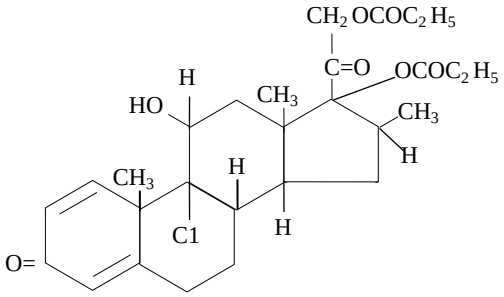
PRODUCT INFORMATION

QVAR™ AUTOHALER™ and QVAR™ INHALER

NAME OF THE MEDICINE

The active ingredient in QVAR is beclomethasone dipropionate. Its molecular formula is $C_{28}H_{37}ClO_7$ (molecular weight 521.1), CAS Register Number 5534-09-8. Its chemical structure is:



DESCRIPTION

Beclomethasone dipropionate (BDP) is a white to creamy white, odourless powder; it is slightly soluble in water, very soluble in chloroform and freely soluble in acetone and alcohol. QVAR also contains ethanol and norflurane (HFA-134a), a propellant which does not contain chlorofluorocarbons (CFCs).

QVAR Autohaler is a breath actuated inhaler which automatically releases a metered dose of medication during inhalation through the mouthpiece and overcomes the need for patients to coordinate actuation with inspiration. QVAR Inhaler is a conventional press and breathe metered dose inhaler (P&B MDI). There are no differences in formulation between the Autohaler and the Inhaler products.

QVAR contains BDP in solution, resulting in an extrafine aerosol. The aerosol droplets of QVAR are on average much smaller (Mass Median Aerodynamic Diameter (MMAD), MMAD range 0.8 to 1.2 microns) than the particle sizes delivered by CFC-suspension formulations (MMAD range 3.5 to 4 microns) or dry powder formulations (MMAD approximately 10 microns) of BDP. The smaller particle size for QVAR results in greater deposition in the airways and less deposition in the oropharynx than beclomethasone products formulated in CFCs.

Radiolabelled deposition studies demonstrated that for QVAR the majority of BDP (>55 % dose ex actuator) is deposited in the lungs and a small amount (< 35 % dose ex actuator) is deposited in the oropharynx. In contrast, approximately 4-7 % dose from the actuator of BDP formulated in chlorofluorocarbons (CFC-BDP) is deposited in the lungs and over 90 % is deposited in the oropharynx. The imaging data suggest that for QVAR, BDP is deposited widely throughout the central, intermediate and peripheral airways whereas deposition is limited to the central airways for CFC-BDP. The smaller particle size of QVAR explains the different deposition patterns compared with CFC-BDP. These delivery characteristics result in equivalent therapeutic effects being achieved at lower total daily doses of QVAR compared to CFC-BDP, and account for the recommended dosage adjustment when switching patients from CFC-BDP to QVAR (see Dosage and Administration).

PHARMACOLOGY

Pharmacodynamics

Bronchial inflammation is known to be an important component in the pathogenesis of asthma. Inflammation occurs in both large and small airways. BDP is a synthetic glucocorticoid. Glucocorticoids have multiple anti-inflammatory effects, inhibiting both inflammatory cells and release of inflammatory mediators. It is presumed that these anti-inflammatory actions play an important role in the efficacy of BDP in controlling symptoms and improving lung function in asthma although the exact mechanism of action of beclomethasone in the lungs is unknown. Inhaled BDP probably acts topically at the site of deposition in the bronchial tree after inhalation. Inhaled BDP at recommended doses reduces systemic exposure compared to oral administration, thereby minimising systemic side effects, including pituitary-adrenal suppression.

A pharmacodynamic study in 43 steroid naive asthmatics given either placebo, 200, 400 or 800 μg/day of QVAR; or 800 μg/day of CFC-BDP for 14 days showed a linear correlation between reduction in 24-hour urinary free cortisol levels (24h-UFC) and dose of BDP administered, as well as between BDP dose and serum total-beclomethasone levels. The mean 24h-UFC, a sensitive marker of adrenal function, remained within the normal range for all dosing regimens. A daily dose of 800 μg QVAR caused similar reductions in 24 h-UFC levels as a daily dose of 800 μg of CFC-BDP. Results from the secondary parameters of plasma cortisol and the ACTH stimulation test supported the findings of 24 h-UFC and showed no differences to CFC-BDP and placebo at QVAR doses up to 800 μg/day.

