1. NAME OF THE MEDICINAL PRODUCT

Pentasa® Suppositories

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each Pentasa suppository contains: 1g mesalazine

For a full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Suppositories. Oblong, compressed white to light tan, speckled suppositories

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Treatment of Ulcerative Proctitis.

4.2 Posology and method of administration

1 suppository 1-2 times daily. Method of administration

For rectal use.

A visit to the toilet is recommended before administration of suppositories.

See separate instructions for use.

4.3 Contraindications

PENTASA is contraindicated in:

- patients with known hypersensitivity to mesalazine, salicylates or any of the excipients, listed in section 6.1
- patients with severe liver and/or renal impairment

4.4 Special warnings and precautions for use

Caution is recommended when treating patients allergic to sulphasalazine (risk of allergy to salicylates). Severe cutaneous adverse reactions (SCARs), including drug reaction with eosinophilia and systemic symptoms (DRESS), Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN), have been reported in association with mesalazine treatment. In case of acute symptoms of intolerance i.e. abdominal cramps, abdominal pain, fever and severe headache and/or the first appearance of signs and symptoms of severe skin reactions, such as skin rash, mucosal lesions, or any other signs of hypersensitivity, the treatment should be discontinued immediately.

Caution is recommended in patients with impaired liver function. Liver function parameters like ALT or AST should be assessed prior to and during treatment, at the discretion of the treating physician.

The drug is not recommended for use in patients with impaired renal function and in patients with haemorrhagic diathesis. Baseline renal function measurement is required in all patients initiating treatment with mesalazine. Urinary status (dip sticks) should be determined prior to and during treatment at the discretion of the treating physician. The renal function should be regularly monitored (e.g. serum creatinine), especially during the initial phase of treatment based on clinical judgment taking baseline renal function into account.

Mesalazine induced nephrotoxicity should be suspected in patients developing renal dysfunction during treatment. The concurrent use of other known nephrotoxic agents, such as NSAIDs and azathioprine, may increase the risk of renal reactions. Treatment should be discontinued if renal function deteriorates.

Patients with pulmonary disease, in particular asthma, should be very carefully monitored during a course of treatment, please refer to section 4.8.

Mesalazine induced cardiac hypersensitivity reactions (myo- and pericarditis) have been reported rarely. Serious blood dyscrasias have been reported very rarely with mesalazine (see section 4.5). Blood tests for differential blood counts is recommended prior to and during treatment, at the discretion of the treating physician. Treatment should be discontinued on suspicion or evidence of these reactions.

Cases of nephrolithiasis have been reported with the use of mesalazine including stones with a 100% mesalazine content. It is recommended to ensure adequate fluid intake during treatment.

As a guideline, follow-up tests are recommended 14 days after commencement of treatment, then a further two to three tests at intervals of 4 weeks. If the findings are normal, follow-up tests should be carried out every three months. If additional symptoms occur, these tests should be performed immediately.

If a patient develops dehydration while on treatment with mesalazine, normal electrolyte levels and fluid balance should be restored as soon as possible.

Mesalazine may produce red-brown urine discoloration after contact with sodium hypochlorite bleach (e.g. in toilets cleaned with sodium hypochlorite contained in certain bleaches).

4.5 Interaction with other medicinal products and other forms of interaction

No interaction studies have been performed. Combination therapy with PENTASA andazathioprine, or 6-mercaptopurine, or thioguanine, a possible increase in the myelosuppressive effects of azathioprine, or 6-mercaptopurine, or thioguanine have shown a higher frequency of myelosuppressive effects, and an interaction cannot be ruled out, however, the mechanism behind the interaction is not established. Regular monitoring of white blood cells is recommended and the dosage regimen of thiopurine should be adjusted accordingly.

There is weak evidence that mesalazine might decrease the anticoagulant effect of warfarin.

4.6 Fertility, pregnancy and lactation

PENTASA should not be used during pregnancy and lactation except when the potential benefit of the treatment outweighs the possible hazards in the opinion of the physician. The underlying condition itself (Inflammatory bowel disease (IBD)) may increase risks for adverse pregnancy outcome. Pregnancy: Mesalazine is known to cross the placental barrier and its concentration in umbilical cord plasma is lower than the concentration in maternal plasma. The metabolite acetyl-mesalazine is found at similar concentrations in umbilical cord and maternal plasma. Animal studies on oral mesalazine do not indicate direct or indirect harmful effects with respect to pregnancy, embryo/foetal development, parturition or postnatal development. There are no adequate and well controlled studies of PENTASA use in pregnant women.

Limited published human data on mesalazine show no increase in the overall rate of congenital malformations. Some data show an increased rate of preterm birth, stillbirth, and low birth weight; however, these adverse pregnancy outcomes are also associated with active inflammatory bowel disease.

