Improved Clinical Pathway Services

ICPS Arthroplasty Pathway

THE AIM OF OUR PROGRAMME IS TO OFFER ENHANCED RECOVERY HIP AND KNEE REPLACEMENTS WITH IMPROVED QUALITY FOR THE PATIENT TO INTERESTED MEDICAL SCHEMES. CURRENTLY WE HAVE CONTRACTS TO TREAT COMPCARE, OPMED, DISCOVERY, OMSMAF, TRANSMED GUARDIAN PLAN, MEDIHELP DIMENSION ELITE, BONITAS, FEDHEALTH, OLD MUTUAL, SASOLMED, SELFMED, MBMED, NEDGROUP POLMED AND AECI (ALL OPTIONS) & SELFMED ELITE OPTION MEMBERS.

1. PRE-OPERATIVE OPTIMISATION TARGETS

Patients meeting the following evidence-based pre-operative optimization targets are clinically eligible for enhanced recovery arthroplasty under the ICPS Programme without further optimization:

- ASA 3 or better
- Hb > 12 g/dL
- BP < 170/100
- Blood HBA1c < 7
- BMI < 40
- eGFR > 60ml/min – stage 2 renal dysfunction
- Patients with a history of cancers without metastasis and in remission
- HIV patients stable on anti-retroviral treatment for 6 months CD4 counts above 200 without any AIDS defining diseases
- MRSA negative
- MSU negative
- Warfarin optimization must be done pre-operatively

PATIENT EDUCATION

- Create an expectation of early mobilisation starting on the day of the surgery
- Create an expectation of early discharge – as early as day 2, with most of the patients discharged on day 3
- Discuss type of preferred anaesthesia –Spinal Anaesthesia with sedation and high volume local anaesthetic infiltration by surgeon
- Discuss pain control. Articulate clearly that there will be some discomfort, however intolerable levels of pain will be relieved by a combination of regularly prescribed drugs. These, when prescribed together will have a synergistic effect with a lower incidence of complications •
- Explain pain, nausea and vomiting management via regular multimodal analgesia, antiemetic medication, minimising prolonged starvation and, early hydration
- Discuss medication plan on the day of surgery e.g. stop Warfarin 4 days pre-operatively, no Insulin on the morning of the surgery but to take all oral anti-diabetic medication including Metformin as prescribed
- Discuss pre-operative fasting guidelines – no food or milk 6 hours preoperatively, clear fluids up to 2 hours pre-operatively
- The use of drains, epidural catheters, urinary catheters will be minimized or avoided where possible
- Warn patients that they may not feel like voiding and that there is a risk of overflow incontinence
- Patients should be actively encouraged to use a bed pan as soon as possible post operatively ensure ward nurses are aware of this
- Patients are encouraged to use the toilet as soon as able to mobilize

POSTPONEMENT FOR FURTHER OPTIMIZATION

Patients not meeting the targets must undergo pre-operative optimization to enable the best possible clinical outcome. Such patients should expect their surgery to be postponed to allow for optimization.

DISCHARGE PLANNING

Proper discharge planning must be undertaken, with attention to patients' social circumstances and to enable appropriate discharge from hospital to take place.

3. SURGERY, ANAESTHESIA AND ANALGESIA GUIDELINES

ANAESTHESTIC MANAGEMENT

Spinal anaesthesia with sedation is the preferred technique for both knee and hip joint arthroplasty surgery

- 2.5 - 3 ml 0.5% bupivacaine and 25 micrograms of fentanyl intrathecally.

Intrathecal morphine use is discouraged due to delayed respiratory depression.

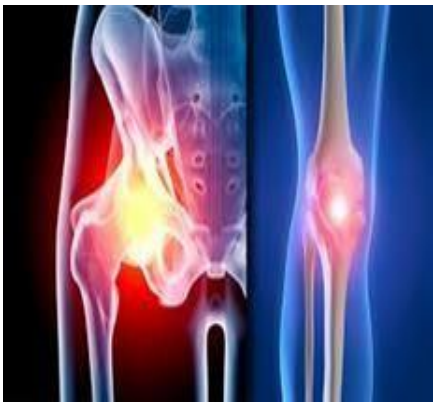
- Dexamethasone 8mg ivi for PONV
- Midazolam titration (0 - 5mg) ivi
- 10 – 15mg/kg Tranexamic acid (Cyclokapron) on skin incision for hip surgery and on release of the tourniquet in knee surgery
- Ondansetron 8 mg (or equivalent) 30 minutes before end of the procedure
- Intra operative fluids to match fluids lost – i.e. maintenance fluid of 1ml/kg/h plus matched blood loss (crystalloid 3:1 or colloid 1:1)
- Vasopressor management to keep BP within 10% of pre-operative BP
- NSAID – if no contra indications to usage
- Paracetamol 1g (ivi or suppository)
- High volume local anaesthetic infiltration by the surgeon (see p10 and p11)

A slowly graded epidural anaesthetic rather than a GA is suggested for patients in which a more cardio-stable anaesthetic is required.

