SUMMARY OF PRODUCT CHARACTERISTICS FOR XPEL SUSPENSION

1. NAME OF THE MEDICINAL PRODUCT

XPEL SUSPENSION

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 5 ml contains Albendazole 100 mg

For a full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Oral Suspension

White pleasant taste orange - vanilla flavoured suspension

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Indicated in the treatment of single or mixed infestations of the following:

Enterobius vermicularis (pinworm/threadworm), *Ascaris lumbricoides* (roundworm), *Ancylostoma duodenale* and *Necator americanus* (hookworms), *Trichuris trichiura* (whipworm), *Strongyloides stercoralis*, animal hookworm larvae causing cutaneous *larva migrans*, and the liver flukes *Opisthorchis viverrini* and *Clonorchis sinensis*.

It is also indicated for the treatment of *Hymenolepis nana* and *Taenia* spp. (tapeworm) infections, when other susceptible helminths species are present.

4.2 Posology and method of administration

Method of administration

Oral suspension

Posology

Adults and Children (over two years)

- *Enterobius vermicularis, Ascaris lumbricoides, Ancylostoma duodenale, Necator americanus* and *Trichuris trichiura*: 400mg as a single dose, taken on an empty stomach.
- Suspected or confirmed *Strongyloides stercoralis* infestation: 400mg once daily, taken on an empty stomach for three consecutive days. Patients should then be appropriately followed for at least 2 weeks to confirm cure
- Cutaneous *larva migrans*: 400mg once daily, taken with food for one to three days has been reported to be effective.
- Suspected or confirmed *Taenia* spp. or *Hymenolepis nana* infestation, when other susceptible helminths species are present: 400mg once daily, taken on an empty stomach for three consecutive days. If the patient is not cured after three weeks, a second course of treatment is indicated. In cases of proven *H. nana* infestation, retreatment in 10-21 days is recommended.
- Mixed worm infestations including *Opisthorchis viverrini* and *Clonorchis sinensis*: 400mg twice a day, taken with food for three days is effective. Patients should be re-examined 1 month after treatment to confirm fluke eradication.

4.3 Contraindications

Hypersensitivity to the active substance(s) or to any of the excipients listed in section 6.1. Xpel Should not be administered during pregnancy or in women thought to be pregnant as albendazole has been shown to be teratogenic and embryotoxic in some animals.

4.4 Special warnings and precautions for use

Confirmation of eradication of many intestinal and tissue parasites is necessary after treatment. Mild to moderate elevations of liver enzymes have been reported with albendazole. Elevations of liver enzymes increase risk of hepatotoxicity and bone marrow suppression. In prolonged higher dose albendazole therapy for hydatid disease, there have been rare reports of severe hepatic abnormalities associated with jaundice and histological hepatocellular damage, which may be irreversible. Case reports of hepatitis have also been received. Enzyme abnormalities usually normalize on discontinuation of treatment.

Monitor and perform liver function tests (hepatic transaminase concentrations) prior to each cycle of albendazole treatment and at least every 2 weeks during treatment. If liver enzymes are significantly increased (greater than twice the Upper Limit of Normal (ULN) or full blood count decreased by a clinically significant level, consider discontinuing the drug based. Decisions to reinstitute albendazole when hepatic enzymes return to pretreatment levels should be individualized taking into account the risks and benefits of further albendazole treatment. If the drug is reinstituted, perform laboratory tests frequently to monitor for recurrence.

Albendazole has been shown to cause bone marrow suppression and therefore blood counts should be monitored at the start of each 28-day cycle and every two weeks during treatment. Closer monitoring of blood counts is recommended in patients with liver disease, including hepatic echinococcosis, since these individuals may be more susceptible to bone marrow suppression leading to pancytopenia, aplastic anemia, agranulocytosis, and leukopenia. Albendazole should be discontinued if clinically significant decreases in blood cell counts occur.

Destruction of cysticercosis lesions by albendazole may cause irreparable retinal damage, even when corticosteroids are given. Prior to treatment of neurocysticercosis, examine patient for cysticercosis retinal lesions. In those with such lesions, weigh the need for treatment against the possibility of irreparable retinal damage. Symptoms associated with an inflammatory reaction following death of the parasite within the brain may occur in patients receiving albendazole treatment for neurocysticercosis (e.g. seizures, raised intracranial pressure, hydrocephalus, focal signs). These should be treated with appropriate corticosteroid and anticonvulsant therapy. Oral or intravenous corticosteroids are recommended during the first week of treatment to prevent cerebral hypertension. Pre-existing neurocysticercosis may also be uncovered in patients treated with albendazole for other conditions. Symptoms may occur soon after treatment, appropriate steroid and anticonvulsant therapy should be started immediately.

There is a risk that treatment of *Taenia solium* infections may be complicated by cysticercosis, and appropriate measures should be taken to minimise this possibility.

The use of albendazole in patients with impaired renal or hepatic function has not been studied. However, caution should be used in patients with pre-existing liver disease, since albendazsole is metabolised by the liver and has been associated with idiosyncratic hepatotoxicity.

There is limited experience in children under 2 years of age, therefore use in this age group is not recommended.

