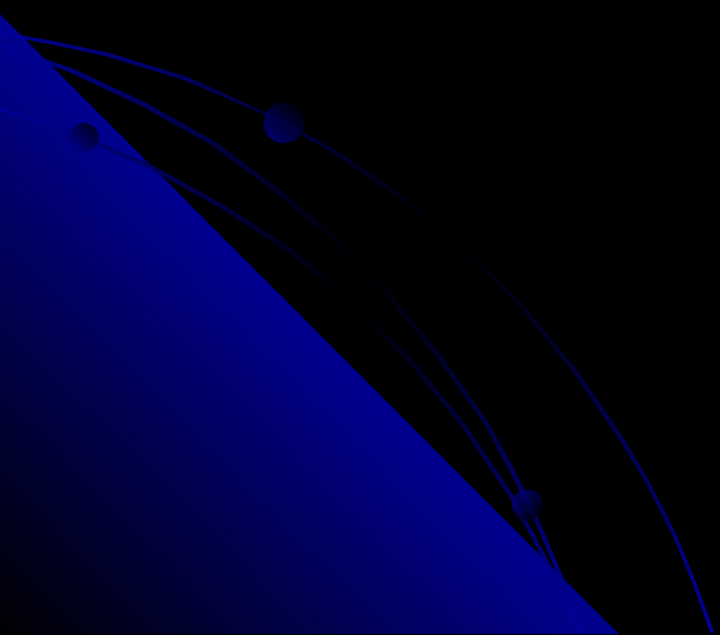
J. Heckman



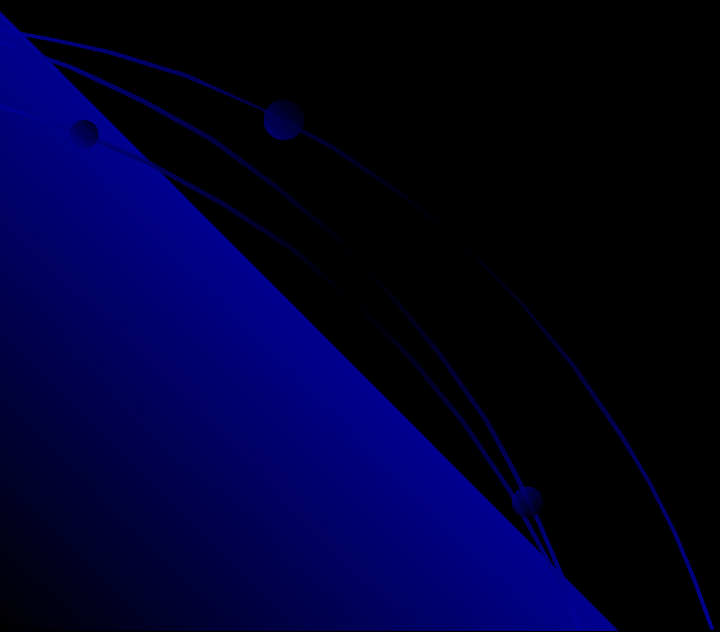
However, it is wise to turn our efforts to the direction of minimally invasive THA when more important problems are related with this procedure?



It is suggested that patients appreciated
the smaller incision and smaller
operative dressing...



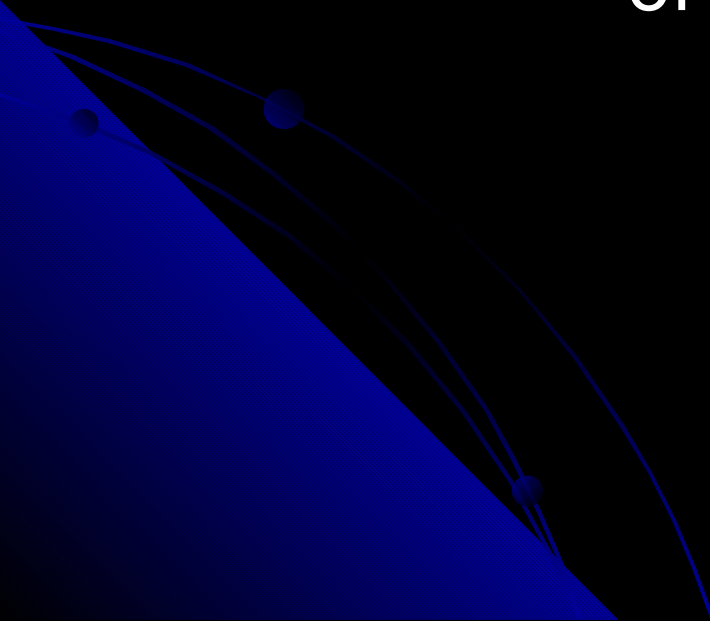
This is a misleading approach



Minimally invasive THA has
created much controversy among
orthopaedic surgeons

Symposium: Minimally Invasive THA. DJ Berry (moderator),
RA Berger, JJ Callaghan, LD Dorr, PJ Duwelius, MA Hartzband,
JR Lieberman and DC Mears JBJS (Am), Nov 2003

