Orthopaedic Training – is it all about the Surgery?

There are many who would judge the quality of Orthopaedic training by the deftness at which a trainee handles the blade. Whilst it is true that surgical skills are the cornerstone of what makes an Orthopaedic surgeon, they are but a thread in the tapestry of what makes a great one. In our training, we have learnt various surgical skills and technical tips. Whilst some of this knowledge remains timeless, there are many surgical techniques that will eventually become obsolete in our fast progressing world. Thus, I would like to highlight some of the key lessons about surgical personality, surgical grit and surgical ego that the program has taught me, and arguably, these are the lessons that will serve me a lot more in my career than the surgery itself.

Surgical Personality

"Great things are done by a series of small things brought together"

Vincent Van Gogh

I always wanted to be a smooth registrar. I figured with my easy personality and quick wit, that's what I would be. The type that was good with their hands, relaxed at all times, ready for a drink after work and went running on the weekends. It turned out that I became quite the opposite. I struggled with many cases and found myself constantly checking my intra-operative images. I lugged my surgical exposure textbook everywhere I went and when that became too heavy for my shoulders, I put an electronic version into my hand phone. Surgical reading and clinics took up much of the weekdays and I often spent the weekends performing my pre-operative planning. Where did it all go wrong?

The truth was, nowhere. As I progressed in the industry, I realized this was common practice for those that had gone before me, much like it will be for those after me. I never understood that in surgery, much like professional sports, it's what we do in the dark that puts us in the light. Through surgical training, my surgical personality was formed on the tenets of safety and competency. I learnt that operating is never easy, whether it's a small case or a big one and that there is no room for complacency in the operative field. The Gods of Orthopaedic surgery do not like smug surgeons. The constant checking of your assistants performing sterile draping, inordinately long assessments of the intra-operative images and careful attention to skin closure are not markers of an obsessive ineffective surgeon. Instead, they are a reflection of a surgical personality that has been taught to respect even the smallest of details.

It is not unusual to see a junior assistant being careless with draping and that is because they have not had or seen the experience of infection occurring just because you cut through 1 inch of a drape. They don't see the patients who suffer infection and are never quite the same because of it thereafter. They don't know the chills that run up our spines when a hip bipolar hemiarthroplasty doesn't reduce because of that mere 1mm difference and they don't know the sound of a breaking femur when you do try to force the reduction. These events are what inadvertently transforms every would-be surgeon into a careful one as well as a surgeon that recognizes the importance of every single detail and respects the potential catastrophe that can occur when the sum of small errors add up. Whilst "big-picture" assessment is still very much in vogue in other modern industries, the devil is indeed in the details with Orthopaedic surgery.

I have long given up becoming a surgeon who can stroll into theatre without pre-operative planning and "wing it" as he operates. Such surgeons probably don't exist and even if they did, their cavalier attitude is a harbinger of troubles to come. I am now more aware of the background work that is required to ensure a successful and safe operation every time we hold the scalpel. I have also since realized that surgery is very much more a lifestyle than it is an occupation. No doubt, I still endeavor to go for the occasional night out and the more frequent weekend runs but as a surgeon, appropriate time has to be spent on careful preparation to ensure a good result, every time.

Surgical Grit

"The difference between winning and losing is most often, not quitting."

Walt Disney

Grit, loosely defined as perseverance and passion for long term goals, has attained worldwide recognition, rather appropriately in what our seniors identify as an increasingly soft generation. Applicable to elite soldiers and athletes, Orthopaedic surgery is a field in which grit too plays an integral role. The commonality between soldiers, elite athletes and surgeons are that each individual in these fields requires hours of preparation and training in order to produce a performance where failure is poorly tolerated.

Surgical grit has its place in each station of surgical training. It is required early on, even prior to attaining a traineeship. There are many applicants who would consider themselves stellar candidates due to their formidable work rate and peerless academic capabilities. However, they lack the fortitude and creativity to explore avenues that would make them truly distinctive. They do not understand that at this juncture of training, every candidate is intelligent and hard work is often a foregone conclusion. They get frustrated at being passed over for traineeship but do not spend the equivalent effort to identify ways to create value for the department, their surgical teams and themselves. There are many residents who may not have possessed stellar academic qualifications at time of application but instead distinguished themselves by their unwavering drive and determination.

