

Dysthythmias associated with the use of glycopyrolate intavenously as
premedicant or during anesthesia have been observed in peediatic enatients Trements. patient with Down's syndrome, and pediatricic patientsts with spast paralysis or brain damage may experience an increased response to anticholinergics, thus increasing the potential tor side effects.
A paradoxical reaction characierizied by hyperexitability may ocur in pediatictic patients taking large doses of anticholinergics including glycopyrrolate
 effecty of anticholinergics.
Benzy alcohol, a component of this drug product, has been associated with
serious adverse events and death, particulary in peediatic patients. The serious adverse events and death, paricicuaty in pediaitic patients. The
"gasping syndrome,", (characteterized by central nevous system depression,
 its metabolites found in the blood and urine) has been associated with benzyl
alconol dosages $>999$ mgkgg/day in neonates and low-birth-weight neonates. Additional symptoms may include gradual neurrological deterioration, seizures, Intracranial hemorrhage, hemototogic abrormaitites, skin breakdown, hepatic and renal tailure, hypotension, tradycardia, and cardiovascular collapse.
Attrough nomal theraputic doses of this product deliver amounts of benzyl alcohol that are substantially lower than those reported in association with the "gassing syndrome", the minimum amount of benzzy alcohol at which well as pate ents receeving g high dosagass, may be more IIkely to deverelop toxicity
 alconol should consider the combined daily metabolic load of bennyl la om all sources.
Geriatic Use
Clinica Studies of gylcopyrrolate injection did not include stficient numbers of subjects aged 65 and over to dotermine whether they respond dififerently
trom younger subjects. Other reported clinical experience has not dentified differences in responses between the elderly and younger patients. In general, dose selection for an ansedery patient stould be cautious, usually starting at the low end of the dosing range, refecting the greater frequency of decreased
hepatic, renal, or cardiac tunction, and of concomitant disease or other

## adverse reactions

Antcholinerglcs, Including glycoppyrolate injection, can produce certain
effects, most of which are extensions of their pharmacologic actions. Adverse reactions may indude exerostomia (dry mouth), urinary hesitancy the puill: cydonesa incressed ocular tension:
 weaknesss, diziziness; insomniaz, nausea; voniting, impotence: suppression
of lactation: consitiapotor: boated feeling severe allergic reactions incuing If lactation: constipation: bloated feeling: severe allergic reactions inctuding skin, and other dermal manitestations; some degree of mental contusion and/ or excitement. especially in elderly persons.
addition, the e colowing
In aditition, the following adverse evevist have been reported from posts.
marketing experience with g glycopyrontate injection: malignant hyperthermia) carciac arrhythmias (including bradycarcia, ventricular tachycardia, ventricular fibrillation); carciac arrest, hypertension; hypotension; seizures; and respiratory arest. Post-marketing reports have included cases of hearn
block and oTc interval prolongation associated with the combined use of olycopyrrolate and an anticholinesterase. Injection site reactions including puritus, edema, erythema, and pain have also been reported.
Glycopyryolate is chemically a quaternary ammonium compound; hence, its
passsage across lipid membranes, such as the blood-brain uarier is inited in contrast to atropine sulfate and scopolamine hydrobromide. For this reason the occurrence of CNS-related side effects is lower, in comparison to their incidence following administration of antcchoinergics which are chemically
tertiary amines that can cross this barrier readily.