In two 12 week trials conducted in patients with symptomatic moderate (n=347) and symptomatic moderately severe (n=233) asthma, plasma cortisol levels were monitored as a secondary safety assessment to determine HPA-axis suppression. The mean percentage change of plasma cortisol values from baseline and the number of patients with plasma cortisol values below the normal reference was similar for HFA-placebo, 800 μg/day QVAR and 800 μg/day CFC-BDP.

In a 12 month study in 473 asthmatic patients given either QVAR in a dose range of 200 to 800 μg/day or CFC-BDP in a dose range of 400 to 1600 μg/day, adrenal function was assessed by plasma cortisol levels and response to cosyntropin. No differences in mean plasma cortisol levels or clinically significant changes in cortisol levels from baseline were seen between the two treatment groups, and no significant difference in response to cosyntropin was seen between the treatment groups. The effect of QVAR on bone metabolism was assessed by serum osteocalcin concentrations. No clinically meaningful differences in serum osteocalcin levels were found between the treatment groups.

A 12 month multicentre study in 520 paediatric patients with asthma demonstrated that the effect on growth of 100-200 μg/day of QVAR from the Autohaler was comparable to those of 200-400 μg/day of CFC-BDP from a P&B MDI with spacer. The effect of QVAR on bone metabolism was assessed by serum osteocalcin levels, PICP, 1-CTP and urine deoxypyridinoline/ creatinine ratio. No treatment differences were found between the treatment groups. Analysis of adrenal function, as assessed by 24 h-UFC, plasma cortisol levels and response to low dose ACTH stimulation showed no significant differences between QVAR or CFC-BDP treatments across all doses.

Clinical studies indicate that CFC-BDP and QVAR inhalers are clinically equivalent when given in a dose ratio of 2.5 to 1.

Pharmacokinetics
BDP is hydrolysed in the lungs to beclomethasone monopropionate before reaching the systemic circulation and is further metabolised during its passage through the liver. The principal route of elimination of BDP and its metabolites is in the faeces. Between 10 % and 15 % of any orally administered dose is excreted in the urine, as both conjugated and free metabolites of BDP.

The pharmacokinetics of beclomethasone and of total-beclomethasone have been measured over 24 hours in mild asthmatics given single and multiple doses of QVAR. Total beclomethasone was obtained by hydrolysing any BDP and beclomethasone monopropionates in the serum samples to beclomethasone.. The peak serum concentration for total beclomethasone is achieved within 30 minutes. The mean values of the peak serum concentrations after multiple dosing of 100 μg, 200 μg or 400 μg twice daily for 14 days are proportional to the dose. The mean peak serum concentration after the highest recommended dose of 400 μg twice daily is approximately 1 ng/mL.

Pharmacokinetic studies comparing QVAR and CFC-BDP demonstrated that a dose of 200 μg of QVAR achieved comparable total beclomethasone levels as a dose of 400 μg of CFC-BDP. This finding is consistent with the deposition results, which showed increased lung deposition and reduced oropharyngeal deposition for QVAR compared with CFC-BDP. Pharmacokinetic data in the paediatric population shows that the AUC for the dominant active metabolite 17-BMP after administration of 200 μg of QVAR from the Autohaler is similar to that of 400 μg of CFC-BDP given via an inhaler with spacer.

CLINICAL TRIALS
QVAR versus CFC-BDP
In controlled clinical trials in adults QVAR was effective at controlling asthma at doses as low as 50 μg twice daily (100 μg/day), below the recommended dose of CFC-BDP. Comparable asthma control was achieved at lower daily doses of QVAR than with CFC-BDP (e.g. 200 μg of QVAR twice a day provided comparable asthma control as 400 μg or 500 μg of CFC-BDP twice a day). The improvement in FEV_1 across doses was greater for QVAR than for CFC-BDP, indicating a beneficial shift in the dose response curve for QVAR. Improved efficacy of QVAR compared to CFC-BDP is due to its increased relative airways availability (as a consequence of a smaller mean particle size and improved pulmonary deposition). Because of this, doses of QVAR required to achieve the same effect as CFC-BDP are 2 to 2.5 times lower than CFC-BDP (see Dosage and Administration).

