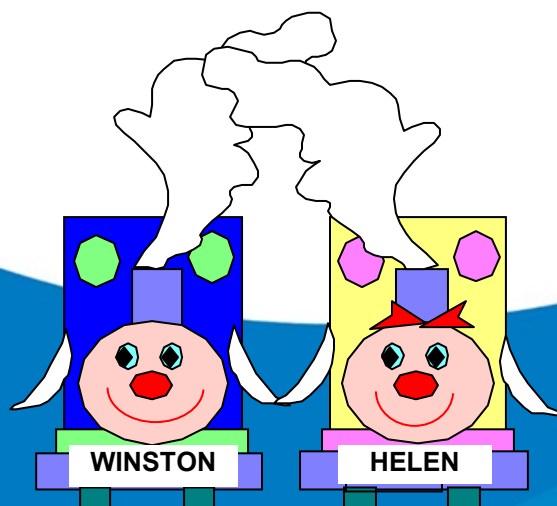


Long Lines and Central Lines

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Some very sick children have serious medical problems that require very complex management.

One of the problems is that babies often require a special line (drip) into one of their veins through which important intravenous (i.e. into the vein) medications and fluids can be given because they are too sick to take medicines by mouth.

There are several types of these lines.

- Central lines i.e. a line inserted into one of the baby's main veins through the chest
- Long lines which are generally put into an arm. These are the most common types used in the Paediatric Department.

What is a long line?

A long line is a very thin flexible tube made out of a special material that can be inserted into a vein in the arm or leg similar to a normal drip. However, it has extra length and is made of a stronger material (special type of rubber) to allow it to be inserted far enough to reach larger veins whose walls are strong enough to allow for the special medications and fluids to be given to the baby. The veins in a baby's limbs, especially a sick baby, are not as strong as the bigger central veins nearer the heart and are prone to problems

Why are long lines needed?

Normal 'drips' cannot cope with the special medications that these very sick babies need. Often the special fluids would block the usual small drips and therefore many repeated drips will be needed. Inserting a normal drip into a limb vein on a baby involves inserting a needle surrounded by a small short plastic tube, (a cannula) into a tiny vein and removing the needle, leaving the cannula in place to administer drugs, and fluids into the vein. These normal drips as well as blocking can pass through the fragile vein wall into the baby's surrounding tissues, causing bruising, swelling and pain.

How are long lines inserted?

The procedure for inserting a long line is relatively straight forward and will be carried out by an experienced doctor under sterile conditions. Once the line is in place an x-ray of the line will be taken to check it is in the correct place within the vein. If the line is too far into the vein, or not far enough; then adjustments can be made prior to its continued use.

They can be difficult to secure and at risk of coming out of the vein as the baby moves around and will be covered with more dressings than a cannula normally would be.

Risks and benefits of the long line

The benefits of having a long line are:

- ◆ Aids accurate monitoring of baby's vital signs
- ◆ Allows medical / nursing staff to give special intravenous fluids
- ◆ Allows medical / nursing staff to give intravenous medications
- ◆ Allows for blood samples to be taken without pricking the baby
- ◆ Prevents continued normal drip insertion procedures as it is a more substantial intravenous device that lasts longer than a normal drip
- ◆ Allows accurate fluid intake measurement

The risks of having a long line are:

- Infection (this can be treated with antibiotics)
- Tissue injury
- Displacement of the line (deeper inside the vein or further away from the ideal position)
- Impairment of, or restricted blood supply to the arm or leg

Most serious but extremely rare complication is the accumulation (a collection) of fluid around the heart (cardiac tamponade) causing pressure on the heart. This rare condition may be avoided by accurate positioning and fixation of the line and good assessment of the position of the line after x-ray.

How long can the long line last?

The long line can stay in the baby's vein as long as it is not causing any problems and continues to work well.

Central Lines

A central line is very similar to a long line, but is generally surgically implanted due to its positioning near the heart. The benefits and risks are exactly the same, the positioning allows for normal use of the arms as the line can be hidden inside clothing.

If you have any further questions, please contact your child's consultant via their secretary via the hospital switchboard.

The secretaries are available Monday to Friday, 9.00 am to 5.00 pm.

If you need to contact the Department outside of these hours, please phone either:

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