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COVID Issue Paper

CIENT PERIODIQUE

Orthopedic Trauma Care During the COVID-19 Epidemic - New Challenges?

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In the past few months, the entire world is changing before our eyes due to the recent Covid-19 outbreak, with an alarming number of patients being influenced directly or indirectly by the virus spread. Health systems, together with economic systems, are forced to transform their usual course of action and prioritize treatment on the basis of urgency and limited resources.

Orthopedic trauma by its nature deals with relatively urgent cases, some more than others, and while some decrease in the volume of high energy trauma cases is probably expected (due to the rapidly expanding worldwide civilian quarantine), a steady inflow of patients with various types of fractures mandating surgery, including fragility hip fractures, is still continuously streaming into hospitals.

Like many other surgical fields, Covid-19 affects the way orthopedic and general trauma surgeons should treat patients. The main issues of concern are resource management (including human, equipment and operating theaters resources) and the availability and feasibility of follow-up clinics which usually play a crucial role in the postoperative treatment of these patients.

Much can and should be discussed regarding resource management and all its aspects, and many burning questions are troubling medical managers during this outbreak, questions like exposure and protection of medical teams, allocation of surgical personnel to internal medicine and ICU wards and many more. Personally, we chose to focus attention on the issue of trauma patient care and specifically on the issue of orthopedic trauma and post-operative care.

One should remember that the morbidity and mortality of surgery are elevated in patients suffering from covid-19. This should be stressed out when debriefing patients prior to surgery and gaining their informed consent.

Each patient undergoing surgery should be asked for relevant Corona virus symptoms and signs, as well as possible contact with covid-19 patients or carriers (a thing which just now had a toll of shutting down a whole cardio-thoracic ward in the north due to a patient's family who was a carrier, while attending his loved ones and infecting a whole ward staff).

In patients who have been suffering from an unexpected postoperative complication, it is appropriate to check for covid-19 as a cause of the unexpected course of the post-op period.

The availability of post-operative clinics is decreasing - all medical personnel are required to work long rotating shifts and are drawn into Covid-19 patient care. Expanding quarantine enforcement and patient's concern regarding their own health risk limits the patients' ability to attend for appointments when scheduled. In addition, a large numbers of physicians could be infected or put in isolation due to exposure to Covid-19 patients, so basically - the entire health care system is overwhelmed.

With this in mind, together with the fact that trauma never rests, we wanted to emphasize some important points regarding decision making and post-operative care.

First, we recommend considering lowering your threshold for operative treatment in debatable cases (for example reduced fractures with initial substantial displacement) - you may not be able to follow them up and catch their failure in time.

Second, when in surgery - try to achieve the best surgical solution, like as stable fixation as possible in order to avoid immobilization with plaster - you can't be sure when you will see this patient again - it's better if they can mobilize (this is not a new concept, but is becoming even more relevant in our current situation). If you must - try to use a back slab rather than full cast so patients can remove it by themselves. Same applies for stapling vs. suturing - staples necessitate some medical personal to remove them, while if you close the skin with absorbable sutures, this need is mitigated.

Third, make sure to write down a detailed post-op plan for a period of a month, including wound care and sutures removal, antibiotic treatment if needed, anticoagulation, required x-ray monitoring and of course - detailed physiotherapy instructions - you may not get to meet the patient again but another doctor may and its best that they know your plan.

Similar recommendations apply for patients who are treated conservatively – try to use removable splints or a back slab when possible, instead of full cast, and again, make sure to write down an elaborated treatment plan for the coming month. Put extra emphasis on physiotherapy, including giving the patients some initial exercises to get them started, and get the patients involved in their treatment plan. Same applies for pain management - give multi-modal analgesia, which shifts from narcotics to NSAID's as time goes by.

Running post-operative clinics is crucial even during these days of medical uncertainty. Even though there is no better alternative than physically examining the patients in clinic, one might consider the option of running a virtual clinic or forming a digital channel of communication with the patients using commercially available audio-visual means through the internet. Surely one can't see if a fracture has healed if one cannot see the patient and see his/her gait, perform a physical exam etc. But, one can still ask about basic post-op problems like fever, pain control etc. Post-operative x-rays are hard to obtain in this fashion but wound care, patient's general health, range of motion and physiotherapy status could probably be monitored from afar.

These are difficult and challenging times for the entire medical community, and we are all standing together, each to his own front, united in battle against this new and intimidating enemy in the hope for better days. So, take care and be safe!

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