## overdosag

To combat peripheral anticholinergic effects, a quaternary ammonium
antichoinesterase such as cross the blood-brain barierr) may be given intravenousy in increments of 0.25 mg in adutsts. This dosage may be repeated every five to ten minutes Until anticholineryic overactivit is is reversed or up to a maximum of 2.5 mg .
Proportionately smaller doses should be used in pediatic patients. 1 Indication Tor repepitive dosess of neositignine should be based on close monitoring of the decrease in heart rate and the return of bowel sounds.
If CNS symploms (e.g., excitement, restlessness, convuls sions, psychototic
behavior) occur, physositignine (which dooss cross the blooo-brain barier) may be used. Physostigmine 0.5 to 2 mg should be sowowly administered intravenously and repeated as necessary up to a totala of 5 mg in aduuts. Proporionately smaller doses should be used in pediatric patients.
To combat hyootension, administer IV tuluds and or pressor agents
supportive care.
Fever should be treated symptomatically.
Following overdsosage, a curare-like action may occurr, i.e., neuromuscular
blockade leading to muscurar weakness and possibile paralysis. In the event of a curare--like effect on respiratory muscles, artificial respiration should be


DOSAGE AND ADMINITTRATION
NOTE: CONTAINS BENYL ALCOHOL (see PRECAUTIONS)
NOTE: CONTANSS BENYXL ALCOHOL (See PRECAUTIONS.
Parenteral druy product should b inspected visualy for particulate mater
and and discoloration prior to administataion whenever solution and container
permit. Giycopyrrolate hiection may be administered

Adutis
Preanes
Treazesthetic Mendication
The recommended dose of glycopyrrolate injection is $0.004 \mathrm{mg} / \mathrm{kg}$ by intramuscuar injection, given 30 to 60 minutes prior to the anticipated time of induction of anesthesia or at the time the preanesthetic narcolic and/or
seeative are administered. sedative are administered.
Intraperative Meedication
Giycopyrrolate injection may be used during surgery to counteract drug. Induced or vaga refiexes and their assoclited arhyythmas (e.9., bradyycardia). It should be adminisisered intravenousy as single doses of 0.1 mg and
repeated, as needed, at iterrals of 2 to 3 minutes. The usual attempts should
 anesthetic manipultions necessary to
should be pertormed.
should be performed.
Reversal o o Neuromuscuar Blockade
The recommended dose of gyccopyrrolate injection is 0.2 mg for each 1.0 mg of Ine recormended dose of glycopyriflate iniectonis 0.2 mg Ior each 1.0 mg ol of carciac side effects, the drugs may be administered simutaneousy by
intravenus iniection and may be mixed in the same syringe intravenusus
Peptic lleer
The usuar recommended dose of fyccopyrrolate inectionis 0.1 mgadministered at 4 -hour intervals,, or 4 times saily intravenously or intramuscularly, Where More profuund effect is required, 0.2 mg may be given. Some patients may
need only a single dose, and frequency of administation should be dictated by patient response up to a maximum of four times dally.


| ARTWORK INFORMATION |  |
| :--- | :--- |
| Item Code: 13161005 |  |
| Component : Leaflet | Country: US |
| Dimension: Length- 170, Height- $\mathbf{4 4 0} \mathbf{~ m m ~ ( ~ F r o n t ~ \& ~ B a c k ~ ) ~}$ |  |
| Customer Name: Somerset | Colours: 1 |
| Specification Substrate: $\mathbf{4 0}$ GSM | BLACK |
| Language: English |  |
| Change History: New Artwork | Die Line \& NVZ: |


