



Asparaginase for children and young people

An information guide for patients, parents and carers

The purpose of this guide is to give information on the use of asparaginase in children and young people with cancer.

Please read this guide carefully alongside any patient information provided by the manufacturer. We have written this guide to give you more information about the use of this medicine in children and young people. Keep it somewhere safe so you can read it again.

What is asparaginase?

Asparaginase is an enzyme that causes leukaemia cells to die by depriving them of essential nutrients. It is usually given in combination with other chemotherapy medicines.

What preparations of asparaginase are available?

Asparaginase is available as a long-acting preparation (pegaspargase) given every two weeks and a short-acting preparation that is given every two days. The type of asparaginase used and the total number of doses will depend on the treatment plan. The exact timings of the doses will depend on the preparation to be used.

How is asparaginase given?

Asparaginase is normally given by an injection into the muscle (intramuscular). It can also be given by injection into a vein (intravenously or IV) through a portacath device, Hickman line, PICC line or cannula.

Are there any possible side effects?

It is important to remember that everyone reacts differently to chemotherapy. Some will have very few side effects, whilst others will have more. The side effects listed below will not affect everyone who is given asparaginase and may be different if given with other medicines.

What are the common side effects?

Allergic reaction

Sometimes allergic reactions may occur with asparaginase. The reaction may be mild to severe. To monitor for signs of allergic reaction, you/your child will need to stay in hospital for some time after each dose is given. The nurses will explain how long you need to stay. Allergic reaction at home must be reviewed by your medical team. As a reaction can be delayed for up to six to eight hours after the dose, contact the hospital if any reaction occurs once home.

Signs of a mild reaction include skin rashes and itching, high temperature, shivering, redness of the face or sore mouth and tongue. If any of these occur, please tell your hospital team immediately.

Signs of a severe allergic reaction include any of the above as well as difficulty in breathing, chest pain or facial swelling. If you are in hospital and show signs of a severe allergic reaction call a doctor or nurse immediately, or if you are at home, call an ambulance immediately.

Blood clotting

Asparaginase can affect how long it takes for the blood to clot. It may take more, or less time than normal to clot. This may lead to bruising or bleeding or increase the risk of a clot forming within a blood vessel. If you notice unusual bruising or bleeding, please contact your hospital team.

For a few weeks after receiving asparaginase, there may be an increased risk of a blood clot forming. Clots are formed by blood cells and other factors in the blood. Blood clots are not a problem unless they block the flow of blood. If there is severe headache, swelling in a leg or arm, pain, redness or other changes in skin colour (pale or blue colour), difficulty breathing or sharp chest pain that worsens after taking deep breaths, please contact your hospital team for advice.

If a blood clot develops, anticoagulant medicines (medicines that thin the blood, dissolve the clot and prevent new clots forming) will be prescribed.

Temporary effect on liver function

Asparaginase can cause some changes to how the liver works. This should return to normal when the treatment is finished. If the liver function is seriously affected, then treatment will be changed. Blood tests will be taken to monitor liver function (called liver function tests). If there is pain on the right side of the abdomen, yellowing of the skin and eyes, or signs of bruising or bleeding, contact your hospital team for advice.

Muscle or joint pain

If muscle or joint pain develops, please contact your hospital team for advice.

Changes in blood sugars

This can show as raised or low blood sugars. Your hospital team will advise what to do if this happens to your child.

Nausea (feeling sick) and vomiting (being sick)

Asparaginase, when given on its own, is unlikely to cause nausea and vomiting. Anti-sickness drugs will be given to prevent or reduce these symptoms if needed. Please contact your treating hospital if sickness is not controlled.

Diarrhoea

This is usually mild. If diarrhoea is severe or continuous, please contact your hospital team for advice.

What are the less common side effects?

Inflammation of the pancreas (pancreatitis)

Asparaginase can cause inflammation (swelling) to the pancreas. This can happen two to three weeks after receiving asparaginase. Inflammation of the pancreas can cause pain in the abdomen (upper tummy), severe nausea (feeling sick) and vomiting (being sick). If this occurs, please contact your hospital team for advice. If this side effect happens, no further doses of asparaginase will be given.

Is there anything else I should know about or do?

Tests and investigations which may take place before, during or after treatment

Before starting treatment, blood tests will be done to check that your liver works properly.

How asparaginase interacts with other medicines

Some medicines can affect how well asparaginase works. Always tell the doctor about any other medication being taken. Check with your doctor or pharmacist before taking any other medicines. This includes supplements and herbal or complementary medicines.

Pregnancy

If you are sexually active while taking anti-cancer medicines or drugs, it is important to use contraception such as condoms, the pill or coil to avoid pregnancy. You may need to take a pregnancy test to confirm you are not pregnant before taking this medicine. Contraception should continue for a while after treatment finishes. Your team will advise how long you should continue using contraception.

Fertility

Depending on the type, doses and combination of medicines given during your treatment, it is possible that your fertility may be affected. For girls, this means that it might be harder for them to become pregnant in the future. For boys, this may mean that their sperm is less fertile which will affect their chance of having children. For more information on this, please discuss this, with your hospital team.

If you have any questions about imatinib, please contact your treating hospital. This guide only gives general information.

Always discuss individual treatment with your medical team. Do not rely on this guide alone for information about treatment.



USEFUL ORGANISATIONS

Children's Cancer and Leukaemia Group (CCLG)

publishes a variety of free resources to order or download.
www.cclg.org.uk

Young Lives vs Cancer offers practical support to children and young people with cancer and to their families.

www.younglivesvscancer.org.uk

Macmillan Cancer Support offers support and advice to those affected by cancer.

www.macmillan.org.uk

EMC (Electronic Medicines Compendium) offers up-to-date, approved and regulated information for licensed medicines.

www.medicines.org.uk



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