A 12 month large multicentre safety study in paediatric patients with asthma showed that stable patients on CFC-BDP (200-400 μg/day with spacer) can be switched to lower daily doses of QVAR (100-200 μg/day via Autohaler) with good maintenance of asthma control.

Clinical studies indicate that CFC-BDP and QVAR inhalers are clinically equivalent when given in a dose ratio of 2.5 to 1.

QVAR versus budesonide
A 6-week randomised, open label study in adult patients with symptomatic moderate asthma receiving 400 μg/day budesonide dry powder inhaler (DPI) showed that 400 μg/day QVAR delivered via the Autohaler provided equivalent control of asthma as 800 μg budesonide DPI. Equivalent asthma control was shown by equivalent improvement in peak flow parameters, asthma symptoms, sleep disturbance and beta-agonist use.

In an 8-week randomised, open-label study in adult patients with symptomatic moderate to severe asthma receiving 500-1000 μg/day CFC-BDP, 800 μg/day QVAR delivered via the Autohaler provided equivalent asthma control to 1600 μg/day budesonide DPI. An equivalent mean change from baseline in AM PEF was observed over the 8-week study period for the two treatment groups. Statistically significant improvements from baseline were seen in asthma symptom and sleep disturbance scores for patients in both groups.

These studies demonstrate that QVAR at half the daily dose of budesonide DPI provides equivalent asthma control in symptomatic adult asthma patients. Both treatments were well tolerated and there were no clinically significant differences in the safety profiles of the two treatments.

QVAR versus fluticasone

In a 6-week randomised, double-blind, double-dummy, parallel study, adult patients with symptomatic asthma taking a total daily dose of 200-500 μg CFC-BDP, 100-250 μg CFC-FP or 200-400 μg budesonide were randomised to receive either 400 μg/day QVAR or 400 μg/day CFC-fluticasone (FP). Results of this study showed a clinically equivalent mean change from baseline in AM PEF over the 6-week study period. Equivalent asthma control was shown by equivalent improvements in peak flow parameters, asthma symptoms, sleep disturbance and beta-agonist use.

In an 8-week randomised open-label study adult patients with symptomatic asthma receiving up to 500 μg/day FP or 500-1000 μg/day BDP or 400-800 μg/day budesonide were switched to 800 μg/day QVAR or 1000 μg/day HFA-fluticasone. There was an equivalent mean change from baseline in AM PEF observed over the 8-week study for the two treatment groups. No statistically significant differences in pulmonary parameters, asthma symptoms, sleep disturbance and beta-agonist use were seen for patients in both groups.

These studies demonstrate equivalent asthma control with QVAR and fluticasone in patients with symptomatic asthma. Both treatments were well tolerated and there were no clinically significant differences in the safety profiles of the two treatments.

INDICATIONS

QVAR is indicated for the prophylactic management of asthma.

CONTRAINDICATIONS

Hypersensitivity to beclomethasone dipropionate or any other ingredient in QVAR.

PRECAUTIONS

Asthma Management

QVAR is not indicated for immediate relief of asthma attacks or status asthmaticus. If the prescribed dose of QVAR is no longer effective or symptoms get worse, the patient must seek medical attention for review of maintenance therapy.

Asthma management should be adjusted according to individual need based on lung function and clinical monitoring. Increasing use of a β_2-agonist may be a sign of worsening asthma. Under these circumstances a re-assessment of the patients' therapy plan may be required and increasing glucocorticosteroid therapy should be considered. This is important since poor asthma control can result in potential life-threatening situations and increased use of β_2-agonists may cause deterioration of asthma control.

