New Technique in Femoral Distraction Saves Time, Increases Efficiency and Reduces Manual Effort During Knee Surgery

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One of the more pressing problems facing surgeons is the decreasing availability of surgical assistants. At many hospitals, for example, there are simply no residents on staff, and it is very difficult to enlist another surgeon to assist in surgery. Furthermore, hospitals are less and less willing to dedicate nursing staff to act as assistants. An instrument that could alleviate this problem and improve efficiency during an orthopedic procedure would be a major benefit for any surgical facility.

In many orthopedic surgical procedures, such as knee surgery, the need for an assistant is essential. Typically, surgical assistants have had to hold a bone hook or manually pull on the femur at the thigh in order to maintain joint distraction throughout the surgical procedure. A solution that dispenses with this assistant's role would be a decided advantage for both the surgeon and the surgical facility.

Surgeons have relied on lamina spreaders and bone hooks during knee surgeries to gain access to the operative site. This technique, however, not only creates an obstacle for the surgeon but also requires the surgeon to reposition the instrument in order to work in the entire joint space. An instrument that improves visibility of the operative site and reduces surgical time will be a significant advance in knee surgery.

Finally, and perhaps most importantly, the more a surgeon can precisely control

joint distraction throughout the procedure, the more efficient and successful the procedure will be. Controlled, finite femoral distraction in the hands of the surgeon without the need for an assistant would be immensely beneficial.

Advances in surgical products and devices are being developed all the time. One of those recent advances is the development of a new system for femoral distraction. This new solution saves time and increases efficiency in a wide range of orthopedic surgical procedures including unicomparmental and total knee replacement, arthroscopy and ligament reconstruction.

This breakthrough in femoral distraction techniques substantially improves knee surgical procedures. The new solution, the De Mayo Universal Distractor™, delivers precise, finite distraction of the knee. It allows a completely unobstructed view of the operative site for either right or left leg procedures on any sized patient.

The surgeon uses the distractor to separate the joint space by means of a handle that incrementally provides the required distraction. The distractor also eliminates the need for lamina spreaders, the use of a bone hook, or the need of a surgical assistant to manually distract the joint – benefits that improve performance and save precious time.

The problem with using a lamina spreader, or a bone hook, is their interference with the surgical exposure and the need to remove them during implantation of the knee replacement components. The distractor, on the other hand, allows clear viewing of the posterior compartments of the knee joint during and after cementing of the components.

The distractor is also very useful in standard arthroscopic procedures, including meniscectomy and meniscal repair. It allows great visibility and access to the posterior menisci, reducing the chance of causing damage to the femoral articular cartilage. The more typical methods of opening the knee during arthroscopy by stressing the collateral ligaments are most effective with the knee in extension.

Unfortunately, as the knee is extended the femoral condyle interferes with the surgeon’s ability to operate on the posterior menisci. The ability to distract the knee, while in flexion, is a major advantage of the distractor, and not possible by any other external means. The distractor can also reduce and hold tibial plateau fractures during arthroscopic or open reduction and internal fixation.

The distractor, used in conjunction with the De Mayo Knee Positioner™, features a sterile, patent-pending pressure protector pad that avoids direct pressure to the popliteal nerve and soft tissue. The pad provides a wide distribution of forces protecting the delicate popliteal structures of the knee by transferring pressure to the hamstring tendons. The pad is designed with an inner core of dense, non-collapsible plastic material covered with with a latex free polyurethane foam pad.

The new distractor solution has proven to be ‘another pair of hands,’ assisting the orthopedic surgical team, while helping a hospital or surgical facility to deploy its human resources more effectively.

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