

Title: **GUIDELINES FOR THE MANAGEMENT OF
INTRASPINAL CATHETERS IN THE COMMUNITY IN
CORNWALL**

Developed by: **THE INTEGRATED PAIN AND PALLIATIVE CARE
SERVICE, RCHT, IN CONJUNCTION WITH ST JULIAS
AND MOUNT EDGCUMBE HOSPICES , THE
MACMILLAN SERVICE AND THE COMMUNITY
NURSING SERVICE**

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Purpose: To ensure safe administration of analgesia by the
epidural/intrathecal route in the community setting

Responsibility: Medical and nursing staff, in particular community
nurses

Definition: Guideline

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Integrated Pain and Palliative Care Service

GUIDELINES FOR USE OF SPINAL OPIATES

Indications

1. Failure of conventional therapy to give adequate pain relief.
2. Adverse side effects preventing continued use of “conventional therapy”.

Contraindications

1. Coagulopathy.
2. Local infections preventing sterile insertion of catheters.
3. Unwilling or distressed patients.

ROUTE OF ADMINISTRATION

For intraspinal opiates a percutaneous tunnelled intrathecal catheter is the route of choice however the epidural route may be used. The site of insertion of the catheter will depend upon the dermatomal distribution of the pain.

Following the placement of the catheter the appropriate drug regime will be administered for a trial period to assess the efficacy of the technique. Length of this trial will depend upon the life expectancy of the patient. If anticipated life expectancy is greater than 3 months and the infusion produces adequate analgesia, then consideration for implantation of a permanent system should be given (e.g. Synchromed pump). In these patients, to decrease the risk of infection, it is advisable that the trial infusion period should be short . However, the trial should be long enough to ascertain stable dose requirements and efficacy.

MANAGEMENT OF TUNNELLED INTRASPINAL CATHETERS

Patients requiring opioid by the epidural / intrathecal route will be receiving analgesia for chronic or terminal illness. They will generally have already received regular opioid via an alternative route.

1. The epidural / intrathecal catheter is inserted under strict aseptic technique in theatre, pain clinic or hospice with resuscitation facilities available. The precise venue will depend on the medical condition of the patient and the local facilities. The procedure should be covered by antibiotic prophylaxis. The presence of a positive MRSA screen is not necessarily a contraindication for the use of this technique in palliative care patients

2. The epidural / intrathecal infusion is prescribed on the prescription chart with full instructions as necessary.
3. Rate of infusion boundaries must be clearly stated.
4. Epidural / intrathecal syringes must be changed by a registered nurse, who will carry out the procedure according to local protocols within the Hospice or Community.
5. Delays in reloading epidural / intrathecal infusions **must** be avoided so as to achieve constant analgesia.
6. If using a Graseby syringe driver please refer to the guidelines document, "The setting up and use of the Graseby syringe drivers MS16A and MS26" as produced by the Macmillan Team, R.C.H.T.
7. Converting oral or parental opiates to spinal opiates may lead to a patient experiencing withdrawal symptoms due to the significant reduction of opiate dosage. To prevent this patients should be prescribed small doses (10mg) of prn oral or parental Morphine.

Clinical Observations:

1. Monitoring should be documented on the appropriate Observation Charts.

NB The Consultant in Pain Management will record in the patient's notes if observations are to be monitored any differently.

2. The length of catheter visible from the exit site to the skin should be measured and recorded after each intervention to ascertain whether the catheter has migrated. This measurement is a useful observation if problems with analgesia arise.

DRUGS USED FOR INTRASPINAL INFUSIONS

Diamorphine is the opiate of choice. This may be supplemented by the use of local anaesthetic Bupivacaine or Alpha2-agonist Clonidine, or the Benzodiazepine midazolam. An appropriate conversion factor for opiates is: -

<u>Oral Morphine</u>	<u>Subcut Diamorphine</u>	<u>Epidural Diamorphine</u>	<u>Intrathecal</u>
<u>Diamorphine</u>			
30mg	= 10mg	= 2mg Diamorphine	= 0.2mg
Diamorphine			

FAILED ANALGESIA

If a patient fails to get adequate analgesia in the presence of a spinal catheter then the intraspinal checklist (see attached) for problems associated with epidurals/intrathecal catheters should be followed. Failure of adequate analgesia will usually require medical input unless problems can be resolved by following the checklist.