Systemic Effects
Inhaled steroid products are designed to direct glucocorticoid activity to the lungs in order to reduce the overall systemic glucocorticoid exposure and side effects. In sufficient doses however all inhaled steroids can have adverse effects, notably depression of the hypothalamic-pituitary-adrenal (HPA) axis, Cushing's syndrome, Cushingoid features, reduction of bone density, retardation of growth in children and adolescents, cataract and glaucoma and more rarely a range of psychological or behavioural effects including psychomotor hyperactivity, sleep disorders, anxiety, depression or aggression (particularly in children). In steroid-dependent patients prior systemic steroid usage may be a contributing factor, but such effects can occur amongst patients who regularly use only inhaled steroids. It is important, therefore, that the dose of inhaled steroid is titrated to the lowest dose at which effective control is maintained. Clinical studies in adult asthmatics treated with QVAR within the dose range 100-800 µg daily have demonstrated mean values for adrenal function and response within normal range. The lowest dose of QVAR that causes suppression of the HPA axis (as indicated by 24 hour urinary cortisol concentrations), effects on bone mineral density or growth retardation in children has not yet been established.

Transfer from Systemic Steroids
Patients who have received systemic steroids need special management when being transferred to inhaled steroid therapy. As recovery from impaired adrenocortical function caused by prolonged systemic steroid therapy is slow, adrenocortical function should be monitored regularly. Patients should have stable asthma before being given inhaled steroids in addition to the usual maintenance dose of systemic steroid. (See Dosage and Administration).

Discontinuation of systemic steroids may cause exacerbation of allergic diseases such as atopic eczema and rhinitis. These should be treated symptomatically with antihistamines and/or topical therapy.

In patients who have been transferred from oral steroids to inhalation therapy, systemic steroid therapy may need to be reinstated rapidly during periods of stress or where airways obstruction or mucus significantly compromises the inhaled route of administration. The dose of inhaled steroids should be increased at this time and then gradually reduced to the maintenance level after the systemic steroid has been discontinued. Respiratory tract infections should be treated with appropriate antimicrobial therapy. The effect of BDP on recurrent lung infection is not known. Caution is necessary in patients with active or latent pulmonary tuberculosis.

Propellant
QVAR contains a hydrofluoroalkane propellant (norflurane). In animal studies, narcosis and sensitisation to the arrhythmogenic effects of adrenaline were observed following inhalation of norflurane at high exposure concentrations. The potency of the cardiac sensitisation was less than that of trichlorofluoromethane (CFC-11). In humans, norflurane is absorbed into the circulation following inhalational administration, although plasma concentrations are low and elimination is rapid. Excessive use of QVAR should be avoided as this carries a potential hazard from the propellant as well as from overdosage of the BDP in the formulation.

Use in Pregnancy (Category B3)
There is inadequate clinical evidence of the safety of QVAR used during pregnancy. In animals, systemic administration of relatively high doses of BDP can cause abnormalities of foetal development including growth retardation and cleft palate. Inhalational administration of a norflurane-based formulation of BDP to pregnant rats caused retardation of foetal growth and development, and red adrenal glands. QVAR should be avoided for use in pregnancy unless the expected benefit to the patient outweighs the risk to the foetus.

Use in Lactation
It is probable that beclomethasone is excreted in milk. However, given the relatively low doses used by the inhalation route, the levels are likely to be low. Studies of inhaled BDP have not been done in lactating animals. In breastfeeding mothers the therapeutic benefits of QVAR should be weighed against the potential hazards to mother and baby.

Paediatric Use
To minimise the systemic effects of orally inhaled corticosteroids, the dose should be titrated down to the lowest that provides effective asthma control. The safety and efficacy of QVAR in children under the age of five has not been established.

Carcinogenicity, Mutagenicity and Impairment of Fertility
Potential carcinogenicity, mutagenicity and impairment of fertility have not been adequately investigated in animal studies of BDP. Other glucocorticoids (budesonide, prednisolone and triamcinolone acetate) have been shown to increase the incidence of hepatocellular tumours in rats by a non-genotoxic mechanism.

INTERACTIONS WITH OTHER MEDICINES
No clinically significant drug interactions have been associated with therapeutic doses of BDP.