4.5 Interaction with other medicinal products and other forms of interaction

Phenytoin, carbamazepine, and phenobarbital appear to induce the oxidative metabolism of albendazole, resulting in significantly reduced concentrations of albendazole sulfoxide. This interaction is likely to be clinically significant when albendazole is used to treat systemic worm infections. The interaction is probably not clinically significant when albendazole is used for intestinal worm infections. Antidiabetic agents potentiate the action of albendazole, H 2 antagonist increases the plasma concentration of albendazole. Cimetidine, praziquantel and dexamethasone have been reported to increase the plasma levels of the albendazole active metabolite.

Chinese Ginseng may theoretically reduce the intestinal concentration of albendazole active metabolite. Grapefruit juice may increase the bioavailability of albendazole but less than the increase observed after a fatty meal
Albendazole may theoretically inhibit theophylline metabolism and increase toxicity.

4.6 Pregnancy, lactation and Fertility

Xpel is contra – indicated in pregnancy, patients who think they are, or may be pregnant should not take Xpel.

It is not known whether Albendazole is excreted in human milk. It is therefore not advisable to breast feed following the administration of Xpel Suspension.

4.7 Effects on ability to drive and use machines

XPEL do not have direct influence on the ability to drive or use machinery

4.8 Undesirable effects

Gastro – intestinal disturbances such as transient abdominal pain and diarrhea have tendered to occur in patients being treated for heavy intestinal infestation, side effects in patients treated with high doses include allergic reactions, alopecia, transient neutropenia, agranulocytosis and hypospemia. In doses exceeding the recommendations, vomiting, fever, bone marrow suppression, raised hepatic enzymes, hepatitis and glomerular nephritis can occur. Hypersensitivity reactions such as exanthema, rash, urticarial, pruritis, urticaria and angio – oedema have been observed.

4.9 Overdose

In the event of accidental overdose, disturb of vision, psychic alteration, abdominal cramps, nausea, vomiting and diarrhea may occur.

If poisoning or excessive overdose is suspected, it is recommended, on general principles, that vomiting be induced or gastric levage be performed and such symptomatic supportive therapy be administered as appears. Activated charcoal may also be given.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

The specific ATC code for Albendazole is P02CA01. Albendazole is a benzimidazole carbamate derivative; it is a broad – spectrum anthelmintic.

It causes selective disappearance of cytoplasmic microtubules in the tegumental and intestinal cells of affected worms. Glucose uptake is thereby selectively and irreversibly blocked in susceptible adult intestine dwelling helminthes and their tissue dwelling larvae. Inhibition of glucose uptake results in glycogen depletion of the parasite. This in turn results in reduced formation of ATP required for survival and reproduction of the helminth. Corresponding energy levels are gradually reduced until death of the parasite ensues.

5.2 Pharmacokinetic properties

Albendazole poorly absorbed from the gastrointestinal tract rapidly undergoes extensive first-pass metabolism in the liver, and is generally not detected in plasma or in urine. Albendazole sulphoxide is the primary metabolite, which is thought to be the active moiety in effectiveness against systemic tissue infections (anthelmintic activity). Peak plasma concentrations of albendazole sulfoxide attained 2–5 hours after a dose. Albendazole sulphoxide is further metabolized to albendazole sulfone and other primary oxidative metabolites.

Albendazole sulfoxide is widely distributed throughout the body including into urine, bile, liver, cyst wall, cyst fluid, and cerebrospinal fluid (CSF). It is about 70% bound to plasma protein.

Albendazole sulphoxide and its metabolites appear to be principally eliminated in bile, with only a small proportion (<1% of albendazole sulfoxide) appearing in the urine. The plasma half- life of albendazole sulphoxide is 8-12 hours**.**

Patients with extrahepatic obstruction: Increased albendazole sulfoxide serum concentration and prolonged half-life. Elimination half-life may be 31.7 hours.

5.3 Preclinical safety data

No other relevant information beside what is provided in other sub sections of this SmPC.

Carcinogenic potential:

There is not report of carcinogenic potential following administration of Albendazole.

Mutagenic potential:

Albendazole is structurally related to mebendazole and with similar activities. Study on mebendazole showed that it is teratogenic in rats but there are no adequate and well controlled studies in human pregnancy. It was noted that in the survey of limited number of pregnant women who have inadvertently taken mebendazole during the first trimester, the incidence of malformation and spontaneous abortion was no greater than that observed in the general population.

6. PHARMACEUTICAL PARTICULARS

SUMMARY OF PRODUCT CHARACTERISTICS FOR XPEL SUSPENSION

6.1 List of excipients

Simethicone, Tween 80, Xanthan gum, Sugar, Sorbitol, Sodium Benzoate, Potassium Sorbate, Citric Acid, Orange Flavour, Vanilla Flavour.

6.2 Incompatibilities

Not Known

6.3 Shelf life

A tentative shelf life of 2 years is proposed for Xpel Suspension

6.4 Special precautions for storage

Store in a cool dark place below 30 ^{O}C. Keep out of reach of children

6.5 Nature and contents of container and special equipment for use, administration or implantation

The primary container is amber PET bottle with white aluminuin P.P cap. Carton box with characteristic colour shade and overprinting serves as secondary packaging material.

6.6 Special precautions for disposal and other handling

There are no special requirements for disposal and handling of Xpel Suspension, however, it should be handled with care. Medicines should however not be disposed of via wastewater or household waste. Any unused product or waste material should be disposed of in accordance with local requirements.

7. SUPPLIER

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8. DATE OF LAST REVISION

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