The grass is hardly greener once residency commences. As a resident, surgical training can be daunting. As a non-trainee under a particular consultant, I was constantly praised for my diligence and enthusiasm. When I returned to the same team as a junior resident, I found that those praises were now past glories, and instead, my surgical know-how and skill were now heavily scrutinized. As a junior resident, the surgical inexperience can lead to harsh words in the operating theatre. Surgical grit is required to de-personalize these seemingly hurtful comments and re-constitute them into constructive learning opportunities. As one progresses in skill level, grit then becomes important in maintaining discipline to partake in long or challenging operations and especially critical, when it comes to dealing with poor surgical outcomes.

A fellow senior resident of mine once performed a hip bipolar hemiarthroplasty. It was a difficult case for him and the post-operative x-ray revealed a dense cement extrusion, likely from a femoral perforation by the implant. The consultant in charge was informed and the decision was made to treat this complication non-surgically. This is a situation in which many senior residents have unfortunately found themselves in. It is easy and tempting to cave in such seemingly desperate times; to tell the operating theatre that you've had a bad night and can't continue. Undeterred, my colleague went on to perform another hip bipolar hemiarthroplasty immediately after that (cemented at that) and another one that very night. That course of action was impressive in that he had the surgical grit to persevere after a bad result and to perform his next two similar surgeries to perfection. His ability to be professional and effective even in the face of surgical complications is a clear example of surgical grit.

It is important to remember that surgical grit goes beyond working long hours. More than that, it is about critically examining your surgical failures. The ability to take a failure and learn from it without being demoralized is a key component of grit and this attribute will serve us well, even at the highest echelons of surgery.

Surgical Ego

"Talk to a man about himself and he will listen for hours"

Benjamin Disraeli

I enjoy coffee room talk. There is first, the compulsory moments of lamenting on how tired one is, presumably from doing actual work. Then, we talk about the upcoming cases – interesting history, unique x-rays and technical complexities. It is rare however, to end an Orthopaedic conversation without sneaking in a humble brag. Often times, we lead in with a comment on how difficult, extremely difficult or impossible our next case is. We then reassure the listening audience that given the fact that we have performed many such cases (ranging from fifty to hundreds), we should be able to achieve a good result. Finally, we give a gross under-estimate of the surgical time we will require, dividing the actual surgical time by at least half.

Many would feel that such pantry banter is fairly harmless. Worryingly, these may be the first signs of a pervasive surgical ego that affects how accurately a surgeon assesses his surgery and more importantly, himself. I have on occasion found myself saying that I've done a number of a particular surgery, only to prove myself grossly wrong upon reviewing my surgical records. In my defense, I genuinely didn't know how

many I had done. I took a guess-timate, based on the background numbers that my peers were throwing out at that time as well as a number in which I felt commiserated with my self-determined level of expertise. That in itself is the problem. If we are to believe that mastery comes from repeated practice, or as a modern take, Malcolm Gladwell's "10,000-hour rule" for mastery, then over-estimating my experience is complacency at its worst. If I am unable to be honest with myself over my own level of expertise, I will misrepresent my ability. This may lead me to attempt a surgical case that I am not able to perform competently. In order to improve self-awareness and prevent ego from overtaking my vision, I now diligently document my surgical experience and this serves as an objective measure of surgical experience and competence. For in the fog of war against your own ego, clear surgical documentation is a valuable lighthouse.

Surgical ego can also rear its ugly head in the assessment of complications. Commonly termed denial, surgical ego can result in the disbelief of one's own surgical errors. I have seen many residents deny that an implant infection has occurred when both the clinical and biochemical features seem to strongly suggest an infection. In order to prevent this, recognizing a potential surgical bias is important. For myself, I have increasingly sought senior or peer guidance when assessing a possible complication from my surgeries. It would be unacceptable that a surgical complication has progressed under my own watch all because I was too busy worrying what others would think of me.

There are many of us who believe that we are extraordinary individuals. Interestingly, it has been said that the thought that one is extraordinary, is the most ordinary thought of all. It would be wise to remember that our peers are equally, if not more intelligent individuals and that without the appropriate experience, one should not assume a position of expertise so readily. We have to learn to recognize moments where our surgical ego is clouding our vision and it is important for every surgeon to be able to keep his surgical ego in check.

Conclusion

As I progress the surgical hierarchy, I am thankful to all my seniors for teaching me the surgical skills required to navigate the world of Orthopaedic surgery. I am even more thankful for them for moulding my surgical personality, training my surgical grit and educating me on how to draw on my surgical confidence rather than my ego.