POSTOPERATIVE NURSING MANAGEMENT

- Patients should be monitored hourly using an early warning scoring system until full recovery from the spinal anaesthetic. Thereafter specialist nursing post-operative protocols for patient monitoring should be followed
- If not catheterized, patients should be encouraged to urinate using a bed pan even though they may not feel a full bladder (due to the spinal anaesthesia)
- Patients must be encouraged to mobilise as soon as normal muscle tone and function is returned – aim within 6 hours of spinal anaesthetic
- Patients must be encouraged to change into a track suit, sit out of bed and self-care as soon as on the morning of day 1 post op.
- If possible, patients to embark on a physiotherapy mobilisation and strengthening program starting on the day of surgery
- Joint X- ray and routine FBC on day 2 post surgery.
- Discharge criteria - independently mobile with crutches or walker, able to negotiate stairs, sit on the toilet safely and functional capacity

4. PHYSIOTHERAPY MANAGEMENT GUIDELINES



FIRST CONSULTATION

Assessment of the patient's bilateral joint range of motion and muscle strength.

Assessment of the patients' functional capacity; ability to get up from a chair; mobilise with and without assistance.

Assessment of the patient's home circumstances with regards to the patient's ability to negotiate stairs, loose mats, low toilet seats etc. Correction and assist aids should be put in place pre-operatively to facility early discharge.

An assessment should also be made as to the amount and quality of the patient's support at home. Support should be organised pre-operatively and before the patient is admitted, this to facilitate a smooth discharge process.

the Physiotherapist will assess the patients' overall likelihood of an early mobilisation post operatively. If this is in doubt the decision to operate must be reviewed with the treating surgeon. Patients should be trained in the use of walkers and crutches as well as shown how to negotiate a bedpan, toilets, sitting, and stairs.Patients should be given a rehabilitation exercise program specific to the joint being replaced. The patient should be encouraged to start on this prior to surgery.

The patient's functional capacity, pain and stiffness using the WOMAC score for their procedure (hip or knee) should be documented and recorded. A copy of the spread-sheet is attached at the end of this document. This should be completed by the patient together with the physiotherapist and the percentage scale should be sent to the email address below.

A version can also be found at www.orthopaedicscores.com This can be completed online, saved as a PDF and emailed to admin@icpservices.co.za.

PATIENT EDUCATION AND EXPECTATION

The patient's expectation must be set at the first physiotherapy consultation around the following key issues:

- Patients need to be informed about the dangers of immobilisation post operatively especially deep vein thrombosis, pneumonia, as well as urinary tract infections from urinary catheters required if patients are confined to bed. Due to the nature of the surgery, the patient should expect some discomfort but not at levels that are uncontrollable. Patients will be mobilized next to the bed and to the toilet as early as 4 to 6 hours post-operatively. This is largely because of the type of anaesthetic, which provides pain control without sedation and nausea and vomiting.

Day 1 post operatively

Patients are expected to begin engaging in an active rehabilitation program of strengthening exercises and full weight bearing. This includes sitting out of bed for most of the day, mobilising with a walker and using the toilet.

Day 2 post operatively

Patients continue with the active rehabilitation program. This intensifies to include negotiating stairs, getting in and out of a car or bath.

Day 3 post operatively

The physiotherapist in consultation with the surgeon assesses the patient's readiness for discharge as per discharge criteria. Most patients are generally discharged home or to a pre – organised step-down facility on day 3 or 4. Delayed discharge is indicated if the patient can't walk or sit in a chair or on the toilet.

DISCHARGE CRITERIA

- Pain is controlled
- Able to walk with a walker or crutches
- Able to dress with only a little help and can get into and out of the bed and a chair/toilet.

PHYSCIAL REHABILIATION AFTER DISCHARGE

1. Rehab facility transfer – Direct transfer from the hospital to a rehab facility is sometimes necessary. This option is most appropriate for older patients and for those who live alone and are unable to secure help. Insurance coverage for rehab stay varies and needs be investigated in advance. Duration of rehab stay can be as short (few days) or longer depends on the speed of recovery and the amount of support each patient will have when returning home.

2. Outpatient therapy - Outpatient therapy in a physical therapy department has the advantage of better equipment vs. what is available in home. More mobile patients often opt for outpatient care. Patients often transition from home to outpatient therapy as they become more mobile**.**

OUTPATIENT REHAB DURATION

1-2 x Individual 15min Rehab sessions which is subjected to pre-authorisation from ICPS.

TIME ON WALKER OR CRUTCHES**:**

Full weight bearing is generally allowed immediately after surgery. Most patients can wean off the walker or crutches as their muscle function, swelling and soreness allows. Many patients have moved to the use of a cane by 1 to 2 weeks postop.

TIME ON A CANE:

Once off the walker or crutches, the use of a cane in the opposite hand is sometimes helpful for a short time. Most physically fit patients are off all ambulatory aids including a cane by 2 to 3 weeks postop.

TIME UNTIL RETURN TO DRIVING:

Patients should not return to driving until cleared to do so postop. In part this is due to liability issues if an accident should occur. It is generally safe to return to driving 2 to 4 weeks after left hip surgery and 4 to 6 weeks after right hip surgery.

RETURNING TO WORK:

Predicting a return to work date is difficult. Motivational issues play and important role. Great variability exists. In general, patients returning to a sedentary job tend to return to work 4 to 6 weeks postop and those with more physically demanding jobs tend to return at 3 months postop.

RETURNING TO RECREATIONAL ATHLETICS:

Patients can begin to return to light recreational sports such as golf or cycling by 4 to 6 weeks postop. More strenuous sports such as tennis may require 12 to 16 weeks before a return is possible.

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