Supplementary prescribing for the elective surgical patient

Throughout the UK, nurses have started training in supplementary prescribing. The guidelines for supplementary prescribing, initially referred to as dependent prescribing (Department of Health, 1999), recommend that nurses can prescribe in continuing care by agreement with the patient and the diagnosing doctor.

Supplementary prescribing is defined as a voluntary partnership between an independent prescriber (doctor, dentist or vet) and a supplementary prescriber (a first-level nurse or pharmacist). It will be implemented by the use of a patient-specific clinical management plan (CMP) drawn up by the independent and supplementary prescribers and used with the agreement of the patient. The CMP determines the drugs that may be used, the range and route by which they may be given, the clinical situation for using the drugs and criteria for referral to the doctor (Table 1).

A nurse clinician for surgical services typifies the role of a nurse who has taken a master’s degree in clinical nursing. This qualification enables the nurse clinician to diagnose, investigate and instigate treatments or refer patients appropriately. Independent extended nurse prescribing, where nurses can prescribe a restricted range of medications, and patient group directions, where nurses can supply and administer a range of medications, have already been established within this role. Supplementary prescribing should be considered for the elective surgery patient population, which includes patients admitted for elective surgery in urology, orthopaedics and general surgery.

Rationale for inclusion of medication

Pain control

Most patients having surgery may expect some pain. This will range from minimal soreness not requiring analgesia to severe pain after major surgery that requires skilful prescribing to minimise discomfort without giving side-effects. The analgesia ladder ranks analgesics by clinical efficiency, allowing a choice of medication for the severity of pain.

The CMP for supplementary prescribing will only require consideration of prescription-only analgesia for moderate pain. This is because the supplementary prescriber is also an independent extended prescriber. Analgesics for minor pain can therefore be prescribed without consultation with a doctor. These include paracetamol, ibuprofen and a single prescription medicament, nefopam.

Controlled drugs for severe pain, such as morphine and pethidine, have been excluded from supplementary prescribing and are usually prescribed in theatre by the anaesthetist.

The only analgesia identified for our CMP was diclofenac sodium, to be administered either as a suppository or for oral administration to a maximum of 150 mg per day in divided doses. The intramuscular route was avoided, thus reducing the risk of skin necrosis from repeated injections.

Hydration

Patients are fasted for at least six hours before surgery, with sips of water allowed for up to two hours before.

Perioperatively, hydration is maintained by intravenous infusion using glucose 5% and/or sodium chloride 0.9% (saline), often in a 2:1 ratio respectively, with three litres

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given in 24 hours. The glucose solution replaces water and saline maintains the electrolyte balance (British Medical Association and Royal Pharmaceutical Society of Great Britain, 2002). Sodium chloride (0.9%) may be given more rapidly if the patient is showing signs of dehydration postoperatively, that is, thirst, tachycardia and low blood pressure.

**Prophylaxis to prevent thromboembolic disorder**

The trust policy for the prevention of postoperative deep vein thrombosis and pulmonary embolism varies, depending on the type of surgery.

For general surgery, a low molecular heparin (enoxaparin 100mg/ml) by subcutaneous injection is given to all patients undergoing operative procedures of longer than 20 minutes. In orthopaedics, this policy is followed only when the patient has a previous history of a thromboembolic disorder.

For all other patients, aspirin (150mg once daily) is given before surgery and continued for five weeks. This decision is based on evidence detailed in the Pulmonary Embolism Prevention Trial (2000) indicating that aspirin reduced the risk of pulmonary embolism and deep vein thrombosis by at least one-third in periods of increased risk. Orthopaedic patients who are unable to tolerate aspirin can be offered mechanical foot pumps as a non-pharmacological alternative. All patients are given thromboembolic stockings.

Enoxaparin is also given when conversion from a long-term anticoagulant (warfarin) to a low-molecular heparin is required to prevent haemorrhage in the perioperative period. The drug is continued after surgery until the patient is again stabilised on long-term medication. Enoxaparin is considered an essential medication for perioperative care and is included in the management plan. Aspirin can be prescribed independently and, therefore, has not been added to the CMP.

**Prophylaxis to prevent joint infection**

With the increase in multi-resistant bacteria, care must be taken to ensure not only that the antibiotic prescribed is appropriate but also that it is necessary. Evidence-based hospital policies have therefore been developed to indicate the appropriate antibiotic for each infection or for prophylaxis.

The morbidity associated with joint infection after joint surgery is such that prophylactic antibiotic therapy is...
REFERENCES


BOX 2. AIMS OF TREATMENT USING A CMP

- Pain relief;
- Prophylactic prevention of postoperative deep-vein thrombosis and pulmonary embolism;
- Prophylactic prevention of infection after joint surgery;
- To maintain hydration or to correct hydration pre- and postoperatively;
- To correct blood volume as a short-term measure when the patient is in a state of shock due to postoperative blood loss until medical support arrives or a blood transfusion can be performed.

The mechanism for instigating the CMP complies with the implementation guide (DoH, 2003):

- The CMP has been drawn up with the agreement of the independent prescriber;
- The doctor (independent prescriber) will have made the diagnosis before the patient’s admission;
- The CMP will be discussed with the patient before it is used;
- The CMP will be signed in theatre for use in the postoperative period.

On reflection, other medications could have been included in the CMP. No allowances have been made for pre-medication, the intravenous glucose-potassium-insulin régime for patients with diabetes, or for other prophylactic antibiotics.

The decision to use pre-medication to reduce anxiety, or for a glucose-potassium-insulin régime, is made by the anaesthetist. The technical difficulties of including these medications in this CMP include involving the anaesthetists as additional independent prescribers and not being able to agree the CMP in time for its use.

With regard to antibiotics, although there are other indications for administration of prophylactic antibiotics in surgery, as most are given in a single dose on induction of anaesthesia in theatre, they were not considered necessary for supplementary prescribing.

This basic CMP appears to be all that is required for our situation and it will be revised as necessary. Its strength is in its simplicity because it is written for carrying out the basics of surgical care with no complicating factors. However, it is possible that problems will arise once it has been implemented.

The CMP is designed to be patient-specific, but is it to be specific to supplementary or independent prescribers? At present, two supplementary prescribers work together, and arrangements can be made to include both prescribers on the CMP. However, will this work in future as more nurses qualify to prescribe? This is something that will need to be addressed if supplementary prescribing is to work in a secondary care setting.

Conclusion

Patients admitted for elective surgery have common medication needs that can be incorporated into a CMP. The present CMP encompasses five areas of care: analgesia, hydration, prevention of thrombosis, prevention of infection and treatment of hypovolaemia. It complies with the regulations specified by the Department of Health, and a system for its implementation is suggested.

Our CMP for the elective surgical patient is simple, yet effective. The difficulties are foreseen in implementing it in secondary care because in this area teams of independent and supplementary prescribers all look after the same patient.

The CMP consists of only eight medications. Because nurses are able to prescribe these, there should be fewer delays in patients receiving their medication. Furthermore, using a CMP allows nurses to deliver a comprehensive package of surgical nursing care.