How to Manage Orthopedic Surgical Complications

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All surgeries carry the risk of complication, and all surgeons will eventually have complications occur in their patients. That said, the best way to deal with a complication is to prevent it in the first place. There is no substitute for good technique beginning with patient selection, pre-operative decision making and asepsis and continuing through surgical technique and post-operative care. This presentation will review some of the common reasons complications occur and the best methods to avoid those mistakes. Some of the common complications will be examined and potential treatments will be discussed.

Most complications can be predicted in retrospect. Based on that fact, they should be preventable with good technique and decision making. With regard to fractures, choosing appropriate fixation methods is critical. Beyond that, surgeon skill is a common problem. Mistakes in judgment commonly involve overestimating one's abilities or failure to execute a procedure well due to lack of experience or training.

Once a complication occurs, it must be dealt with. This may involve doing nothing with the realization that the outcome will suboptimal. If intervention is appropriate, it will either be in the short-term or long-term. Post-operative films must be critically and humbly evaluated so that the opportunity to immediately correct the error is not lost. Similarly, an acute failure of fixation or deterioration of patient status in the early weeks following surgery should not be ignored in the hopes that the issue will somehow remedy itself.

In the event of fracture fixation failure, the immediate decision is whether to intervene surgically or not. The decision rests on the degree of healing present and on the amount of alignment that has been lost. If the fracture has lost significant reduction or alignment it is usually also unstable. Judging the situation in light of what one would have considered appropriate alignment immediately post-operative is often useful in resisting the temptation to stall for time. Bear in mind that second surgeries are often more challenging than the original effort, and such cases may need to be referred.

The presence of infection is also a medium-term risk. In this case it is often best to leave the implants in place and treat the infection until the fracture heals. After sufficient healing has occurred (typically several months) the implants may need to be removed to eliminate a lingering nidus of infection. Culturing the site of infection is important as is long-term antibiotic therapy. Owners should be counseled about the long-term nature of the treatment.

The most likely long-term complication from many orthopedic procedures is arthritis. A complete discussion of the treatment for arthritis is beyond the scope of this presentation, but some review points will be addressed.