MANAGEMENT OF FILTERS AND EXTENSIONS

A portex millipore filter with luer connection is fitted to the chuck **attached to the intrathecal catheter** –(the proximal filter), which is then connected to an extension tube to the infusion device. There will be a further millipore filter between the extension tube and the pump (the distal filter). The distal filter should be changed on a weekly basis and the proximal filter, i.e. the one closest to the patient, will be changed every month, along with the extension tube using a aseptic technique (please refer to local policy` The setting up of Graseby syringe drivers` and The Royal Marsden Manual of, Clinical Nursing Procedures, 4th edition).

CATHETER DISCONNECTION POLICY

Percutaneous tunnelled catheters are usually secured to the patient's skin with two "lockit clip", these are self-adhesive patches which clip onto the catheter. These clips grip the catheter and should prevent movement and migration of the catheter out of the entry site. If these devices need changing, this should only be undertaken by appropriately trained staff within the hospice or community.

The catheter will then be connected via the chuck which is screwed onto the catheter. It is recommended that the catheter to chuck site is superglued together to prevent disconnection.

Minimal disturbance of the catheter is advised to minimise the risk of infection.

The infusion device is likely to be a Graseby/MS26 or on occasions Graseby 9000 .

The most likely disconnection site is where the catheter enters the chuck, as all the other connections are luer fittings. If a disconnection at the chuck/catheter junction should occur then the catheter should be cleansed with antiseptic solution and reconnected , and the doctor involved in the management of this case should be informed at the earliest convenience.

A catheter should not in any circumstances, be removed without the permission of the appropriate Palliative Care/Pain Management Consultant.

Disconnection at any luer fitting should be reconnected, although this should rarely happen.

Problems relating to the intraspinal opiates/catheters

Inadequate Analgesia

If the analgesia is inadequate despite the infusion functioning correctly give 'rescue' analgesia and contact the named clinician.

Back Pain

Any complaint of persistent or increasing back pain particularly if it is referred to the legs must be taken seriously. This must be referred to the named clinician at once to exclude the possibility of spinal cord compression, haematoma or abscess formation. The infusion must be stopped until the patient is reviewed.

Altered Sensation

There may be some degree of alteration of sensation due to local anaesthetic. If these symptoms increase and are accompanied by back pain they may be a sign of spinal cord compression, haematoma or abscess formation. The patient must be reviewed urgently by the named clinician and the infusion stopped until the patient has been reviewed.

Headache

Severe frontal headaches may indicate a leak of cerebro spinal fluid but usually only occurs in the early post implant period. It may be relieved by simple analgesia, bed rest and lying flat. If it persists discuss with the appropriate hospice

Pruritus

This can be a side effect of the opioid and can be treated with antihistamines, keep the patient cool and apply calamine lotion. If it persists contact the appropriate hospice

Urinary Retention

Due to contracture of the sphincter at the exit of the bladder caused either by opioid and/or local anaesthetic. This may need short or possibly long term term bladder catheterisation.

Leaking at Catheter Site

May be caused by migration of the catheter. Pad the site with a sterile dressing and assess pain relief. Contact the appropriate hospice.

Occlusion

If the pump alarms this could indicate that there is undue pressure sometimes caused by a blockage. Check the catheter tubing for signs of kinks. If occlusion persists and there is evidence of kinking of the catheter this may require cutting and rejoining. This can be undertaken by suitably trained staff if not contact the appropriate hospice

Swelling or Inflammation

Any swelling or inflammation may be a sign of infection and should be discussed with the appropriate hospice and the patient may need reviewing from the named clinician.

MANAGEMENT OF INTRATHECAL PORTS (SPINOPLANT)

For patients with longer term life expectancy who respond well to intraspinal infusions, the insertion of a port system may be considered. This will need to be undertaken in an operating theatre as it requires incisions at the appropriate spinal level for insertion of the catheter, and tunnelling of the catheter laterally to the subcostal margin where the port will be inserted. The diaphragm of a port will not be under the incision, thus enabling the gripper needle to be inserted percutaneously into the port away from the incision site.

The gripper needle will be attached with its luer fitting to a millipore filter in the same manner as a percutaneous catheter. These gripper needles should be changed when necessary by appropriately trained staff, using an aseptic technique. If the gripper needle becomes displaced from the port, a new needle should be inserted, again under full aseptic technique. The filters and extension will be managed as per a tunnelled catheter.