| PRODUCT INFORMATION FORM (PIF) |  |  |  |
| :---: | :---: | :---: | :---: |
| STATUS | Finalized, In Process with PD |  |  |
| VERSION | 1.0 |  |  |
| FINALIZED ON | 30-10-2021 16:12:43 |  |  |
| INITIATED ON | 05-10-2021 16:28:01 |  |  |
| PRODUCT / BRAND NAME | Glycopyrrolate Injection, USP |  |  |
| GENERIC NAME | Not entered |  |  |
| PLANT | Caplin Steriles Limited |  |  |
| STRENGTH | $0.2 \mathrm{mg} / \mathrm{mL}$ |  |  |
| PACK SIZE | 1 per carton |  |  |
| MARKET TYPE | INT - International |  |  |
| MARKETS | USA |  |  |
| LANGUAGE | English |  |  |
| COMPONENT | Leaflet |  |  |
| DOSAGE FORM | Injections |  |  |
| DIVISION | Caplin Steriles Limited |  |  |
| CUSTOMER NAME | Somerset |  |  |
| WORKFLOW | Caplin Work Flow |  |  |
| CHECKLIST VERSION | 1.0 ( 7 Checklist points) |  |  |
| CR NUMBER | Not entered |  |  |
| CR DATE | Not entered |  |  |
| CR DOCUMENT | Not entered |  |  |
| REMARKS | NA |  |  |
| COMPONENT | EW MATERIAL CODE | MATERIAL CODE DESCRIPTION | REMARKS |
| Leaflet | 1005 | Printed Leaflet Glycopyrrolate Injection, USP_Somerset-R0 | Printed Leaflet Glycopyrrolate Injection, USP Somerset-R0 |


| RA INPUT |  |
| :--- | :--- |
| SHELF LIFE | 24 months |
| MANUFACTURING LICENSE <br> NUMBER | TN/Drugs/TN00003457 |
| RA REMARKS | NA |

## QA INPUT

| QA INPUT |  |
| :--- | :--- |
| REFERENCE MFR NUMBER | GPL/IA/CP4/US-03,G PL/IC/CP4/US-03,G PL/ID/CP4/US-06,G PL/IB/CP4/US-05 |
| SFG CODE | $36160027,36160028,36160029,36160030$ |
| QA REMARKS | Nil |

## PD INPUT

| PD INPUT |  |
| :--- | :--- |
| FG CODE | $56110139,56110140,56110141,56110142$ |
| PD REMARKS | Nil |


| Finalization Summary |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| ACTION BY | DEPARTMENT | ACTION | ACTION ON | COMMENTS |
| Aditya-Project <br> Management Initiator 1 | Project Management | Submitted | 05-10-2021 16:28:31 | NA |
| Vinuta-Regulatory <br> Affairs Reviewer 3 | Regulatory Affairs | Submitted | $12-10-2021$ 10:29:19 | Yes |
| Vishnumoorthi-Qual ity <br> Assurance Reviewer 1 | Quality Assurance | Submitted | $21-10-2021$ 10:01:46 | Yes |
| Mohan-Packaging <br> Development <br> Reviewer 1 | Packaging <br> Development | Reviewed | $21-10-2021$ 17:17:33 | Yes |
| Mohan-Packaging <br> Development <br> Reviewer 1 | Packaging <br> Development | Submitted | $29-10-2021$ 09:25:18 | Yes |
| Vishnumoorthi-Qual ity <br> Assurance Reviewer 1 | Quality Assurance | Reviewed | $29-10-2021$ 10:44:41 | yes |
| Vinuta-Regulatory <br> Affairs Reviewer 3 | Regulatory Affairs | Reviewed | $29-10-2021$ 12:02:20 | Yes |
| Ashok-Quality <br> Assurance Reviewer 2 | Quality Assurance | Reviewed | $29-10-2021$ 16:26:27 | Yes |
| Mohan-Packaging <br> Development <br> Reviewer 1 | Packaging <br> Development | Submitted | $29-10-2021$ 17:07:32 | Yes |
| Vinuta-Regulatory <br> Affairs Reviewer 3 | Regulatory Affairs | Approved | $29-10-2021$ 17:23:28 | Yes |
| Gopal-Packaging <br> Development <br> Reviewer 2 | Packaging <br> Development | Approved | 29-10-2021 17:23:34 | default approve <br> comment |
| Vishnumoorthi-Qual ity <br> Assurance Reviewer 1 | Quality Assurance | Approved | 30-10-2021 12:15:29 | default approve <br> comment |
| Ashok-Quality <br> Assurance Reviewer 2 | Quality Assurance | Approved | $30-10-2021$ 16:12:43 | default approve <br> comment |

