What are your feelings on one mini incision versus two 1.5 incisions?

There are many different ways of doing minimally invasive surgery. My definition of minimally invasive surgery is not cutting the muscles and the tendons. If you can do total hip replacement (THR) with one incision without cutting the mus-
cles or the tendons then that’s minimally invasive surgery. If you
can do it with two incisions, three incisions, or ten incisions, it
doesn’t matter, as long as you don’t cut the muscles or the ten-
dons. Most of the ways that surgeons are doing a single mini incision involve cutting the muscles and cutting the tendons.

There’s nothing magic about making one incision or two inci-
sions. However, the easiest and the most efficacious way that I can
do THR without cutting the muscles and the tendons or putting the
leg in an abnormal position and excessively twisting the hip is with
this two incision technique. If someone can find a better way to do
it with one incision or three incisions, then I’ll change.

How long does it take to learn how to do the
procedure?

Probably anywhere from two to ten cases. It’s really based on
your background and how quickly you adapt to new procedures.
Some surgeons are comfortable with the procedure after only
two or three cases. It takes some surgeons a dozen cases, and
like anything I’m sure, some will never feel comfortable with it.

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components through the small incisions
because we use fluoroscopy.

Dr Richard Berger, Assistant Professor of Orthopedic
Surgery, Rush-Presbyterian-St Luke’s Medical Center,
recently spoke with Orthopedics at the 71st Annual Meeting
of the American Academy of Orthopaedic Surgeons about his
success with minimally invasive hip replacement surgery
using two incisions: one for preparation and placement of
the acetabulum and one for preparation and placement of
the femoral component.
Who are the best candidates for this procedure?

First, this minimally invasive two incision THR can be done on almost any patient. The best patient to learn this new procedure, or any new procedure, is a thin woman with atrophic changes. There are some patients we haven’t done yet; however, I don’t know if that means they can’t be done. We haven’t done patients who are morbidly obese with complete congenital dislocations or patients who have retained hardware. In my practice, 90% of my patients could have this minimally invasive procedure.

How are the patients positioned?

The surgery is done supine. The benefit of doing it this way is you can use fluoroscopy and very easily take radiographs during the procedure. It’s also good for assessing leg length more accurately.

Can surgical navigation help you do the procedure?

Surgical navigation will eventually help everyone, whether you make a big incision, a small incision, or two small incisions. We’re more accurate putting in the components through these small incisions than with traditional bigger incisions because we use fluoroscopy. So whether you make a bigger or smaller incision, it would be more accurate to have the assistance of fluoroscopy or some other navigation system.

Many companies currently are developing navigation systems and when they become easier to use clinically, I hope to use a navigation system, which should be even more accurate than fluoroscopy.

What is your complication rate?

In our first 100 patients, we had one complication. It was an intraoperative femur fracture that we didn’t open, we didn’t do anything different. We implanted a distally coated stem and it’s been almost 3 years and the patient has done great. In the remaining patients, there have been no other complications, no dislocations, no revisions, no readmissions and no reoperations for any reason.

It’s important to point out that we didn’t just think of this and then one day try it. It was developed over years doing cadaver work, dissections, and a lot of background work prior to doing the first patient. That’s why it’s worked so well.

Do you need special instruments?

You need specialized instruments that allow you to see in those small holes and retract. The instruments are long and slender with lights on them. Traditionally, THR instruments were designed for orthopedic surgeons making big incisions. They were big and bulky. Those are not suitable to make an inch and a half incision and many traditional instruments simply won’t fit into those small incisions.

Is there any extra cost involved?

It depends on how quickly you operate. In my hands, the surgery takes a little bit longer than in traditional hip replacement. There is the added cost of operating room time and the added cost of using fluoroscopy during the procedure. However, the costs are far outweighed by the fact that my patients go home the same day instead of spending 3-5 days in the hospital.

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The surgery itself is more expensive but you gain all that back in the hospital stay. Also, very few people talk about the added cost following the surgery. Normally patients do 3 months of physical therapy, however, my patients do about 2-3 weeks of therapy, which saves the health-care system a lot of money.

Are you limited with the type of prosthesis used for this procedure?

It is limited to cementless applications. I don’t think you can use cement effectively with this. You make a big mess and you can’t get a good cement mantle. Any of the porous coated stems, whether they are proximally porous coated, distally coated, mid coated, etc, can be used with this technique and people have done it.

Will all joint replacement be done on an outpatient basis in 5 years?

It depends a lot on the hospitals, the payors, and the patients. We’ve shown that it can be done in a percentage of patients and that it’s safe. Whether or not the payors and the hospitals want to have that done, and whether or not most patients want to go home, that’s a separate issue. I think most of the patients I see don’t want to stay long in the hospital; in fact, they don’t want to stay in the hospital at all.