

**Technology**

Neostigmine,-glycopyrrolate for individuals with difficulty with evacuation

Inventor

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Key Features

- Treatment of chronic intestinal obstruction
- Fast acting without reduced side effects
- Avoids incomplete evacuation of the bowels leading to incontinence
- Avoids physical trauma

Stage of Development

Reduced to practice with successful demonstration in clinical studies

Keywords

- Therapeutic
- Spinal Cord Injury
 - Neostigmine
 - Neurological disease
 - Glycopyrrolate
 - Regulate bowel movements
 - Difficulty with evacuation

Patent Status

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Neostigmine-Glycopyrrolate for Bowel Care in Individuals with Spinal Cord Damage and Advanced Neurological Disease (VA Reference No. 02-095)

Therapeutic drug compound to regulate bowel movements in individuals with spinal cord injury and advanced neurological diseases

Technology

The Department of Veterans Affairs has developed a therapeutic drug compound to regulate bowel movements in individuals with spinal cord injury and advanced neurological diseases.

Description

The technology developed by the VA is a combination of two drugs: neostigmine, used as a reversible anti-cholinesterase inhibitor, and glycopyrrolate, an anti-cholinergic and anti-spasmodic. Both drugs are available generically in injectable form. Neostigmine is known for its side effects on the gastrointestinal tract, including an increase in motility of the colon resulting in defecation, and on the cardiovascular system, leading to a slowing of the heart rate. The novel combination takes advantage of the side effect of neostigmine on the gastrointestinal tract and can correct the difficulty with evacuation in patients. To control the unwanted side effects of neostigmine on the cardiovascular system without blocking the desired effects on gastrointestinal tract, the glycopyrrolate compound was added in an appropriate dose.

Competitive Advantage

Traditional methods for treatment of chronic intestinal obstruction include laxatives, enemas (saline and oil), polyethylene glycol lavage, lactulose, and/or digital stimulation. These methods are expensive, uncomfortable, time consuming, difficult to administer and/or may cause damage to the bowel.

This invention:

- Avoids incomplete evacuation of the bowels leading to incontinence; avoids physical trauma; reduces the risk of anorectal problems, such as bleeding hemorrhoids and anal fissures; and reduces the loss of dignity of the patient.
- Can lead to complete bowel evacuation within ten minutes of being administered without side effects.

Status

The Department of Veterans Affairs is looking for a partner for further development and commercialization of this technology through a license, and the VA inventors are available to collaborate with interested companies through a Cooperative Research and Development Agreement (CRADA).