ALPROSTADIL

Class: Prostaglandin;Vasodilator

Indications:

Prostin VR Pediatric®: Temporary maintenance of patency of ductus arteriosus in neonates with ductal-dependent congenital heart disease until surgery can be performed. These defects include cyanotic (eg, pulmonary atresia, pulmonary stenosis, tricuspid atresia, Fallot's tetralogy, transposition of the great vessels) and acyanotic (eg, interruption of aortic arch, coarctation of aorta, hypoplastic left ventricle) heart disease.

Caverject®: Treatment of erectile dysfunction of vasculogenic, psychogenic, or neurogenic etiology; adjunct in the diagnosis of erectile dysfunction

Edex®, Muse®: Treatment of erectile dysfunction of vasculogenic, psychogenic, or neurogenic etiology

Available dosage form in the hospital:

- ALPROSTADIL 20MCG AMP

- ALPROSTADIL 20MCG INTRACAVERNOSAL VIAL

Trade Names:

Dosage:

-Erectile dysfunction:

-*Intracavernous (Caverject®, Edex®):* Individualize dose by careful titration; doses >40 mcg (Edex®) or >60 mcg (Caverject®) are not recommended: Initial dose must be titrated in physician's office. Patient must stay in the physician's office until complete detumescence occurs; if there is no response, then the next higher dose may be given within 1 hour; if there is still no response, a 1-day interval before giving the next dose is recommended; increasing the dose or concentration in the treatment of impotence results in increasing pain and discomfort.

-*Vasculogenic, psychogenic, or mixed etiology:* Initiate dosage titration at 2.5 mcg, increasing by 2.5 mcg to a dose of 5 mcg and then in increments of 5-10 mcg depending on the erectile response until the dose produces an erection suitable for intercourse, not lasting >1 hour; if there is absolutely no response to initial 2.5 mcg dose, the second dose may be increased to 7.5 mcg, followed by increments of 5-10 mcg .

-*Neurogenic etiology (eg, spinal cord injury):* Initiate dosage titration at 1.25 mcg, increasing to a dose of 2.5 mcg and then 5 mcg; increase further in increments 5 mcg until the dose is reached that produces an erection suitable for intercourse, not lasting >1 hour

Maintenance: Once appropriate dose has been determined, patient may self-administer injections at a frequency of no more than 3 times/week with at least 24 hours between doses .

-*Intraurethral (Muse® Pellet):*

-Initial: 125-250 mcg

-Maintenance: Administer as needed to achieve an erection; duration of action is about 30-60 minutes; use only two systems per 24-hour period.

-Patent ductus arteriosus I.V.:

Prostin VR Pediatric®: I.V. continuous infusion into a large vein, or alternatively through an umbilical artery catheter placed at the ductal opening: 0.05-0.1 mcg/kg/minute with therapeutic response, rate is reduced to lowest effective dosage. With unsatisfactory response, rate is increased gradually; maintenance: 0.01-0.4 mcg/kg/minute.

Note: PGE_1 is usually given at an infusion rate of 0.1 mcg/kg/minute, but it is often possible to reduce the dosage to $^1/_2$ or even $^1/_{10}$ without losing the therapeutic effect.

Note: Therapeutic response is indicated by increased pH in those with acidosis or by an increase in oxygenation (PO_2) usually evident within 30 minutes.

Geriatric

Elderly patients may have a greater frequency of renal dysfunction; lowest effective dose should be used. In clinical studies with Edex®, higher minimally effective doses and a higher rate of lack of effect were noted.

Renal Impairment:

No dosage adjustment provided in manufacturer's labeling.

Hepatic Impairment:

No dosage adjustment provided in manufacturer's labeling.

Common side effect:

Intracavernosal injection: Genitourinary: Penile pain

Intravenous:

-Cardiovascular: Flushing

-Central nervous system: Fever

-Respiratory: Apnea

Pregnancy Risk Factor: X/C (Muse®)