SYNCHROMED PUMPS

Synchromed Pumps need to be topped up on a regular basis by the appropriate hospice doctor. These pumps have an 18ml reservoir and the frequency of top-up will therefore depend upon the volume infused per day. However, these pumps should not require refilling on more than a monthly basis and no special care is required by the community nursing team. If inadequate analgesia occurs then please contact the appropriate hospice.

Medical Support for Patients in the community with Intrathecal Infusions

The relevant Hospice is the first point of contact for staff in the community who experience problems with intraspinal catheters. The Hospice will hold an on call rota of Pain Management Consultants who are available for out of working hours advice, should problems arise which cannot be resolved by the nursing staff or on call medical staff at the Hospice. If the problems cannot be resolved locally, then the patients may need to be admitted to a hospice, where a bed should be made available. This will allow more conventional methods of analgesia to be reinstituted, prior to reassessment by the Pain Management Consultant. If a bed is not available then the hospice will contact the named clinician and the patient will need to be admitted to RCHT. The named clinician will discuss the patients care with the admitting medical team.

When this technique is no longer required please return, as soon as able, all community notes for audit purposes to :- Secretary to the Integrated Pain and Palliative Care Service, c/o The Pain Clinic, Royal Cornwall Hospital, Treliske, Truro TR1 3LJ.

PROTOCOL FOR PATIENTS WITH SPINAL OPIATES BEING DISCHARGED FROM THE HOSPICE INTO THE COMMUNITY

Name _____

Hospital/ICS Number _____

Date of Patient's planned discharge _____

DATE and Sign.	ACTIVITY	YES/NO	COMMENT WITH REASONS
	Is community nurse known to patient?		
	Community nurse contacted? Name of nurse _____		
	Are protocols and procedures available and received?(including trouble shooting guide for syringe drivers if relevant)		
	Is the equipment available? 1. Syringe driver 2. Filters 3. Extension sets 4. Dressings 5. Drugs		
	Is above equipment for future needs ordered?		
	Is hospice bed held?		
	Is patient's GP aware of discharge? Contacted name: _____		
	Is training completed & sufficient core staff skilled and competent with care of epidural & intrathecal catheters and use of syringe driver or pump? Named nurse:_____		
	Named consultant availability agreed? Name:_____		

NAMED PAIN MANAGEMENT CONSULTANT _____

HOSPICE CONTACT NUMBER _____

SIGNATURE _____

(Discharge
planners)

Hospice

Community Nurse

Macmillan Nurse

PLEASE PUT ONE COPY IN PATIENTS RECORD AND ONE IN HOSPICE NOTES
IMPLANTED INTRATHECAL CATHETERS

Why may I need an implanted catheter?

Your doctors, nurses and carers will have already considered that you may be a suitable patient to receive an implanted intrathecal catheter and will have discussed this with you. The usual reason is because of poor pain relief by any other method or route, or because the side-effects of the painkillers being taken are unacceptable and stop you being able to do things as normally as possible.

What are the expected benefits?

These are:

- Better pain control and well being.
- Much lower doses of painkilling drugs.
- Less unwanted side effects because the doses of drugs used are much lower.
- Improved ability to undertake everyday activities.

What is an Intrathecal Catheter?

An intrathecal catheter is a thin plastic tube that is inserted into the spinal fluid (CSF) which bathes the nerves of the spinal cord. The tube is placed between the bones of the spine at a chosen level to reach the spinal fluid and nerves. The other end is buried under the skin to come out usually on the abdomen area to allow drugs to be given through the catheter. An intrathecal catheter is also sometimes known as an intraspinal catheter, or as a subdural catheter.

An epidural, or extradural, catheter is when the thin plastic tube is placed outside the thick membrane sac (dura) which contains the spinal fluid and all the nerves of the spinal cord.

An epidural catheter is often used during childbirth or after operations to relieve pain for a few days. For longer-term use, and to get drugs to work directly on the nerves at the lowest possible dose, an intrathecal catheter is best.

Painkilling medicines are given continuously and slowly from a small pump attached to the catheter. Most of the drugs used are very similar to those taken by mouth or injection but in very much smaller doses. Special little filters on the outside end of the catheter and pump guard against infection.

What will happen?

First there must be a Pre-insertion assessment so that everyone is confident that this is the most appropriate method of pain relief to try and that you are happy to proceed. The next stage is the actual procedure and in the following days getting the doses and drugs used to the optimum level and effect. The final stage is then the maintenance stage of the catheter at home. During this time you, your family and carers will become involved in looking after the catheter and pump and watching out for any complications.

