Increasing data is emerging, consistently demonstrating a more rapid recovery for patients undergoing direct anterior approach (DAA) surgery. In one study, objective findings of early recovery including timed up and go tests, Functional Independence Measures are significantly faster in the first 2 weeks, and normalize by 6 weeks. A more recent randomized study shows a quicker achievement of the functional milestones of discontinuing walking aids, discontinuing opioids, stair ascent, and walking 6 blocks, as well as accelerometer measures of activity in the first 2 weeks after surgery. In both of these studies, seasoned surgeons well beyond their learning curves performed the surgeries.

A prospective MRI study of volume before and after surgery has shown full recovery or mild hypertrophy of most muscles at an average of 24 weeks from surgery, but a sustained loss of muscle volume for the obturator internus muscle in the DAA, and sustained loss of muscle volume for obturator internus, obturator externus, piriformis, and quadratus femoris in the posterior approach patients. The muscles that are released in the surgeries recover incompletely.

Prospective assessment of muscle strength demonstrated loss of flexion strength in the DAA group and loss of external rotation strength in the Posterior group at 6 weeks. By 3 months, the DAA group had returned to normal in their strength, while the Posterior group had persistent external rotation weakness.

Prospective assessment of gait, pre-operatively and at 6 months showed similar improvements in frontal and sagittal plane range of movement in gait, with a similar improvement in transverse plane movement (internal and external rotation) in the DAA group, but no change in the Posterior cohort.

The precision of socket placement, after undergoing a learning curve, was greater with the use of fluoroscopy in the DAA.

Cutting and subsequently repairing a muscle can have a clinically insignificant, but nonetheless objectively measurable effect on the function of that muscle.

Observed downsides of DAA include a higher prevalence of wound complications in obese patients, and possibly a higher risk of periprosthetic fractures in elderly, thin women. Recent larger registry data would also suggest that there is no difference in dislocation rate between the 2 referenced approaches, and possibly a higher femoral revision rate for the DAA. These may be honest and real depictions of a large learning curve as we further understand and disseminate the subtleties of proper execution of DAA surgery.
References:

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