MEDICINE INFORMATION

VAC chemotherapy for rhabdomyosarcoma

A guide for patients and families receiving VAC, including bladder protection and early help with constipation.

At a glance

Treatment	Vincristine + Dactinomycin + Cyclophosphamide
When it may be used	VAC is used in some treatment plans for rhabdomyosarcoma, a type of soft-tissue cancer.
How it is given	Your child receives vincristine, dactinomycin and cyclophosphamide through a vein.
Before you start	Tell the team about constipation, weakness or numbness, kidney or bladder problems and past radiation.

What this treatment is and how it works

VAC combines three chemotherapy drugs. Dactinomycin is also called actinomycin D. Some hospitals use the same initials for a different combination, so check the full names.

When it may be used

Surgery or radiotherapy may also be part of the plan.

Before treatment

Ask for a calendar showing treatment and local care.

How treatment is given

The team may give fluids and a drug called mesna to help protect the bladder from cyclophosphamide. Some visits use only part of the combination.

Tests and monitoring during treatment

Blood counts, kidney and liver tests, and urine may be checked. Tell the team about bowel changes, pain passing urine, and difficulty walking or using hands.

Side effects

Common or more frequent side effects

- **Changes in blood counts.** A child with fewer white blood cells can develop an infection quickly. Children may seem unusually quiet, shake with cold or refuse food before they can say what hurts. Acute bleeding, unexplained bruising or marked tiredness can also reflect low platelets or red cells. Agree who will call the unit if your child becomes unwell when you are not with them.
- **Constipation and changes in movement.** Vincristine can slow the bowel or affect nerves in the hands and feet. A child might avoid walking or stop enjoying usual activities. Let the team know about constipation, weakness, tripping or jaw pain. Ask whom to call if there is severe tummy pain, vomiting or visible swelling of the belly.
- **Sore mouth and changes in eating.** Your child's mouth may become sore or dry. A soft toothbrush and the mouth care recommended by the team may help. Tell the team about ulcers, white patches, difficulty swallowing or drinking less than usual.

Other reported side effects

Dactinomycin can worsen skin or tissue effects around radiotherapy. The teams coordinate timing. Report yellow skin or eyes, sudden swelling or tenderness around the belly.

Serious effects to recognise

- **Pain or swelling at the infusion site.** Tell the nurse immediately if your child reports burning or stinging, or if you notice fluid leaking or new swelling near the line. Call the unit if the site changes after you take your child home.
- **Bleeding or pain from the bladder.** Cyclophosphamide can irritate your child's bladder. Report blood in urine, pain or difficulty passing urine. Follow the written instructions for fluids and any prescribed mesna.

Liver injury is rare. Tell the team promptly if your child's skin or eyes become yellow.

When to seek urgent help

Call your hospital's 24-hour cancer care number straight away for fever, chills, blood in urine, severe constipation with belly swelling or vomiting, unusual bleeding, or increasing pain at the drip site. Follow the written temperature instructions from your child's team. If the team has given you no written threshold, call at 37.5°C (99.5°F) or above, or below 36°C (96.8°F). Call if your child seems very unwell even when their temperature is normal.

Seek emergency care for severe breathing difficulty, swelling of the face or throat, chest pain, collapse or bleeding that will not stop.

Practical advice for this treatment

Help your child through the visits

Before treatment, ask which days involve all three medicines and which have fewer. In childhood cancer care, chemotherapy may be coordinated with surgery and radiotherapy. Bring both calendars to appointments so the team can check for timing changes.

Track bowel and movement changes

Vincristine can cause constipation, jaw discomfort or weakness. Tell the team if your child stops eating, seems to avoid walking, trips more easily or needs help with buttons. Ask what to give for constipation and when to call. Decreased appetite with severe tummy pain or vomiting needs prompt assessment.

Understand bladder protection and line care

Cyclophosphamide can irritate the bladder. Your team will say whether fluids or mesna are needed and which urine symptoms to report. Tell the nurse immediately about pain, redness or swelling near the line. Dactinomycin can damage tissue if it leaks outside the vein.

Medicines, interactions and vaccinations

Check new medicines with the team, including antifungals, laxatives and supplements. Ask before vaccines.

Everyday life

Ask about help with school, mouth care and keeping bowel movements regular. Tell the nurse right away if the drip stings.

Pregnancy, fertility and breastfeeding

Ask about fertility preservation and age-appropriate contraception advice before treatment. Get written breastfeeding advice where relevant.

After treatment

Keep the follow-up plan for scans, surgery or radiation. Ask which effects, including nerve symptoms, need longer-term checks.

Frequently asked questions

Does VAC contain doxorubicin?

In this rhabdomyosarcoma guide, VAC means vincristine, dactinomycin and cyclophosphamide. Ask for the names in your child's own treatment plan because different cancer teams may use the same abbreviation for other medicines.

What is mesna for?

It helps protect the bladder when your team prescribes it with cyclophosphamide.

What if I see blood in my child's urine?

Call your hospital straight away.

Why might one medicine be skipped during radiotherapy?

The teams may adjust treatment timing to lower side effects. Ask how this applies to your child's calendar.

What if constipation gets worse?

Contact the team early. Severe pain, vomiting or a swollen abdomen needs urgent assessment.

Why report burning at the drip site?

The nurse needs to check if the medicine has leaked outside the vein.

Individual medicine guides

- Vincristine
- Dactinomycin
- Cyclophosphamide

Sources and further reading

Read this guide alongside your hospital's plan. Ask your pharmacist to confirm the exact product dispensed in India and follow the instructions for that product.

Summary of Product Characteristics (SmPC) and prescribing information

- Vincristine injection - UK SmPC
- Dactinomycin (Cosmegen) - UK SmPC
- Cyclophosphamide injection - UK SmPC
- Mesna injection - UK SmPC

Additional sources

- NCI rhabdomyosarcoma treatment evidence

Editorially approved by Dr (Prof) Vijay Agarwal

Professor and Lead Consultant - Medical Oncology

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