Lack of Information About the Need of Antibiotics on Device Identification Systems in Orthopedics

To the Editor:

After total joint replacement, most patients receive a personalized medical identity card, which usually provides data on the type of prosthesis that was implanted and its manufacturer. The card may also assist in passing through airport metal detectors and security devices. A replica radiograph is sometimes included to help describe their previous orthopedic surgery. The surgeon who performed the surgery and the hospital where the operation procedure was performed may also be included on this card. Unfortunately, it seems quite uncommon to use this card as a reminder to patients to use antibiotic prophylaxis, especially before medical procedures that are likely to cause transient bacteraemia.

A 38-year-old patient underwent total knee replacement for posttraumatic gonarthrosis. Perioperative cefazolin prophylaxis was used. No signs or symptoms of infection were noticed initially after this surgical procedure. Three months later, the patient underwent multiple wisdom teeth extractions. No antimicrobial prophylaxis was administered during this dental treatment. Nine months later, the patient had a knee joint prosthesis infection by group G streptococci, which are bacteria of the physiological oral flora. The infected prosthesis was removed and replaced in a second operation with a new one. Cephalosporins were used for peri- and postoperative prophylaxis. About 2 years later, again, an infection developed in this joint by group G streptococci, most likely due to several carious teeth following extraction. Once again, removal and replacement of the infected prosthesis became necessary and was performed in 2 separate operations.

Patients with a joint endoprosthesis should be thoroughly educated regarding their condition by their orthopedic surgeon. The patient and/or his or her relatives must understand the increased risk of joint infections due to the implantation of such a device. Obviously, the importance of antibiotic prophylaxis during teeth extraction (which represents a high-risk procedure for the induction of bacteraemia) was not effectively communicated in the case described above. Although interdisciplinary guidelines strictly recommend using antibiotics to protect the patient’s prosthetic device, the important measure was missed. Either the dentist did not to ask the rather young patient for anamnestic risk factors for dental-induced infections and the patient forgot to tell him about it, or the dentist misjudged the importance of a recent joint endoprosthesis implantation.

In the case being presented, if the dentist neglected to ask about joint prostheses before the tooth extraction, a well-educated patient would have informed the dentist without being asked. Furthermore, a corresponding remark on the prosthesis identity card should be printed as a reminder for all medical staff. Presentation of such a medical identity card by the patient showing the need for antibiotics during certain high-risk interventions should be sufficient to ensure that this step is taken.

Noteworthy, the European Commission recently issued new medical devices directives. This new directive requires manufacturers or their agents to provide clear identification of a product (eg, type, serial number) and indication of the name and address of the manufacturer or his agent and, if necessary, of the importer established in the territory of the European Union. Besides patient education, bar coding of medical devices may also improve patient safety in the future.

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REFERENCES

Von Langenbeck’s Medial Parapatellar Approach for Unicompartmental Knee Arthroplasty

To the Editor:

We have read with great interest the article “Unicompartmental Knee Arthroplasty Compares Favorably to Total Knee Arthroplasty in the Same Patient” (http://www.orthosupersite.
We agree that unicompartmental knee arthroplasties (UKAs) are a successful option for patients affected with osteoarthritis, in accordance with appropriate patient selection. Based on our experience with UKAs, the main factor influencing the outcome is surgical approach. In our opinion, Von Langenbeck’s traditional medial parapatellar approach should be used, with the knee flexed 110° and the patella everted, instead of a mini-incision on the affected compartment.

Through the traditional approach, a panoramic view can be achieved, which is optimal for precise bone resections, knee balancing (Figure 1), correct cement pressurization, and accurate prosthetic components positioning (Figure 2). This approach also decreases the risk of malalignment. The complete view given by the traditional approach allows the surgeon to correctly check the patellar tracking in a similar way to the TKA (Figure 3). Moreover, meniscal fragments, osteophytes, and bone particulate can be visualized and removed with ease, therefore avoiding possible sources of intraarticular scratches and catching. The most difficult problem with minimally invasive technique is to access the posterior compartment of the articulation to take away the meniscus and posterior osteophytes that, if retained, may lead to impingement of the meniscal bearing, loosening, and dislocation. Moreover, limited surgical access causes skin, capsular, and perhaps bone surfaces higher stresses due to the retraction required (3), increasing the risks for condylar fractures and patellar tendon rupture, as well as prolonging the tourniquet time, leading to an increase in the rate of technical error and early failure. To conclude, we recommend a standard medial parapatellar approach to UKA, rather than a minimally-invasive approach, since the surgical act would become complex when operating on through a keyhole.

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REFERENCES

Reply:
We appreciate the comments made by Drs Salvi and Alia regarding our article comparing unicompartmental knee arthroplasty (UKA) with total knee arthroplasty (TKA). They raise many good points. There is no question that a larger incision is advantageous for visualization of the entire knee and removal of retained bone and cement fragments. On the other hand, several authors have demonstrated that, when carefully performed, an incision that does not evert the patella and keeps the patella-femoral orientation in place during a UKA can be safely performed. In some respects, this improves the implant-to-implant alignment, an important determinant in long-term survivorship of UKA.

Ultimately, we agree with Drs Salvi and Alia that a surgeon needs to be able to assess the joint adequately, and we concur that a smaller incision should never compromise the outcome of UKA.

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