BOA pathway guidelines for resumption of local anaesthetic musculoskeletal procedures in adults

Published on: 3rd August 2020

Purpose

To provide an evidence based and reasoned pathway for local anaesthetic extremity procedures.

This document outlines recommendations for a reasonable pathway, mindful of both potential risks to the safety of patients and staff when treating patients under local anaesthetic, and the need to avoid un-necessary impositions on patients before and after treatments, and provides the rationale behind the recommendations.

The guidelines have been produced by a committee including representatives of the British Society for Surgery of the Hand, the British Orthopaedic Foot and Ankle Society and the British Orthopaedic Association.

The guidelines are applicable for all procedures undertaken on the extremity under local anaesthetic without sedation, including Wide-Awake Local Anaesthesia No Tourniquet (WALANT) techniques; applications include all aspects of hand and upper extremity surgery that can be performed under local anaesthetic alone, and forefoot surgery performed under digital blocks (but not procedures performed under popliteal or ankle block, where the mobility of a patient may be slowed and so potentially prolonging the hospital stay or altering their depth of respiration.

Background

As elective surgical practice resumes with the number of new cases of C19 infection reducing, theatre capacity remains at a premium due to persisting reductions in theatre and anaesthetic availability, and practice changes introduced to protect patients and staff alike. Patients who would have been treated during the lockdown period are now compounding the existing list of patients awaiting surgical treatment. Therefore, restoration of theatre productivity is a priority for surgeons and surgical service managers.

Treatment pathways have been developed to minimise the risk of viral infection affecting patients undergoing surgery. However, as infection numbers fall, we learn more about transmission, and society progressively returns to pre-C19 activities, it is proper that guidelines for surgery are reviewed and updated, with pathways nuanced to a reasonable balance of risk and benefit, particularly important as the potential risks may vary substantially between different groups. The National Institute for Health and Care Excellence (NICE) published guidance on arranging planned care on 27th July 2020[1], and for procedures on adults involving a local anaesthetic the approach is as follows:

[1] National Institute for Health and Care Excellence COVID-19 rapid guideline: arranging planned care in hospitals and diagnostic services. www.nice.org.uk/guidance/ng179. We understand this guidance may be updated regularly.

- All patients should be self-isolating for the period between a swab test for C19 that should be routinely obtained two to three days before a planned procedure and the admission (whereas previous guidance stipulated this would be for two weeks),
- Some patients, including those with vulnerabilities for contracting a C19 infection or an adverse outcome in the event of a C19 infection, may be advised to or wish to self-isolate for two weeks prior to admission.
- All patients should observe strict social distancing and hand hygiene for two weeks before surgery.
- Local policies should be in place outlining the testing and self-isolation strategies needed if local transmission rates of SARS-CoV-2 increase
  The guideline also makes recommendations for the day of treatment to minimise patients' potential exposure while in a hospital facility.

The change in the overall guidance for patients to be admitted for surgery is welcomed, as this will substantially reduce the burden placed upon most patients and their families while they await surgical treatments.

It is intuitively probable that patients receiving treatments performed under local anaesthetic carry a much lower level of potential risk to those requiring general anaesthesia, and depending on local circumstances, treatments could continue to be offered to these patients even in the event of localised or general increase in community prevalence of C19.

This document offers specific advice and guidance for the safe treatment of patients if performed under local anaesthetic, reflecting the general advice contained in the NICE guidance NG179.

Who needs protecting?

All treatment pathways need to carefully incorporate the need for protection of patients (both the individual undergoing a given procedure, and other patients being treated in the same institution), and staff. While there is overlap between the needs of these groups, there are also important differences in their needs:

- *Patient undergoing a surgical procedure*- the level of risk for a patient undergoing surgery will be influenced by their individual level of vulnerability due to their co-existing medical conditions, their potential exposure to the C19 virus, the nature of their surgery and the type of anaesthesia required to conduct the procedure.
- *Other patients*- irrespective of the potential risk to any one given patient, all patients treated in an institution have the potential to transmit a viral infection to other patients and staff in the same area of the hospital where they are treated.
- *Staff*- due to the nature of surgical treatments, staff often need to come into close contact with the patients under their care, exposing them and their patients to levels of cross-infection risk over and above the environmental risk posed by being in a hospital.

Why is surgery performed under local anaesthesia different?

Intuitively, patients having their musculoskeletal (MSK) procedure performed under local anaesthesia (LA) do not have the same risk of an adverse outcome from a peri-operative C19 infection as patients being treated under a general anaesthetic (GA) as they have not been exposed to the airway and lung challenges of the GA process. In addition, the systemic challenge posed by the surgery is lower. Evidence to support this is emerging from the Corona Hands project, a multi-

centre service evaluation project of surgery undertaken at the peak of the pandemic in April 2020; data from 575 people who were treated under local anaesthesia have shown no C19 complications despite the majority only undergoing routine symptom and/or contact questionnaire screening[2]. These data indicate that the level of risk to an individual patient being treated using local anaesthetic is low, and so for the individual a prolonged period of household self-isolation is unduly onerous and restricting.