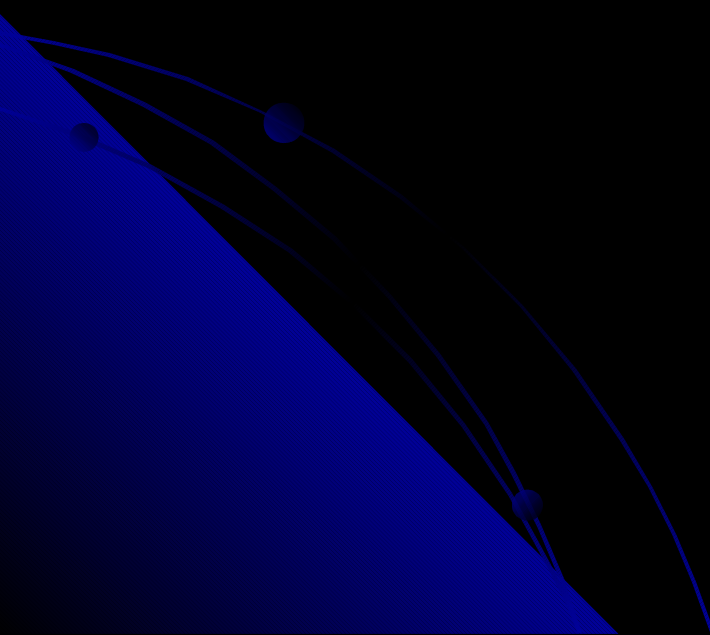
Advocates emphasize the potential for this method to reduce operative blood loss, postoperative pain, and hospitalization time, and improve the cosmetic appearance of the surgical scar



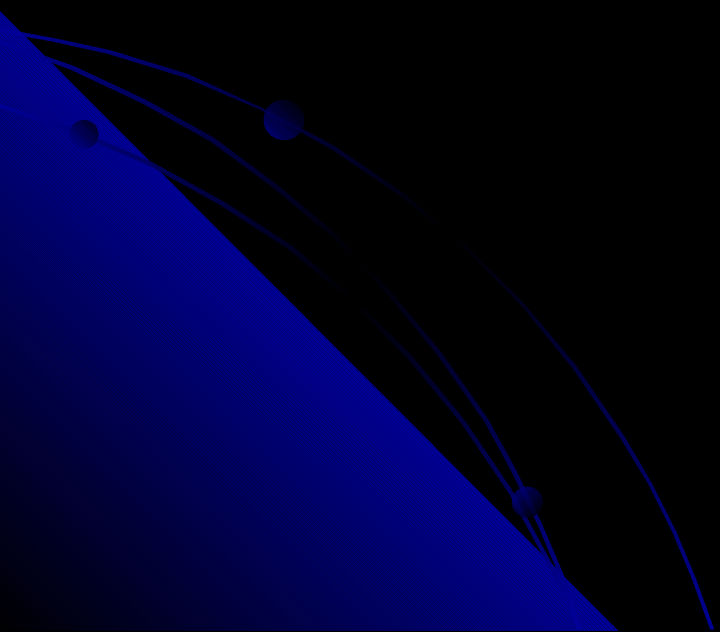
Opponents of minimally invasive THA express concern regarding potential complications, related to reduced visualization at the time of operation

(calcar or femoral fracture, dislocation, malposition of the implants, neurovascular injury, poor implant fixation)

THA is a reconstructive procedure and should be done with safety and efficacy



It has been stated that in minimally
invasive THA no muscle or tendons are cut,
and the abductors are not violated



In an experimental study, performed in Mayo Clinic, Rochester MN, in fresh-frozen cadavers, the contention that the two-incision technique is done without cutting, reaming or damaging the gluteus medius or the gluteus minimus, or the external rotators, was not confirmed

Mardones et al. CORR 441: 63-67, 2005

80 patients treated with a two-incision method had longer operative time and substantially more complications than did 120 patients with a standard posterior approach

Pagnano et al. CORR 441: 86-90, 2005

Comparison of primary THR's performed with a standard incision (85 patients) or a mini incision of ≤ 10 cm (50 patients)

The mini-incision group had higher risk of:

