CONDITION

Vipoma

Vipoma is a rare condition caused by a tumor that releases a hormone and leads to ongoing watery diarrhea.

WHAT IT IS
Rare VIP-secreting neuroendocrine tumor

BODY SYSTEM
Digestive and hormone systems

MAIN SYMPTOMS
Watery diarrhea, dehydration, weakness, muscle cramps

WHAT CAUSES IT
Usually a sporadic VIP-secreting neuroendocrine tumor

HOW IT IS DIAGNOSED
High blood VIP during diarrhea, followed by tumor imaging

MAIN TREATMENT
Fluids, electrolyte replacement, hormone-blocking medicines, and tumor treatment

CAN IT BE CURED?
Sometimes - surgery cures some localized tumors

IS IT AN EMERGENCY?
Sometimes, with severe dehydration or heart-rhythm symptoms

LONG-TERM OUTLOOK
Often manageable; spread usually requires long-term treatment

Overview

A vipoma is a rare type of neuroendocrine tumor. Neuroendocrine tumors begin in cells that make and release hormones. Most vipomas start in the pancreas, an organ behind the stomach that helps with digestion and blood sugar control.

A vipoma releases too much vasoactive intestinal peptide, usually shortened to VIP. VIP normally helps control the muscles, blood vessels, and fluid levels in the digestive tract. Too much VIP causes the intestines to release large amounts of water and salts.

The main result is frequent, watery diarrhea that can continue during fasting and overnight. This can remove large amounts of fluid and potassium from the body. Potassium is a mineral needed for normal muscle, nerve, and heart function.

Vipoma is sometimes called WDHA syndrome. The letters stand for watery diarrhea, hypokalemia, and achlorhydria. Hypokalemia means low potassium. Achlorhydria means the stomach makes little or no acid, although this does not always cause noticeable symptoms.

Symptoms

The most characteristic symptom is ongoing, high-volume watery diarrhea. It may happen many times a day and usually continues even when you have not eaten. This is different from many short-lived causes of diarrhea.

Other possible symptoms include:

Some people have high blood sugar because VIP can affect how the body manages glucose. Blood calcium may also be raised in some cases.

Symptoms may develop gradually. Because diarrhea has many more common causes, a vipoma may not be considered until symptoms have continued or routine treatment has not helped.

- Thirst, dry mouth, dizziness, or reduced urination from dehydration
- Weakness, fatigue, muscle cramps, or tingling from low potassium
- Abdominal pain, nausea, or unintended weight loss
- Facial flushing or redness
- A fast, irregular, or pounding heartbeat
- Confusion or fainting when fluid or mineral loss becomes severe

Causes and risk factors

A vipoma develops when neuroendocrine cells grow into a tumor and release excessive VIP. In adults, the tumor most often begins in the pancreas. In children, a VIP-producing tumor may instead arise from nerve-related tissue outside the pancreas.

Most vipomas occur sporadically. This means the cellular change happens without a known inherited cause or clear trigger. Food, stress, and ordinary stomach infections do not cause a vipoma.

A small number are associated with multiple endocrine neoplasia type 1, or MEN1. MEN1 is an inherited condition that raises the risk of tumors in several hormone-producing organs. A personal or family history of MEN1 or several endocrine tumors may lead to genetic

assessment.

Having long-lasting diarrhea does not by itself mean you have a vipoma. Infections, medicines, inflammatory bowel conditions, and other hormone-related conditions are much more common explanations.

Diagnosis

Diagnosis begins by confirming that the diarrhea has features of secretory diarrhea. This means the intestine continues releasing water even when you are not eating. Blood tests are used to check potassium, kidney function, glucose, calcium, and the body's acid balance. Stool tests may help rule out infection and other causes.

The key diagnostic test measures VIP in the blood. The sample should be taken while significant watery diarrhea is occurring because the level may change over time. A clearly raised result that fits the symptoms supports the diagnosis. Mild elevations can have other explanations, including reduced kidney function, so the result must be interpreted in context.

Other hormone or tumor-marker tests may be used, but they cannot confirm a vipoma by themselves. For example, chromogranin A can be affected by acid-reducing medicines like omeprazole or lansoprazole , kidney problems, and other conditions.

If testing suggests a vipoma, imaging is used to locate the tumor and see whether it has spread. Tests may include:

Somatostatin receptor imaging looks for proteins found on many neuroendocrine tumor cells. It can also show whether certain targeted treatments may be suitable.

A tissue sample, called a biopsy, may be needed if the diagnosis or stage is uncertain. The sample is examined to confirm the tumor type and how quickly its cells appear to be growing.

- CT or MRI scans of the abdomen
- Endoscopic ultrasound, which images the pancreas from inside the digestive tract
- Somatostatin receptor imaging, often using a specialized PET scan

Treatment and management

Initial treatment focuses on replacing the fluid and minerals lost through diarrhea. Severe dehydration or low potassium may require treatment in hospital with fluids and electrolytes given through a vein. Blood tests and heart monitoring may be needed until levels are stable.

Medicines called somatostatin analogues are commonly used to control hormone release. Octreotide and lanreotide are examples. They can reduce diarrhea and help correct fluid and potassium loss. Side effects can include digestive symptoms, changes in blood sugar, and gallbladder problems.