Patients undergoing MSK procedures under LA can usually be admitted shortly before surgery and discharged immediately afterwards without the need for the pre-operative and post-operative processes that are necessary for cases performed under regional or general anaesthesia.

There is growing evidence that hand surgery (both soft tissue and percutaneous fracture wiring) can be performed safely under LA outside the main operating theatres, without increased risks of surgical site infection[3]. Service providers should explore their existing infrastructure for suitability of conversion into a LA day-case procedure room to provide increased surgical capacity without compromising resumption of treatments that require anaesthetic input.

Previous guidelines

Previous guidelines were based on the worst risk scenario as patients undergoing surgery performed under a general anaesthetic have been shown to have an increased risk of death from an intercurrent C19 infection, with an overall mortality of 23.8%[4]. However, with falling prevalence rates and screening, the risk associated with MSK surgery appears to be much lower and the social-economic hazard of excessive caution has been re-examined[5].

Established treatment pathways were developed that considered risks posed by patient susceptibility to C19, the complexity of their treatment, and the ability to deliver care while separating patients who have been shown not to have active C19 infection from those with C19 or an unknown C19 status, and minimising patient time in hospital facilities.

While the combination of self-isolation and swabbing of patients provided confidence that the surgery had as low a risk as possible of an adverse outcome due to a peri-operative C19 infection, the process of household self-isolating prior to and following surgery is onerous for the family unit, and costly to society.

The new NICE guidance[5] removes the burden of a two-week self-isolation period for most patients and their family, but still considers local anaesthetic procedures grouped with those undertaken using more invasive forms of anaesthetic. Given the emerging data confirming the low risk levels amongst patients treated under a local anaesthetic, these guidelines for patients treated using local anaesthetic techniques should enable treatments to be continued even in the event of an increase in C19 cases, subject to local resource availability and circumstances.

[2] Corona Hands 2020 – awaiting publication.
[3] Jagodzinski et al. J Hand Surg Eur. 2017;42(3):289-294.
[4] COVIDSurg Collaborative Lancet (2020); 396: 27–38
[5] www.nice.org.uk/guidance/ng179

Recommended LA Pathway

The recommended pathway is suitable for both elective and trauma procedures. However treatment of trauma cases should not be inappropriately delayed by using this pathway for their care; local guidelines should be followed if they facilitate urgent trauma surgery through a different, C19-status unknown pathway.

The aims of the LA pathway are:

- To avoid transmission C19 from patients to staff and vice versa
- To avoid the logistic, personal and economic effect of unwarranted self-isolation
- To treat patients expeditiously
- To avoid lengthening waiting lists
- To encourage development and use of minor procedures facilities to treat appropriate cases.

For patients with elective conditions, these aims can be achieved by:

- Pre-surgical – discussion with and information for patients
    - Patients being contacted to confirm they wish to proceed with surgery, and that they understand and accept the potential associated risks as part of a shared decision making process
    - Explain to patients measures to reduce the risks of infection at the time of surgery - they should minimise contact with others where possible and follow good hygiene measures for 14 days prior to surgery, will undertake a swab test 2-3 days prior to surgery and will need to self-isolate from that point until admission (This should include isolation from other household members during this period, and does not require other people in the household to self-isolate.)
    - Explain that if they develop symptoms, test positive, or need to self-isolate due to contact with someone who has COVID-19, then their surgery will need to be delayed.
    - Outline circumstances under which patients with identified vulnerabilities may choose to delay their treatment, or to undertake a formal 14 day period of self-isolation
    - Advise patients to use private transport to and from the planned care setting if possible. If this is not possible, then advise patients using public transport to follow UK government advice on travel.[6]
    - Provide patients with information on where to go, what they can/cannot bring with them, advise that they will be required to wear a mask during their procedure and any other practical information they will need.