- wound complications
- acetabular component malposition
- poor fit and fill of cementless femoral components

Several advocates of minimally invasive THA
have stated that an advantage of these
techniques is the cosmetic appearance of a
short incision

Kennon et al. JBJS Am (Supp 4), 2003

Howell et al. Orthop Clin North Am, 2004

Wright et al. J. Arthroplasty, 2004

Chiment et al. J Arthroplasty, 2005

Comparison of scars from THR done with a standard or a mini-incision

The cosmesis of mini-incision THA scars was inferior to standard-incision scars because of skin and soft tissue damage produced by high retractor pressures needed for exposure using limited skin incision

Mow et al. CORR 441: 80-85, 2005

There are only a few leading surgeons,
members of the Hip Society in USA, who
advocate or endorse MIS in hip arthroplasty

Klein et al, CORR 441: 68-70, 2005

The benefits of MI-THA remain unproven

D Berry, Editorial, JBJS Am, 2005



In the first large (219 hips) prospective, randomized blinded trial of a MI-THA technique, the procedure provided no objective short-term benefit with respect to postoperative pain level, perioperative blood loss, time of hospitalization, or speed of early functional recovery

Ogonda et al JBJS Am, 2005

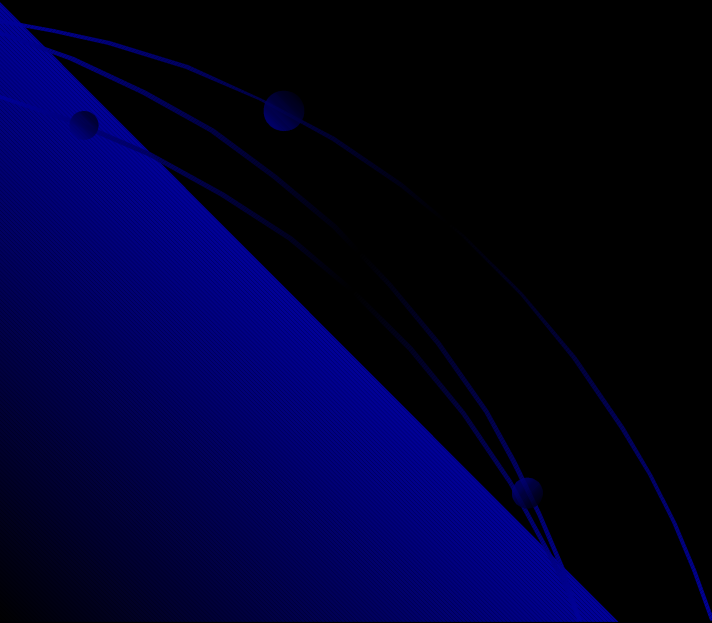
Catastrophic complications of MI-THA.

A series of three cases

Fehring and Mason, JBJS Am, 2005

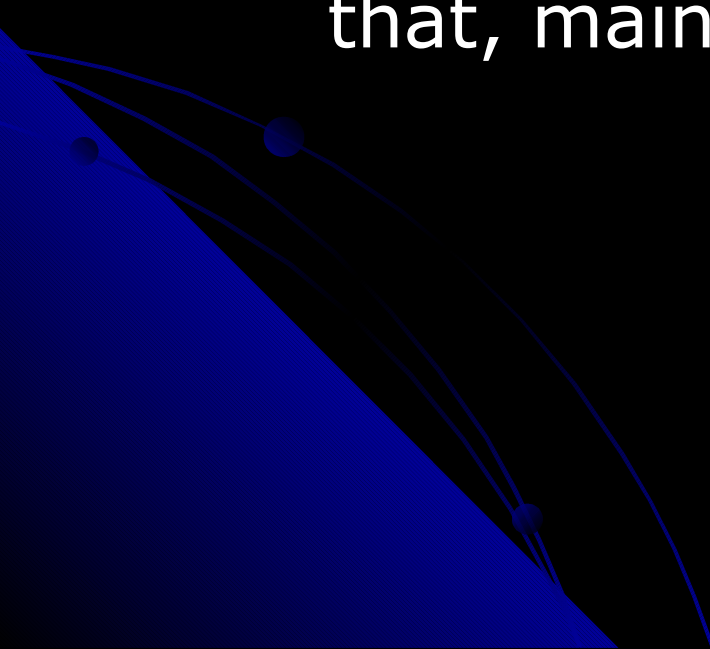


Ethical and Legal problems



Conclusion

It is important that the well-known long-term benefits of hip replacement not be compromised by a technique that, mainly, offers a shorter scar



Conclusion

Let's be sceptical to this misleading innovation