ADVERSE EFFECTS
When using QVAR an occasional incidence of hoarseness and/or a rare occurrence of candidiasis of throat and mouth may occur. Patients may find it helpful to rinse out their mouth with water after using their inhaler to reduce the risk of candidiasis and hoarseness. Topical anti-fungal therapy can be used for the treatment of candidiasis while continuing treatment with QVAR.

As with other inhaled therapy, paradoxical bronchospasm with wheezing may occur immediately after dosing. Immediate treatment with an inhaled short-acting bronchodilator is required. QVAR should be discontinued immediately and alternate prophylactic therapy introduced.

Systemic effects of inhaled corticosteroids may occur, particularly at high doses prescribed for prolonged periods. These may include adrenal suppression, growth retardation in children and adolescents, decrease in bone mineral density, cataract and glaucoma (see Precautions).

Very rarely Qvar may cause, Cushing's syndrome, Cushingoid features, anxiety, sleeping disorders or behavioural changes including hyperactivity, aggression and irritability (predominantly in children).

Hypersensitivity reactions including rashes, urticaria, pruritis and erythema, and oedema of the eyes, face, lips and throat (angioedema) have been reported.

Clinical Trial Data
Table 1 shows the adverse events reported amongst adult patients in multiple dose studies of inhaled QVAR for 6 to 12 weeks. Table 2 shows the adverse events reported amongst adult and paediatric patients in large multicentre trials of inhaled QVAR vs CFC-BDP for 12 months. Each table includes all adverse events probably or possibly related to QVAR with an incidence of 1 % or greater. A dash represents an incidence of less than 1 %.

Table 1

	QVAR (n=812)	Placebo (n=289)	CFC-BDP (n=487)
Application Site Disorders			
Inhalation Site Sensation	4 %	2 %	6 %
Inhalation Admin – Dysphonia	3 %	1 %	3 %
Inhalation Taste Sensation	2 %	-	2%
Inhalation Admin – Cough	-	1 %	2 %
Central & Peripheral Nervous System Disorders			
Headache	-	-	1 %
Respiratory System Disorders			
Pharyngitis	1 %	-	-
Increased Asthma Symptoms	-	4 %	-

Table 2

	QVAR (n=566)	CFC-BDP (n=194)
Application Site Disorders		
Inhalation Site Sensation	3 %	3 %
Inhalation Admin – Dysphonia	2 %	2 %
Inhalation Taste Sensation	1 %	0 %
Central & Peripheral Nervous System Disorders		
Headache	2 %	1 %
GI System Disorders		
Stomatitis	1 %	2 %
Respiratory System Disorders		
Pharyngitis	4 %	6 %
Rhinitis	1 %	1 %
Bronchitis	-	1 %
Increased Asthma Symptoms	1 %	-

The following adverse reactions, probably or possibly related to the use of QVAR, were recorded during clinical trials with a frequency of less than 1 %.

Application Site Disorders
Uncommon: cough; increased asthma symptoms.
General Disorders
Uncommon: chest pain. Rare: asthenia; back pain; fatigue; oedema; pain.
Cardiovascular Disorders, General
Rare: hypertension.
Central & Peripheral Nervous System Disorders
Uncommon: dizziness; dysphonia; migraine. Rare: neuropathy; tremor; vertigo.
Gastro-Intestinal System Disorders
Uncommon: abdominal pain; constipation. Rare: dyspepsia; GI disorders (unspecified); nausea; tongue discolouration; toothache.
Heart Rate and Rhythm Disorders
Rare: palpitations.
Metabolic and Nutritional Disorders
Uncommon: weight increase.
Musculo-Skeletal System Disorders
Uncommon: myalgia.

Myo Endo Pericardial & Valve Disorders
Rare: angina pectoris.
Platelet, Bleeding & Clotting Disorders
Uncommon: epistaxis.
Psychiatric Disorders
Uncommon: increased appetite. Rare: anxiety; depression; insomnia.
Resistance Mechanism Disorders
Uncommon: infection. Rare: infection bacterial
Respiratory System Disorders
Uncommon: bronchitis; coughing; upper respiratory tract infection. Rare: acute asthma episode; hemoptysis; respiratory disorder; sinusitis.
Skin & Appendages Disorders
Uncommon: rash. Rare: photosensitivity reaction; skin disorder; urticaria
Vascular (Extracardiac) Disorders
Uncommon: purpura.