Blood disorders (leucopenia, thrombocytopenia, anaemia) have been reported in new-borns of mothers being treated with PENTASA.

In one single case after long-term use of a high dose of mesalazine (2-4 g, orally) during pregnancy, renal failure in a neonate was reported.

Breast-feeding:

Mesalazine is excreted in breast milk. The mesalazine concentration in breast milk is lower than in maternal blood, whereas the metabolite, acetyl-mesalazine appears in similar or increased concentrations. No controlled studies with PENTASA during breast-feeding have been carried out. There is only limited experience during lactation in women after oral application is available to date. Hypersensitivity reactions like diarrhoea cannot be excluded. If the infant develops diarrhoea, breast-feeding should be discontinued.

Fertility:

Animal data on Mesalazine show no effect on male and female fertility

4.7 Effects on ability to drive and use machines

PENTASA has no or negligible influence on the ability to drive and/or use machines.

4.8 Undesirable effects

Summary of the safety profile

The most frequent adverse reactions seen in clinical trials are diarrhoea, nausea, abdominal pain, headache, vomiting, and rash. Hypersensitivity reactions and drug fever may occasionally occur, and severe cutaneous adverse reactions (SCARs), including drug reaction with eosinophilia and systemic symptoms (DRESS), Stevens-Johnson syndrome (SJS) and toxic epidermal necrolysis (TEN), have been reported in association with mesalazine treatment (see section 4.4).

Following rectal administration local reactions such as pruritis, rectal discomfort and urge may occur.

Frequency of adverse effects, based on clinical trials and reports from post-marketing surveillance

SOC	Common ≥1/100 to < 1/10	Rare ≥1/10,000 to ≤ 1/1,000	Very rare ≤ 1/10,000	Not known (cannot be estimated from the available data).
Blood and the lymphatic system disorders			altered blood counts (anaemia, aplastic anaemia, agranulocytosis, neutropenia, leukopenia (incl. granulocytopenia) pancytopenia, thrombocytopenia, and eosinophilia (as	

Immune system disorders	Immune system disorders Nervous system disorders		ı	T	I	
Mervous system disorders	Respiratory, thoracic and mediastinal disorders Headache disorders					
Mervous system disorders	Respiratory, thoracic and mediastinal disorders Headache disorders	Immune system			Hypersensitivity	
Nervous system disorders	Nervous system disorders					
Nervous system disorders	Nervous system disorders				anaphylactic	
Nervous system disorders Cardiac disorders Respiratory, thoracic and mediastinal disorders Gastrointestinal disorders Diarrhoea, Nausea, Vomiting, Flatulence Hepato-biliary disorders Rash (incl. urticaria, ersh) Rash (incl. urticaria, ersh) Peripheral neuropathy Allergic alveolitis allergic and fibrotic lung reactions (incl. dyspnoea, coughing, bronchospasm, pulmonary eosinophilia, interstitial lung disease, pulmonary infiltration, pneumonitis) Pancolitis Pancolitis Pancolitis Pancolitis Increased amylase (blood and/or urine) Increased liver enzymes, cholestasis parameters and bilirubin, hepatotoxicity (incl. hepatilis*, cholestatic hepatitis, cirrhosis, hepatic failure) Skin and subcutaneous tissue disorders Respiratory, Allergic alveolitis	Nervous system disorders					
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Drug Reaction with	Eosinophilia and Systemic Symptoms					* *
•	Systemic Symptoms					_
	(Diceso)					
						(-122)

Musculoskeletal connective		Myalgia, arthralgia, lupus	
tissue and bone		erythematosus-like	
disorders		syndrome	
		•	
Renal and		renal function	Nephrolithiasis***
urinary		impairment ****	
disorders		(incl. interstitial	urine
		nephritis (acute and	discolouration***
		chronic)*, nephrotic	
		syndrome, renal	
		insufficiency and	
Reproductive		Oligospermia	
<u>system</u>		(reversible)	
<u>disorders</u>			
General	Anal	Drug fever	
disorders and	discomfort		
administration	and irritation		
site conditions	at the		
	application site, pruritus		
	(anal), rectal		
	tenesmus		

^(*) The mechanism of mesalazine induced myo- and pericarditis, pancreatitis, nephritis and hepatitis is unknown, but it might be of allergic origin.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions to the Ministry of Health according to the National Regulation by using an online form https://sideeffects.health.gov.il/

4.9 Overdose

Acute experience in animals:

A single intravenous dose of mesalazine at 920mg/kg in rats and single oral doses of mesalazine in pigs up to 5g/kg in pigs were not lethal.

Human experience:

There is limited clinical experience with overdose of PENTASA which does not indicate renal or hepatic toxicity. Since PENTASA is an amino salicylate, symptoms of salicylate toxicity may occur. Symptoms of salicylate over dosage are well described in the literature.

