

BRIAN E. GUNNLAUGSON, M.D., P.C.

B.M.R. (PT), F.R.C.S. (C)
Orthopaedic & Fracture Surgery
321 Main Street, Suite 3C
Johnstown, PA 15901
Phone (814) 535-6521
Fax (814) 536-4819

TOTAL KNEE REPLACEMENT

Long term follow-up studies of patients who have had total knee replacement reveal a rate of good and excellent results of 90 to 95%. These good to excellent results deteriorate somewhat with time (1% per year). The requirement for re-operation at the ten year mark is approximately 7%.

Although most patients are well pleased with their operations, there are a number of potential complications which each prospective recipient of total knee replacement should understand.

COMPLICATIONS OF GENERAL ANESTHETIC

Although difficulties with anesthetic are rare in this modern era, some still do exist. It is currently felt that the rate of unexpected death is somewhere close to 1 in 200,000. Other less serious matters should be discussed with your anesthesiologist. More commonly now is spinal anesthetic or nerve blocks with sedation. There is a small risk of nerve injury with these techniques.

COMPLICATIONS OF PRE-EXISTING MEDICAL PROBLEMS

Certain pre-existing medical problems do make the peri-operative period more dangerous. Conditions such as ischemic heart disease, diabetes, chronic obstructive pulmonary disease, hypo or hyperthyroidism, anemia, urinary retention, and a host of other less common medical problems can result in peri-operative complications which may compromise the eventual result.

DELAYED HEALING

When the skin, fascia, muscle or bone are divided they must heal. On occasion, healing is slow to occur. This may give some local pain or discomfort. This usually subsides with time and healing eventually occurs.

THROMBOPHLEBITIS

This is defined as a blood clot(s) within the veins of the legs and/or a migration of the clot to the lung. These clots occur in as many as 40% of cases, however, it is rare for them to become problematic, and even rarer for them to travel to the lungs. The incidence of the latter occurring is well less than 1%, however, if it does occur, it can be most serious. I currently employ treatment around the time of surgery to help prevent this (aspirin, heparin, Coumadin, Arixtra). Other interventions include compression stockings and leg pumps and early mobilization.

INFECTION

With current techniques the infection rate is less than 1%. Should infection occur, a re-operation is almost always needed. Sometimes all the artificial components must be removed to be

INFECTION (continued)

reimplanted after the infection has been controlled. On occasion, reimplantation is not possible and the knee must be fused. This can leave a patient worse off than before the operation. This, thankfully is a rare turn of events, but must be understood.

LOOSENING

Loosening of the components is perhaps the most common complication. It is felt at the 15 year mark after the operation, 7-10% of the components will have failed (loosened). In most cases, this results in re-operation and a successful outcome. On occasion, the re-operation is less successful than the initial operation, and often the durability of results is lessened.

MATERIAL FAILURE

Failure of the tibial or patellar metal or plastic parts has been reported. This is an extremely unusual occurrence, however, should it occur, a repeat operation is needed. The ultimate function may be adversely affected.

PATELLOFEMORAL DYSFUNCTION

Considerable difficulty can be encountered obtaining proper position and function of the patella (knee cap). With refinement of surgical technique and component design, the incidence of these problems (patella fracture, dislocation, component wear, and migration) has decreased. When these do occur repeat operation is most often needed.

NEUROVASCULAR

The incidence of nerve or vessel damage during total knee replacement is very low. One of the nerves passing by the knee may be stretched during a difficult surgery. This may leave a numbness and weakness in the foot. This may be significant enough to require bracing or perhaps a subsequent operation. Injury to the blood vessels about the knee is quite rare, but of great severity should it occur.

INSTABILITY

Instability of the new knee joint is uncommon (less than 1%). If the knee does become unstable, revision surgery is needed as the function of the knee is decreased.

BLOOD LOSS

With modern techniques, blood replacement is far less often needed than before. However, during the course of the operation and during the ensuing few days, a considerable volume of blood may be lost. If forces, the attending doctors may give you blood and blood products. It is possible to donate your own blood well prior to the planned operation, and receive it if needed during or after the operation. We now frequently use a blood salvage system that collects lost blood and filters and then returns it to you.

SUMMARY

In summation, we can see that the overall good and excellent results of 90-95% must be weighted with the amount of pain and dysfunction present, and the risks of complication. The ultimate decision to undergo total knee replacement is left up to you, the patient. I feel that it is my task to offer you the most advanced surgical treatment available, but with to ensure that you fully understand the objectives, likely outcome, and the potential complications of any surgical intervention. If any questions do exist, I heartily encourage you to discuss these with me.