Pre- Insertion Assessment.

It is very important at this stage that you discuss everything about the intrathecal catheter with your doctors, nurses, carers and family. You and your family must have read and understood this consent form and the care plans that you will need when you are at home .During this stage you will learn about the pump equipment and filters and discuss exactly where the catheter will be placed. You and your carers must be satisfied and well informed the catheter and pump.

Implanting the Catheter.

This is a technical procedure that is done by one of the Pain Clinic consultants. It is done either in hospital or in the hospice. Like an operation you must not eat anything for at least 4 hours before the procedure.

You will be given antibiotics to guard against infection and you will be carefully monitored during the procedure and for several hours afterwards.

Usually the procedure is quite straightforward and is done with local anaesthetic to numb the skin and muscles where the catheter is to be placed. You would normally lie on your side while this is being done and have everything explained as it happens. When everything goes routinely the procedure should take about 30 minutes. If you would like something to make you sleepy and relaxed please ask the doctor.

Post operative stage.

Once the catheter is in place painkilling drugs can be given via a pump directly into the spinal fluid. Your pain, pulse, blood pressure, temperature and breathing will be closely monitored for the next 24 hours or longer as the drug's effects are assessed. Usually over a few days the best choice and doses of drugs are established to achieve the optimal relief with the least side effects.

During this period you will be carefully observed for any complications and can become used to looking after the catheter and pump.

You may still need to take some of your normal painkilling medicines until you are stabilised to the best doses of medicines given down the catheter.

Once your new drugs have been stabilised and you, your family and carers are confident about managing your pump and catheter you will be able to return home.

You will be given contact phone numbers to take home.

At Home - Maintenance stage

Once you are at home you will be looking after your pump and catheter. It is also important that you keep careful watch for any complications that may occur and for any significant changes in your pain relief.

Your care team will be in regular contact to help you and also to refill your pump with medicine. You will have exact details of what action to take if you begin to experience any problems and contact telephone numbers to use for any advice or emergency use.

A supply of alternative painkillers will be available to use if the catheter becomes ineffective.

Depending on the drugs you require and with good care of the catheter and pump and pain relief, you should be able to undertake all normal activities at home,. However excessive physical activity can displace the catheter and should be avoided.

What are the Risks and Complications?

With appropriate care and attention this technique can be very effective and safe, although total pain relief cannot be guaranteed and side effects and complications do occur.

The general rate of total failure and discontinuation is about 3%.

Minor complications in the immediate postoperative period, such as bleeding, headache, sedation or technical problems with the pump or catheter may occur, but these are usually easily treated or corrected.

Major complications during this period are uncommon, under 3%, and include infection, meningitis and nerve damage.

Long term complications, meaning during the maintenance stage, occur in about 7-9% of patients. These are the problems that you may encounter when at home and should be observant for. Of these the most important are:

- **Infection** – soreness and redness at the site of the catheter exit site or over your back and unexplained temperatures.
- **CSF (spinal fluid) leaks** – clear fluid leaking around the catheter exit site or developing swelling.
- **Failure of pain control** – displaced or blocked catheter or pump failure.

Side effects from the drugs given down the catheter may also occur and depend on which drugs are given. It should be remembered however that these side effects can occur when the drugs are taken by mouth or injection and should be less of a problem with the much smaller doses used down the catheter. Most are short-lived or can be satisfactorily alleviated with other medicines when necessary.

The more common unwanted effects are constipation, nausea, itching, and urinary retention. Less common side effects include altered hormone levels, weight gain, loss of libido and dysfunction of erection.

INTRATHECAL CATHETER CONSENT FORM

Patients Declaration

Patient's surname
First name
Hospital Number
Date of Birth
Address

I have read and understood the information sheet on intrathecal catheters.
I have:

- Discussed the procedure and care required to maintain the catheter with my family, doctors, nurses and care workers
- Read and will receive copies of the care plans and contact numbers.
- Understood that I may decide not to undergo the procedure
- Accepted the risks detailed in the information sheet, including the rare complications of meningitis and nerve damage.

Patient's signature:
Date:

Consultant's Declaration:

I declare that the above named patient understands the:

- Nature
- Risks
- Responsibilities
- Complications

Of having an implantable intrathecal catheter.

Consultant's signature:
Date: