

1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

1. NAME OF THE MEDICINAL PRODUCT

Azibiot[®] 500 mg film-coated tablets

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each film-coated tablet contains 500 mg azithromycin as 524 mg azithromycin dihydrate.

Excipients: 2.85 mg lactose/tablet.

For a full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Film-coated tablet. The tablets are oval, white, with a score. The tablet can be divided into equal halves.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Azibiot is is indicated for the following bacterial infections induced by micro-organisms susceptible to azithromycin (see sections 4.4 and 5.1):

- upper respiratory tract infections (otitis media, sinusitis, pharyngotonsillitis);
- acute exacerbation of chronic bronchitis;
- community acquired pneumonia
- infections of the skin and soft tissues e.g. folliculitis, cellulitis, erysipelas
- uncomplicated Chlamydia trachomatis urethritis and cervicitis

Consideration should be given to official guidance on the appropriate use of antibacterial agents.

4.2 **Posology and method of administration**

Posology

Azibiot should be given as a single daily dose. Duration of the treatment for the different infection diseases is given below.

Children and adolescents with a body weight above 45 kg, adults and the elderly:

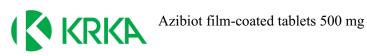
The total dose is 1500 mg, administered as 500 mg once daily for 3 days. Alternatively, the same total dose (1500 mg) can be administered in a period of 5 days, 500 mg on the first day and 250 mg on day 2 to 5.

In the case of uncomplicated *Chlamydia trachomatis* urethritis and cervicitis, the dosage is 1000 mg as a single oral dose.

Children and adolescents with a body weight below 45 kg:

Azibiot tablets are not suitable for patients under 45 kg body weight. Other dosage forms are available for this group of patients.

SmPCPIL153552 1	16.07.2020 – Updated: 16.07.2020	Page 1 of 13
_		



1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

Elderly patients

The same dosage as in adult patients is used in the elderly. Since elderly patients can be patients with ongoing proarrhythmic conditions a particular caution is recommended due to the risk of developing cardiac arrhythmia and torsades de pointes. (see Section 4.4).

Patients with renal impairment:

Dose adjustment is not required in patients with mild to moderate renal impairment (GFR 10-80 ml/min) (see section 4.4).

Patients with hepatic impairment:

Dose adjustment is not required for patients with mild to moderate hepatic dysfunction (see section 4.4).

Method of administration

The tablets can be taken with or without food. The tablets should be taken with water.

4.3 **Contraindications**

Hypersensitivity to the azithromycin, erythromycin, any macrolide or ketolide antibiotic or to any of the excipients listed in section 6.1.

Special warnings and precautions for use 4.4

As with erythromycin and other macrolides, rare serious allergic reactions, including angioedema and anaphylaxis (rarely fatal), have been reported. Some of these reactions with azithromycin have resulted in recurrent symptoms and required a longer period of observation and treatment.

Since liver is the principal route of elimination for azithromycin, the use of azithromycin should be undertaken with caution in patients with significant hepatic disease. Cases of fulminant hepatitis potentially leading to life-threatening liver failure have been reported with azithromycin (see Section 4.8) Some patients may have had pre-existing hepatic disease or may have been taking other hepatotoxic medicinal products.

In case of signs and symptoms of liver dysfunction, such as rapid developing asthenia associated with jaundice, dark urine, bleeding tendency or hepatic encephalopathy, liver function tests/ investigations should be performed immediately. Azithromycin administration should be stopped if liver dysfunction has emerged.

In patients receiving ergot derivatives, ergotism has been precipitated by coadministration of some macrolide antibiotics. There are no data concerning the possibility of an interaction between ergot and azithromycin. However, because of the theoretical possibility of ergotism, azithromycin and ergot derivatives should not be coadministered.

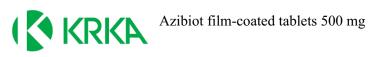
As with any antibiotic preparation, observation for signs of superinfection with non-susceptible organisms, including fungi is recommended.

Pseudomembranous colitis has been reported with the use of macrolide antibiotics. This diagnosis should therefore be considered in patients who develop diarrhoea after starting treatment with azithromycin. Should pseudomembranous colitis be induced by azithromycin, anti-peristaltics should be contraindicated.

Clostridium difficile associated diarrhea (CDAD) has been reported with use of nearly all antibacterial agents, including azithromycin, and may range in severity from mild diarrhea to fatal colitis.

SmPCPIL153552_1	16.07.2020 – Updated: 16.07.2020	Page 2 of 13
-----------------	----------------------------------	--------------

CONFIDENTIAL



1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

Treatment with antibacterial agents alters the normal flora of the colon leading to overgrowth of C. difficile.

