

# Orthopaedic Complications in Clinical Practice

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Orthopaedics is a technically challenging field and as such, complications are not unusual. Fortunately, almost all can be resolved successfully. The level of technical difficulty of the procedure requires that surgeons go through a learning curve to develop the skill set required to ensure reproducible success, case after case. This learning curve may be multi-phasic. The surgeon's confidence can be buoyed after performing 50-100 +/- procedures. Then, humbling moments begin, when the procedure is complicated by factors such as old age, atypical anatomy, end-stage osteoarthritis, complex trauma, severe preoperative chronicity, undiagnosed concomitant diseases, exceptionally small or large patients, cognitive issues, and other unpredictable adverse events. Variable duration of signs and degree of severity at the time of presentation also contribute to the learning curve. The complication rate for some surgeons may reach levels deemed unacceptably high, thus prompting discontinuation of the procedure. This attitude is acceptable but should lead to referring surgery candidates to other surgeons rather than performing less efficacious procedures. If one anticipates complications, then getting the help of a colleague who has expertise in that field dramatically reduces potential complications.

Orthopaedic surgery requires a commitment to become a high volume surgeon in order to attain and maintain proficiency. Likewise, there must be a

commitment to inventory instrumentation and implants that are superbly designed and durable products along with a willingness to upgrade technology as indicated. Surgeons should try and maintain a registry of every patient receiving a complex orthopaedic procedure and patients should be examined at regular intervals as per the case dictates. The followup examinations should be conducted with the understanding that clinical signs may not be picked up by the patient who may continue to carry on with the pain and discomfort causing more surgical challenges to build up when eventually a corrective operation is planned. Multiple follow up parameters should be recorded, especially with regards to complications (incidence and types), as a personal audit of the surgeon's performance. Surgeons should be aware of the clinical relevance of their observations. Complications are unfortunately an unavoidable situation with surgery sometimes, and when a patient decides to have an operation it is important to weigh the relative risks of surgery against the benefits. Trying to solve a very minor problem by surgery may not be worth the risk. The more severe the problem the more acceptable the risk of surgery. Was the risk worthwhile? This question must be pondered deeply by the surgeon and the patient before signing on the consent form.

Although we surgeons usually discuss both risks and benefits of the treatment, patients

typically recall most of the benefits and a much smaller fraction of the risks and complications discussed. This has been proven in many studies that have examined this matter called "informed consent". Understanding the risks and benefits of any treatment is an important part of our decision process and should be a part of the patient's decision process as well.

The incidence of complications and success rates of treatment are often a part of a patient's consultation. Rates of success and complications tell an individual patient nothing about how they will respond to treatment. For example, if the rate of blood clots in the leg after knee surgery is 1%, most of us would say that is low risk. What this really means is that of 100 knee surgeries, one patient will develop a potentially serious blood clot in the leg. That's great if you are in the group of 99 and not so great if you are the one patient who got the clot. Importantly, before surgery, there is no way to predict if you are going to be in the group of 99 or the one unfortunate patient with a blood clot. Everyone needs to be aware of these risks so that we can protect the one person who does develop the problem.

We must accept the fact that all surgeries have the potential risk of complications. These are rare but do occur despite the best attempts of the surgeon to avoid them. Some risks are specific to certain operations or injuries and others are present for most orthopedic operations. The strangest or most unusual thing imaginable has probably happened to someone, somewhere, so all possibilities cannot be discussed, but some risks that are common to most orthopaedic operations are:

- Failure of the surgery
  - Infection
  - Joint stiffness
  - Blood clots
  - Injury to nerves or blood vessels.
- The effort of this journal is to invite surgeons practising orthopaedic surgery in all corners of the globe to contribute their articles in which they can mention any memorable complication they

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encountered and how they dealt with it. We all live in the internet age and deal with a very aware and demanding patient. Hospitals are rated according to their complication rates and there are some websites like RateMDs which have the tagline DOCTORS YOU CAN TRUST! Thus complications is on the radar of the media and internet and sometimes are unduly sensationalized.

The surgeon's responsibility is to engineer success and minimize the risk of complications through adequate preparation of the entire surgical team, patient communication, surgical expertise, and competence in addressing complications. Noncompliance with aftercare instructions can jeopardize success, along with unfortunate and unpredictable events. However, fortunately complications are not common and it is extremely rare for a technically perfectly executed surgery to encounter complications.

The reality is that the option to never having a complication means never

performing the surgery!

Every surgeon of all experience levels at every institution has had complications from surgery. Those of us who treat a large volume of specific problems have certainly seen our own share of complications from surgery, but we also see the complications of others giving us a greater experience in treating more complex orthopaedic problems. As orthopaedic surgeons in practice, we develop an interest and comfort level with treating certain conditions allowing us to develop greater experience in our area of interest to better help our patients. Perhaps this has led to subspecialty interest in the field of orthopaedic surgery where we have diverse societies pertaining to each body part! No matter which subspecialisation it is, all of us need to pledge to get it right the first time, somewhat akin to having only one bite at the cherry!

Prof. Tim Briggs published a report in which the concept of "getting it right first time" is elaborated. The aim of the report is to inculcate an ethos where each

Orthopaedic surgeon pledges to identify and administer the correct treatment at the appropriate time, to a high standard with minimal complications. Not only will this reduce mortality and morbidity rates, but also reduce the need for often expensive revision surgery [1].

This is the first journal of its kind in the world and with the success of 'The journal of orthopaedic case reports' we were emboldened to venture into this controversial but very important subject to all practising orthopaedic surgeons. It is my humble request for all of you to start digging up the various complications or a complex case you have faced in your orthopaedic surgical career and share it with us, so that the younger generation of orthopaedic surgeons can learn from our mistakes!

Thank you,  
Dr. Kiran Kharat  
Editorial Board Member  
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## References

1. Tim Briggs. Getting It Right First Time. Improving the Quality of Orthopaedic Care within the National Health Service in England. Retrieved from <http://www.gettingitrightfirsttime.com/report/>

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