



Temple Street

CHILDREN'S UNIVERSITY HOSPITAL



# Central Venous Catheter Care For Haemodialysis



## Information For Parents and Carers

Haemodialysis Unit 01 878 4757

Main Hospital Number 01 878 4200

# Central Venous Catheters

We hope this booklet will help to explain about central venous catheters and what to expect when your child comes to our unit. It may also be useful to share this information with others looking after your child – teachers/ relatives / carers.

## Contents

What Is A Central Venous Catheter?  
What Does The Operation Involve?  
Are There Any Risks?  
Haemodialysis Using A Central Venous Catheter  
Looking After The Central Venous Catheter  
Some Problems You May Come Across

## What Is A Central Venous Catheter (CVC)?

For haemodialysis to be carried out there must be access to your child's bloodstream. To provide this a **central venous catheter (CVC)** is inserted in theatre. This is a narrow tube placed in one of the veins near your child's heart and held securely in place by a cuff which is under the skin. The tube is made up of two narrow tubes joined together, this allows the blood to be taken out and returned to the body at the same time. Before your child begins dialysis they will be admitted to the ward to have their CVC inserted and allow monitoring for a few days after their first few dialysis sessions. Once in place, it can be used immediately for dialysis and blood tests. When not in use, your child's CVC will be filled with a drug called Heparin or Alteplase to prevent the blood in the CVC line from clotting.

Each child will receive preparation from the Play Specialist with the use of a special doll, if required, before going theatre.

## What Does The Operation Involve?

The central line will be inserted by a surgeon in theatre. It is performed under general anaesthetic when your child is asleep.

You will see a blue and red length of tubing which we call lumens. This allows us direct access to your child's blood for testing and dialysis which will be performed by one of our specialised nursing team.

A large pressure dressing will cover the exit site when they return from theatre. This will be left untouched for approximately 5 days and then replaced with a regular dressing.

## Are There Any Risks?

Every operation or procedure carries a very small risk of complications. Your child's anaesthetist is an experienced doctor who is trained to deal with any complications and they will speak to you about any risks before their operation.

After an anaesthetic, some children may;

- Feel sick and vomit
- Have a sore throat
- Have a headache / stiff neck
- Feel dizzy.

These effects usually last for a short time only. Each symptom will be managed by staff nurses on the ward appropriately such as by providing regular pain relief.

Following any surgery there maybe a small risk of infection or bleeding. The CVC which is inserted directly into your child's blood system, near their heart, will increase their risk of infection. Our specialised staff will monitor your child and take specific precautions to minimise these risks.

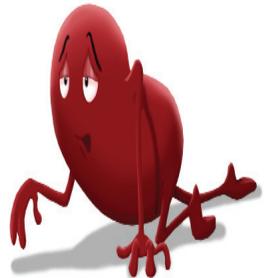
## Common Signs Of Infection

Exit Site Infections can develop at the point where the CVC comes out from the skin. Signs include redness, pain, oozing and the child may have a raised temperature. This infection must be treated with an antibiotic cream and/or intravenous antibiotics to prevent a subsequent line infection. It is for this reason that only our specialised staff are allowed to access the lines and exit site using a specific technique.

An infection can also develop inside the line itself. This type of infection may cause an infection in the blood stream. The main sign is a raised temperature. A line infection is treated with Intravenous (IV) antibiotics.

If you think your child has an infection or has a temperature at home please contact the Dialysis Unit immediately for advice.

Sometimes children may have difficulty with the blood flow through their CVC due to a shift in position of the line or partially clotted blood in the line. If this happens, the line may need further investigations and treatment.



## Haemodialysis Using A Central Venous Catheter

Our specialised nursing team will attach your child to the haemodialysis machine using a specialised technique. After dialysis, the CVC will be filled with a drug called heparin to stop the line clotting with blood between dialysis sessions.