DOSAGE AND ADMINISTRATION

The recommended total daily dose of QVAR is lower than that for current CFC-BDP products and should be adjusted to the individual patient.

Proper instruction and good inhaler technique is necessary to get maximum benefit from QVAR Inhaler. For patients who are unable to successfully coordinate actuation of the metered dose inhaler with inhalation QVAR Autohaler should be substituted. Patients should be advised that QVAR may have a different taste and feel than a CFC inhaler.

QVAR delivers a consistent dose of BDP
- whether or not the canister is shaken
- without the need for the patient to wait between individual actuations
- regardless of storage orientation
- regardless of periods without use of up to 14 days (do not need to test fire)
- at temperatures as low as -10 °C.

Patients should be instructed to rinse their mouth out each time after using QVAR.

Use of a Spacer

QVAR is designed to be used without a spacer. However, where a spacer is considered necessary the AeroChamber *Plus* is a suitable device for use with QVAR Inhaler. Use of an AeroChamber *Plus* spacer with QVAR Inhaler reduces the amount of BDP deposited in the oropharynx without affecting deposition in the lungs. A change in the make of spacer or a change in the formulation of QVAR may be associated with alterations in the amount of BDP delivered to the lungs, the clinical significance of which is uncertain. In these situations the patient should be monitored for any loss of asthma control.

Patients who use a spacer should be instructed to breathe in and out after each actuation of QVAR into the spacer. Any delay should be kept to a minimum. Static on the walls of the spacer may cause variability in the amount of BDP delivered. Patients should be instructed to wash the spacer in warm water and detergent and allow to air dry without rinsing or dying with a cloth. This should be performed before initial use of the spacer and at least monthly thereafter.

Starting and Maintenance Dose:
The recommended dose of QVAR in adults is as follows:
For mild to moderate asthma: 50 μg to 200 μg twice daily
For more severe asthma: doses up to 400 μg twice daily
Maximum recommended daily dose: 800 μg

Use in Children
In children aged five years and over the recommended dose of QVAR is 50 μg twice daily.

QVAR must be used on a regular basis even when patients are asymptomatic. When patient's symptoms remain satisfactorily controlled the dose of QVAR can be gradually reduced to the minimum effective dose to maintain control. Doses of BDP can be titrated up or down by switching between QVAR 50 and QVAR 100 as required.

Comparative clinical studies show that asthma patients achieve equivalent pulmonary function and control of symptoms with QVAR at lower total daily doses than CFC-BDP inhalers. These studies demonstrate clinical equivalence between CFC-BDP and QVAR inhalers when given in a dose ratio of 2.5 to 1.

Transferring Patients from other Inhaled Corticosteroids to QVAR:
Step 1 - Consider the dose of the inhaled corticosteroid appropriate to the patient's current condition. Symptomatic patients may require an increased dose of their current inhaled corticosteroid and this increased dose should be considered in transferring patients to QVAR.
Step 2 - Convert the appropriate inhaled corticosteroid dose to the QVAR dose according to the table below:

	Daily Dose (μg)				
CFC-BDP	200-250	400-500	800-1000	1200-1500	1600-2000
Budesonide DPI*	200	400	800	1200	1600-2000
Fluticasone pMDI**	100	200-250	400-500	600-750	1000
QVAR	100	200	400	600	800

*** dry powder inhaler** ****pressurised metered dose inhaler**

Special Patient Groups
Elderly and Patients with Hepatic or Renal Impairment

No special dosage recommendations are made.