There have been reports of patients taking oral daily doses of 8 grams for a month without any adverse events.

^(**) Photosensitivity: More severe reactions are reported in patients with pre-existing skin conditions such as atopic dermatitis and atopic eczema.

^(***) see section 4.4 for further information.

^(****) Renal failure has been reported. Mesalazine-induced nephrotoxicity should be suspected in patients developing renal dysfunction during treatment.

There is no specific antidote and treatment is symptomatic and supportive. The treatment at hospital includes close monitoring of renal function.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic Properties

Pharmacotherapeutic group: Intestinal anti-inflammatory agents, , aminosalicylic acid and similar agents

ATC Code: A07 EC02

Mesalazine is the active component of sulphasalazine which has been used for a long time in the treatment of ulcerative colitis and Crohn's disease.

The therapeutic value of mesalazine appears to be due to local effect on the inflamed intestinal tissue, rather than to systemic effect. There is information suggesting that severity of colonic inflammation in ulcerative colitis patients treated with mesalazine is inversely correlated with mucosal concentrations of mesalazine.

Increased leucocyte migration, abnormal cytokine production, increased production of arachidonic acid metabolites, particularly leukotriene B4 and increased free radical formation in the inflamed intestinal tissue are all present in patients with inflammatory bowel disease. The mechanism of action of mesalazine is not fully understood although mechanisms such as activation of the γ -form of peroxisome proliferator-activated receptors (PPAR- γ) and inhibition of nuclear factor-kappa B (NF- κ B) in the intestinal mucosa have been implicated. Mesalazine has in-vitro and in-vivo pharmacological effects that inhibit leucocyte chemotaxis, decrease cytokine and leukotriene production and scavenge for free radicals. It is currently unknown which, if any of these mechanisms play a predominant role in the clinical efficacy of mesalazine.

5.2 Pharmacokinetic Properties

General characteristics of the active substance:

Disposition and local availability:

The therapeutic activity of mesalazine most likely depends on a local contact of the drug with the diseased area of the intestinal mucosa. *PENTASA suppositories* are designed to provide the distal part of the intestinal tract with high concentrations of mesalazine and a low systemic absorption. Suppositories are used to treat the rectum.

Absorption:

The absorption following rectal administration is low, but depends on the dose, the formulation and the extent of spread. Based on urine recoveries in healthy volunteers under steady-state conditions given a daily dose of 2g (1g x 2), approximately 10% of the dose is absorbed after administration of suppositories.

Distribution:

Mesalazine and acetyl mesalazine do not cross the blood-brain barrier. Protein binding of mesalazine is approximately 50% and of acetyl mesalazine about 80%.

Metabolism:

Mesalazine is metabolised both pre-systemically by the intestinal mucosa and systemically in the liver to N-acetyl mesalazine (acetyl mesalazine) principally by NAT-1.. The acetylation seems to be independent of the acetylator phenotype of the patient.

Elimination:

The plasma half-life of pure mesalazine is approximately 40 minutes and for acetyl mesalazine approximately 70 minutes. Both substances are excreted in urine and faeces. The urinary excretion consists mainly of acetyl mesalazine.

5.3 Preclinical Safety Data

Toxic renal effects have been demonstrated in all species tested. Rat and monkey dosages and plasma concentrations at the No Observed Adverse Effect Levels (NOAELs) exceed those used in humans by a factor of 2-7.2.

In vitro test systems and in-vivo studies showed no evidence of mutagenic effects. Studies on the tumourigenic potential carried out in rats showed no evidence of any substance-related increase in the incidence of tumours.

Animal studies on oral mesalazine do not indicate direct or indirect harmful effects with respect to fertility, pregnancy, embryo-foetal development, parturition or postnatal development.

Mesalazine is deemed not to pose a risk to the environment at the doses prescribed for use in patients

6. Pharmaceutical Particulars

6.1 **List of excipients**

Magnesium stearate, talc, povidone, macrogol 6000

- 6.2 **Incompatibilities:** Not applicable
- 6.3 **Shelf Life:** The expiry date of the product is indicated on the packaging materials

6.4 Storage Conditions

Store bellow 25°C.

6.5 Nature and Contents of Container

Double aluminium foil blister strips of 7 suppositories each. Pack size: 28

6.6 **Instructions for use/handling**

No special requirements.

6.7 License Number

062 73 26904

7. **Manufacturer:** Ferring, St-Prex ,Switzerland

8. **License Holder**

Ferring Pharmaceuticals Ltd 8, Hashita Street, Industrial Park Caesarea 3088900 ISRAEL

This leaflet was revised in June 2023 according to MOH guidelines.