At the next session, the heparin is removed to allow the CVC to be used again. Occasionally other medicine called Alteplase (TPA) may need to be used if there are clots or fibrin in the lines.

## Looking After The Central Venous Catheter

The dressing covering your child's CVC will be changed before every dialysis session. The area where the CVC enters your child's skin (exit site) will be cleaned and checked for signs of infection. All parents will receive education on all aspects of care of the central line before going home.

If the outer dressing becomes wet or dirty or lifts away from the skin at home, it will need to be replaced or reinforced.

When reinforcing the dressing you will need to do the following:

- Wash your hands
- Peel off the outer dressing only
- Wash hands again
- Apply new dressing
- Wrap gauze around catheter ends and tape to prevent the lines from touching.



Be careful not to get the tube caught up in your child's clothing. After each dialysis session, the line will be wrapped in gauze to protect it.

In smaller children a tubinet bandage can be used to further secure the CVC line. Do not remove or fiddle with the caps of the catheter – they are there to prevent any infection entering the blood system.

It is important that you make sure the clamps on each lumen of the CVC line remain clamped at all times.

Please make sure your child has a clean dedicated emergency lunch box containing spare dressings and the equipment provided by our dialysis nursing team with them at all times including school and social activities.

## What Activities Are Allowed?

Your child is allowed to have a shallow bath as needed once the dressing or the CVC does not get wet.

Normal play and activities are allowed but contact sports and rough play should be avoided due to risk of damage to the CVC. Be careful that the CVC does not get caught in anything such as shoulder straps.

Swimming is not allowed due to the risk of infection.

School bags should have one strap only to avoid damaging the CVC

Car seat - sit in the left side if the permcath in right side so seat belt will not sit directly on top of the permcath.

## Some Problems You May Come Across

Problems with central venous catheters are rare, but it's a good idea to know what to do if a problem does occur. You will receive training from our specialised staff when the CVC is inserted. If any of the following occurs please contact us immediately on 01 878 4757 (Unit) or 01 878 4258 (Ward out of hours).

### **If the cap comes off:**

Clean the end of the line with an alcohol wipe and replace it with a clean cap. Contact the dialysis unit or ward immediately as your child may need antibiotics intravenously.

**If the catheter or lumen is pulled:**

Check the site. If it is bleeding press gently on the site until bleeding stops then change the dressing. Check to see if the cuff is visible. If it is then it is necessary to come directly to the hospital. Make sure the catheter is securely strapped and covered at all times.

**If the catheter is cut or leaking**

Clamp the line above the hole using the spare blue clamp from the emergency lunch box. You will need to come to hospital as the CVC will need to be repaired and child may need antibiotics and admission to the ward.



**If the catheter falls out**

Cover the exit site with gauze or dressing, put pressure on the site until it stops bleeding. Keep your child as still as possible, contact us and come to hospital as soon as possible as the CVC will need to be replaced.

**If the exit site looks infected or there is visible ooze on the dressing**

Contact us and arrange to come to allow us take swab to check for a site infection. Antibiotic or antifungal ointment may be started until we know the results of the swab.

**Useful Catheter Information**

Your catheter type is \_\_\_\_\_

Your catheter size is \_\_\_\_\_

Heparin Locks \_\_\_\_\_

Alteplase Locks \_\_\_\_\_

If you have any concerns or would like advice about any aspect of your child's central venous catheter care, please call:

Haemodialysis Unit  
Monday to Saturday  
01-8784757

or out of hours

St Michael's C Ward  
01-8784258  
01-8784431.

Adapted by the Haemodialysis Unit, Temple Street Children's University Hospital,

With thanks to Great Ormond Street Hospital information booklets. Ref: F060406 © GOSH Trust October 2006

**Our campus is smoke free from February 13th 2013**



**Please remember to wash your hands or use hand gel when you visit the hospital**

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Version: 1

Approval Date: May 2013

Review Date: May 2015

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The information contained in this booklet is correct at time of development