

Hypokalemia is a serum potassium level of  $< 3.5$  mEq/L (3.5 mmol/L). It is a potentially life-threatening imbalance. Hypokalemia seen in patients with VIPoma is due to the massive fecal loss of potassium.

## Achlorhydria

### Acorn-hydra

Achlorhydria is the absence of hydrochloric acid in gastric secretions. Patients with VIPomas develop achlorhydria due to the inhibition of gastrin secretion by VIP.

## Management

### Octreotide

#### Octo-tree-ride

Treatment for VIPoma begins with IV fluid replacement and correction of electrolyte abnormalities. After this, somatostatin analogs, such as octreotide, are given to inhibit the secretion of vasoactive intestinal polypeptide and control the diarrhea in these patients.

### Surgical Resection

#### Surgeon

Surgical resection of the tumor can cure the patient if it has not spread to other organs. However, in one third to one half of patients with VIPoma, the tumor has spread by the time of diagnosis and cannot be cured.

## Associations

### Multiple Endocrine Neoplasia Type 1 (MEN 1)

#### Man with (1) Wand

VIPomas tend to occur as isolated tumors, but may occur in 5% of patients as part of the multiple endocrine neoplasia syndrome type 1 (MEN1) and are associated with parathyroid and pituitary tumors, gastrinoma, and other tumors.