Rotationplasty

Business

Rotationplasty Do you know what osteosarcoma is? Osteosarcoma is a type of leg cancer.

My cousin, Dane, has it in his leg. It can be very severe and painful; many times the patient has to have his or her leg amputated. Having limbs amputated can be very shocking, so doctors came up with a couple of ways to remedy that. One way is to have a rotationplasty done on the leg. This procedure was introduced by Dr.

Van Ness in 1950. It is a special kind of surgery when the doctors remove a part of the leg, and fuse the healthy foot joint back onto the leg facing backwards. Rotationplasty uses the healthy foot joint to replace the knee joint. The patient, after physical therapy, can then walk and do normal things like everyone else. Rotationplasty is a fairly new and unusual way to treat leg cancer.

The other way is called a “ tibia turn-up.” This surgery takes the healthy part of the tibia and attaches it to the end of the amputated leg. This helps the prosthetic leg get a better hold and work more efficiently. Both of these surgeries have helped sick people with osteosarcoma lead normal lives. The rotationplasty surgery has been used for over fifty years. So, how does it work? First, the doctors take the diseased section of the leg out, usually including the knee.

Then, they take the healthy foot joint, still connected to a length of leg, rotate it 180 degrees, and reattach it to the upper part of the leg. The point of this is to use the foot joint as a knee and to have it line up with the other knee joint when the person is fully grown. In an article written by Kevin

Carroll, it states, “ Placing the ankle joint in the position of the knee creates a functional natural knee and the toes provide important sensory feedback to the brain.” The patient would end up with a backwards-facing foot on a short leg. After the surgery, the patient would go through therapy to get the new knee joint ready to be used.

The subject would then get a prosthetic leg fitted. They would be able to walk normally again. The tibia turn-up is related to the rotationplasty surgery.” The leg is amputated above the knee and the tibia bone from the lower leg is inverted, or turned up, making it possible for the ankle end of the tibia to be fused to the bottom of the femur” (Carroll). This is another option for people who do not like the idea of a backwards-facing foot. Having this surgery makes it easier to be fitted for a prosthesis.

Also, their comfort and mobility will usually exceed that of above-knee prosthesis users with a short residual limb (amputee-coalition. org). Even with all the good things that come from these surgeries, there are some complications. Sometimes the bones do not fuse properly, or something could be wrong with the veins and there would not be good blood regulation. Also, having a rotationplasty looks very unusual. There might be later surgery needed, and growth may be a problem.

However, doctors have figured out how to manage growth. “ Oftentimes, however, a growth plate can be salvaged, enabling the femur to grow normally. If, in the future, the amputated side begins to grow more than desired, the surgeon can stop the growth by suturing the growth plate” (Carroll). Furthermore, there are only five to ten percent of serious

complications in patients who have these surgeries. All in all, there is not much to worry about if the surgeons do it right the first time.

In completion, the two surgeries, the rotationplasty and the tibia turn-up, are very good and different ways to treat osteosarcoma. The first uses the healthy ankle joint and replaces the diseased leg and knee joint. The second uses the healthy part of the tibia, inverts it, and reattaches it to the leg. They are both options for patients who have to get their leg amputated because of osteosarcoma. Despite the drawbacks, like the odd look of a backwards foot, patients are living better, more active lives they would not have been able to live without these procedures. We should all be grateful for the gift Dr.

Van Ness gave us: a way for cancer patients to survive