Pre-surgical – steps leading up to surgery

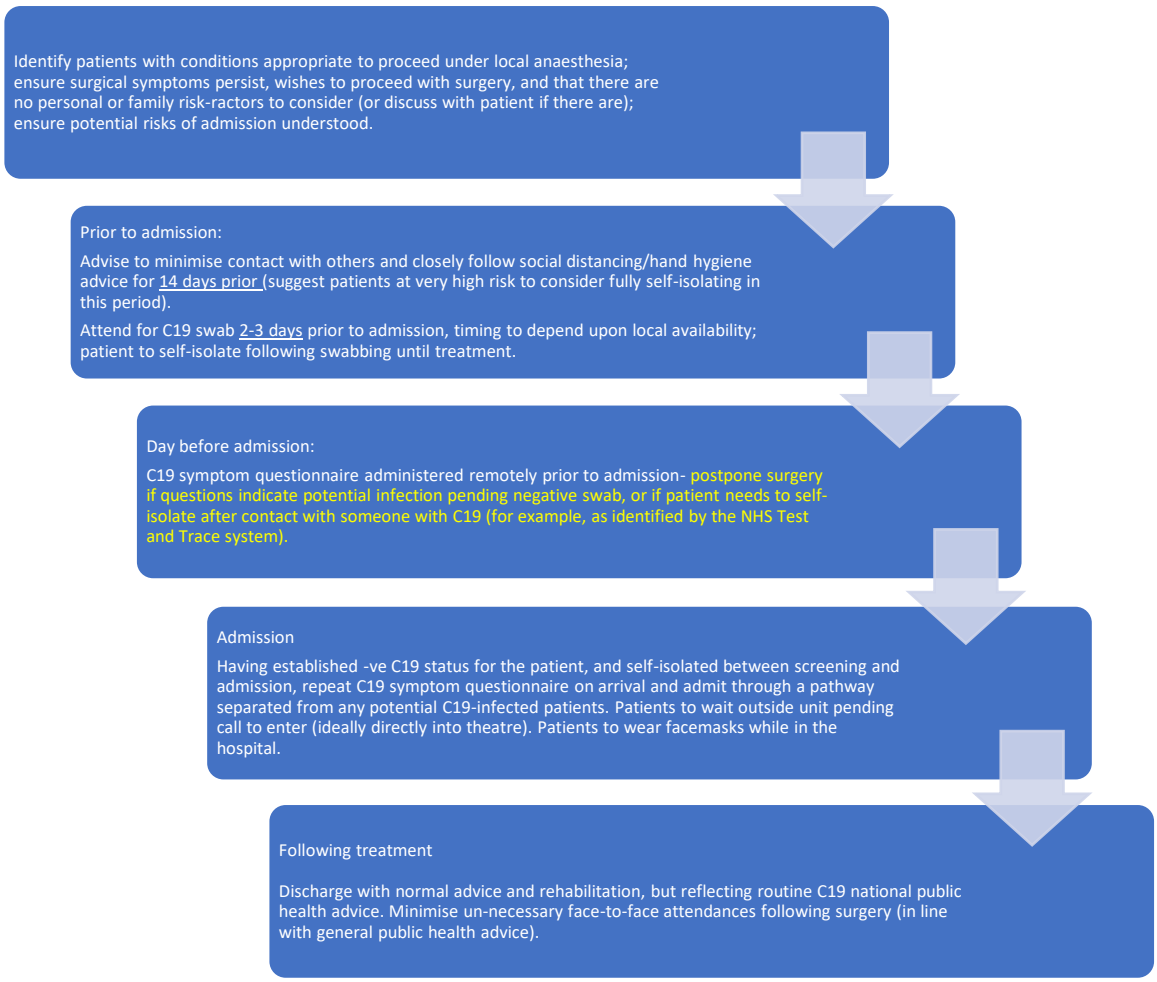
- Administration of an initial C19 symptom and exposure questionnaire prior to scheduling elective procedures
- Patients attend for a routine C19 swab within 2-3 days of surgery and self-isolate thereafter
- Assess patients for symptoms of COVID-19 on the day before surgery.
- Patients being treated following acute injuries must be screened and swabbed when they first present following injury

[6] https://www.gov.uk/guidance/coronavirus-covid-19-safer-travel-guidance-for-passengers

- Day of Surgery
    - Patients admitted and treated separate from any patients with confirmed or suspected C19 infection.
    - Patients should repeat the C19 symptom and exposure questionnaire and have their temperature checked prior to entering the hospital ward.
    - Patients should wear a mask throughout their admission to protect them from the hospital environment.
    - Admission times should be staggered to reduce ward occupancy.
    - Use of Personal Protective Equipment should be guided by the prevailing National and local guidance of the time; it is anticipated that only Level 1 PPE will be required in most cases.
    - Discharge should be direct from theatre of a separate recovery / discharge facility.

- Post-operative
    - Techniques should be used to minimise the potential need for reattendance (eg dissolvable suture, virtual follow up)

Flowchart for recommended LA pathway



Separate Minor Procedure Facility

For centres where a separate minor procedures facility exists away from the main hospital wards and theatres, undertaking a routine C19 swab is un-necessary, although these patients should still undergo questionnaire and temperature screening as outlined above on arrival to the facility. Anyone with a positive questionnaire or raised temperature would necessarily be turned away.

Patients at high risk from C19 infections

The treatment of patients at a high personal risk (e.g., immune suppression; multiple relevant co-morbidities) requires a careful and individualised risk assessment. While it is recognised that a patient's individual risk will probably not be increased by the procedure itself, given the potential for nosocomial infection, clinical judgement should be applied when advising patient about the relative risks of treatments even when performed under LA. Where these patients do go ahead with surgery, there should be enhanced planning and protection for them - for example putting them at the start of the list. In addition, where high risk patients are going ahead with surgery under another pathway, there should be similar enhanced planning and protection from patients under the LA pathway.

Audit

Services are recommended to undertake prospective audit of cases treated under this pathway, as part of clinical governance. The outcomes and complications should be reviewed regularly to help inform a safe provision of care.