Patients not receiving Systemic Corticosteroids

For patients who are inadequately controlled with bronchodilators and who are not receiving systemic corticosteroids, it is recommended that they continue to use a bronchodilator when treatment with QVAR commences. Any improvement in respiratory function is usually apparent in 1 to 4 weeks. Some of the patients who do not respond during this period may have excessive mucus in their bronchi so that BDP is unable to penetrate to its site of action. A short course of systemic steroids in relatively high dosage should be given to eliminate mucus and other inflammatory changes in the lungs. Continuation of treatment with QVAR usually maintains the improvement achieved with the oral steroid while it is being withdrawn gradually. Exacerbation of asthma caused by infection is usually controlled by appropriate antibiotic treatment and, if necessary, by increasing the dose of QVAR. However, it may be necessary to give a short, intensive course of systemic steroids to tide over the duration of the stress.

Steroid Dependent Patients

As recovery from impaired adrenocortical function, caused by prolonged systemic steroid therapy is slow, adrenocortical function should be monitored regularly. The patient's asthma should be in a stable state before being given inhaled steroids in addition to the usual maintenance dose of systemic steroid.

Withdrawal of systemic steroids should be gradual, starting about seven days after the introduction of QVAR therapy. For daily oral doses of prednisolone of 10 mg or less, dose reduction in 1 mg steps at intervals of not less than one week is recommended. The dose reduction scheme should be chosen to correlate with the magnitude of the maintenance systemic steroid dose.

Some patients feel unwell experiencing aches and pains, tiredness and even depression during the withdrawal phase despite maintenance or even improvement of respiratory function. These withdrawal symptoms should be treated symptomatically and the patient should be encouraged to persevere with the inhaler and withdrawal of systemic steroids. However, if there are objective signs of adrenal insufficiency, it may be necessary to resume systemic steroid treatment temporarily.

Most patients can be successfully transferred to inhaled steroids with maintenance of good respiratory function, but special care is necessary for the first months after the transfer until the hypothalamic-pituitary-adrenal (HPA) system has sufficiently recovered to enable the patient to cope with emergencies such as trauma, surgery or severe infections. It may be advisable to provide such patients with a supply of oral steroid to use in such emergencies. The dose of inhaled steroids should be increased at this time and then gradually reduced to the maintenance level after the systemic steroid has been discontinued.
Discontinuation of systemic steroids may cause exacerbation of allergic diseases such as atopic eczema and rhinitis previously controlled by the systemic BDP. These should be treated symptomatically with antihistamines and/or topical therapy.

OVERDOSAGE

For information on the management of overdose, contact the Poisons Information Centre on 131126 (Australia).

The harmful effect that follows inhalation of large amounts of QVAR over a short time period is suppression of HPA function. Specific emergency action need not be taken. Treatment with QVAR should be continued at the recommended dose to control the asthma; HPA function recovers in a day or two.

If excessive doses of BDP were taken over a prolonged period a degree of atrophy of the adrenal cortex could occur in addition to HPA suppression. In this event the patient should be treated as steroid dependant and transferred to a suitable maintenance dose of a systemic steroid such as prednisolone. Regular tests of adrenal function are advised. Once the condition is stabilised, the patient should be returned to QVAR by the recommended method (see Dosage and Administration).

PRESENTATION AND STORAGE CONDITIONS

QVAR 50 Inhaler and Autohaler deliver 50 μg of BDP per inhalation. QVAR 100 Inhaler and Autohaler deliver 100 μg of BDP per inhalation. Each 200 dose canister provides 200 inhalations. 1's

Store below 30°C. Avoid storage in direct sunlight or heat. Protect from frost.
As the canister is pressurised no attempt should be made to puncture or dispose of it by burning.

NAME AND ADDRESS OF THE SPONSOR

iNova Pharmaceuticals (Australia) Pty Limited
L10, 12 Help Street
Chatswood NSW 2067
Toll Free: 1800 630 056

POISON SCHEDULE OF THE MEDICINE

~~(S4)~~ Prescription Only Medicine

DATE OF FIRST INCLUSION IN THE AUSTRALIAN REGISTER OF THERAPEUIC GOODS (the ARTG)

QVAR Autohaler: 23/11/1999

QVAR 50 & 100 Inhaler: 23/11/1999

DATE OF MOST RECENT AMENDMENT

24 July 2014

QVAR Autohaler and QVAR Inhaler are a product technology developed by 3M Pharmaceuticals

QVAR, Autohaler and 3M are registered trademarks