Surgery offers the best possibility of cure when the tumor is localized and can be removed safely. The type of operation is based on the tumor's size and position within the pancreas, its relationship to nearby structures, and whether it has spread. Even after complete removal, follow-up is needed because recurrence is possible.

If surgery cannot remove all of the tumor, treatment may still control hormone symptoms and slow tumor growth. Depending on the tumor's features, options can include:

These treatments have different aims and side effects. Choice of treatment is based on where the tumor is, how quickly it is growing, whether it carries somatostatin receptors, previous treatment, and your overall health.

Anti-diarrhea medicines alone are usually not enough to manage the large fluid losses caused by uncontrolled VIP release. Nutrition support may be useful when prolonged diarrhea has caused weight loss or difficulty eating.

- Somatostatin analogue treatment
- Surgery to reduce the amount of tumor
- Treatment directed at tumors in the liver
- Peptide receptor radionuclide therapy, which delivers radiation to receptor-positive cells
- Targeted medicines that interfere with tumor-growth pathways
- Chemotherapy for selected pancreatic neuroendocrine tumors

Complications

The most immediate complications come from losing water, potassium, and other salts. Severe dehydration can reduce blood flow to the kidneys and cause acute kidney injury. Very low potassium can lead to marked weakness or abnormal heart rhythms.

Ongoing diarrhea may also cause weight loss, poor nutrition, and changes in the body's acid balance. These problems are often reversible when hormone release and fluid loss are controlled.

Some vipomas spread beyond the pancreas, most often to the liver or nearby lymph nodes. Spread can make cure less likely, but treatments may still control symptoms and slow growth

for meaningful periods.

Prevention

Most vipomas cannot be prevented. No food, supplement, or lifestyle change is known to stop a sporadic neuroendocrine tumor from developing.

If you have MEN1, genetic counseling and planned screening may help find endocrine tumors earlier. Screening does not prevent the inherited condition or guarantee that a tumor will not develop.

Preventing complications is often possible. Following the treatment and blood-test plan, reporting returning diarrhea, and replacing fluids as advised can reduce the risk of severe dehydration and low potassium.

Living with it and what to expect

The course of a vipoma is shaped by whether the tumor can be removed, whether it has spread, and how well treatment controls hormone release. Symptoms can improve quickly once fluid losses are replaced and VIP release is suppressed, although the tumor itself may need longer-term treatment.

After surgery, follow-up usually includes symptom review, blood tests, and periodic imaging. New or returning watery diarrhea may be an early sign that hormone activity has returned, but diarrhea can also have unrelated causes and needs assessment.

When a vipoma has spread, it often becomes a long-term condition. Treatment may alternate between periods of monitoring and active therapy. Some neuroendocrine tumors grow slowly, while others behave more aggressively. Imaging, biopsy findings, hormone levels, and changes in symptoms help show what is happening over time.

Daily life often becomes easier when diarrhea is controlled. You may still need to plan around appointments, scans, medicines, and access to fluids or toilets. A dietitian can help if you have lost weight or have trouble maintaining nutrition. Large dietary restrictions are not routinely needed unless they address a specific symptom or treatment effect.

When to get medical help

Arrange a routine medical appointment if you have watery diarrhea that keeps returning,

continues overnight, or persists despite usual care. You should also seek assessment for unexplained weight loss, repeated dehydration, ongoing muscle cramps, or diarrhea that continues while fasting.

Contact your care team promptly if you already have a vipoma and your diarrhea becomes more frequent, your medicine stops controlling symptoms, or you develop new swelling, pain, flushing, or weight loss.

Seek urgent medical care for signs of major fluid or potassium loss, including:

Call emergency services for collapse, severe breathing difficulty, chest pain, a seizure, or loss of consciousness.

- Very little urine, severe thirst, or inability to keep fluids down
- Increasing weakness, severe muscle cramps, or difficulty standing
- A fast, pounding, or irregular heartbeat
- Marked dizziness, fainting, unusual drowsiness, or confusion

Common questions

Is a vipoma cancer?

A vipoma is a neuroendocrine tumor. These tumors can invade nearby tissue or spread to other organs, so they have malignant potential. Their behavior is not identical in every person. The tumor's stage, grade, growth rate, and response to treatment give more useful information than the word "cancer" alone.

Can a vipoma be cured?

Sometimes. Surgery may cure a localized tumor that can be removed completely. Cure is less likely after spread to distant organs, but treatment can still reduce diarrhea, control hormone effects, and slow tumor growth.

How is vipoma diarrhea different from ordinary diarrhea?

It is usually very watery, frequent, and persistent. It often continues overnight or when you have not eaten. It can cause unusually large losses of fluid and potassium. These features can suggest secretory diarrhea, but tests are needed to find the cause.

Is a vipoma inherited?

Most are not inherited. A small number occur in people with MEN1, an inherited tumor-predisposition condition. Genetic counseling may be considered when your personal or family history suggests MEN1.

Will changing my diet stop the diarrhea?

Diet alone does not stop a tumor from releasing VIP. Some food changes may make eating easier or help replace nutrition, but medical treatment is usually needed to control significant secretory diarrhea. Major restrictions can worsen weight loss if they are not planned carefully.

Is a vipoma contagious?

No. A vipoma cannot spread between people through food, contact, sex, or shared living spaces.

Sources

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