C. difficile produces toxins A and B which contribute to the development of CDAD. Hypertoxin producing strains of C. difficile cause increased morbidity and mortality, as these infections can be refractory to antimicrobial therapy and may require colectomy. CDAD must be considered in all patients who present with diarrhea following antibiotic use. Careful medical history is necessary since CDAD has been reported to occur over two months after the administration of antibacterial agents.

No dose adjustment is necessary in patients with mild to moderate renal impairment (Glomerular Filtration Rate [GFR] 10–80 ml/min). In patients with severe renal impairment (GFR <10 ml/min) a 33% increase in systemic exposure to azithromycin was observed (see Section 5.2).

Prolonged cardiac repolarization and QT interval, imparting a risk of developing cardiac arrhythmia and torsades de pointes, have been seen in treatment with other macrolides. A similar effect with azithromycin cannot be completely ruled out in patients at increased risk for prolonged cardiac repolarization (see Section 4.8) therefore caution is required when treating patients :

• With congenital or documented QT prolongation

• Currently receiving treatment with other active substances known to prolong QT interval such as antiarrhythmics of classes IA and III, cisapride and terfenadine

- With electrolyte disturbance, particularly in cases of hypokalaemia and hypomagnesemia
- With clinically relevant bradycardia, cardiac arrhythmia or severe cardiac insufficiency

Exacerbations of the symptoms of myasthenia gravis and new onset of myasthenia syndrome have been reported in patients receiving azithromycin therapy (See Section 4.8).

Paediatric population

Safety and efficacy for the prevention or treatment of MAC in children have not been established.

Special information about some of the ingredients

The film-coated tablets contain lactose. Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption should not take this medicine.

4.5 Interaction with other medicinal products and other forms of interaction

Antacids: In a pharmacokinetic study investigating the effects of simultaneous administration of antacid with azithromycin, no effect on overall bioavailability was seen although peak serum concentrations were reduced by approximately 25%. In patients receiving both azithromycin and antacids, the drugs should not be taken simultaneously.

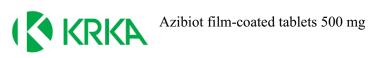
Cetirizine: In healthy volunteers, coadministration of a 5-day regimen of azithromycin with cetirizine 20 mg at steady-state resulted in no pharmacokinetic interaction and no significant changes in the QT interval.

Didanosine (Dideoxyinosine): Coadministration of 1200 mg/day azithromycin with 400 mg/day didanosine in 6 HIV-positive subjects did not appear to affect the steady-state pharmacokinetics of didanosine as compared with placebo.

Digoxin: Some of the macrolide antibiotics have been reported to impair the microbial metabolism of digoxin in the gut in some patients. In patients receiving concomitant azithromycin, a related azalide antibiotic, and digoxin the possibility of raised digoxin levels should be borne in mind.

SmPCPIL153552_1	16.07.2020 – Updated: 16.07.2020	Page 3 of 13
-----------------	----------------------------------	--------------

CONFIDENTIAL



1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

Zidovudine: Single 1000 mg doses and multiple 1200 mg or 600 mg doses of azithromycin had little effect on the plasma pharmacokinetics or urinary excretion of zidovudine or its glucuronide metabolite. However, administration of azithromycin increased the concentrations of phosphorylated zidovudine, the clinically active metabolite, in peripheral blood mononuclear cells. The clinical significance of this finding is unclear, but it may be of benefit to patients.

Azithromycin does not interact significantly with the hepatic cytochrome P450 system. It is not believed to undergo the pharmacokinetic drug interactions as seen with erythromycin and other macrolides. Hepatic cytochrome P450 induction or inactivation via cytochrome-metabolite complex does not occur with azithromycin.

Ergot: Due to the theoretical possibility of ergotism, the concurrent use of azithromycin with ergot derivatives is not recommended (see Section 4.4).

Pharmacokinetic studies have been conducted between azithromycin and the following drugs known to undergo significant cytochrome P450 mediated metabolism.

Atorvastatin: Coadministration of atorvastatin (10 mg daily) and azithromycin (500 mg daily) did not alter the plasma concentrations of atorvastatin (based on a HMG CoA-reductase inhibition assay). However, post-marketing cases of rhabdomyolysis in patients receiving azithromycin with statins have been reported.

Carbamazepine: In a pharmacokinetic interaction study in healthy volunteers, no significant effect was observed on the plasma levels of carbamazepine or its active metabolite in patients receiving concomitant azithromycin.

Cimetidine: In a pharmacokinetic study investigating the effects of a single dose of cimetidine, given 2 hours before azithromycin, on the pharmacokinetics of azithromycin, no alteration of azithromycin pharmacokinetics was seen.

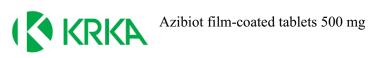
Coumarin-Type Oral Anticoagulants: In a pharmacokinetic interaction study, azithromycin did not alter the anticoagulant effect of a single 15-mg dose of warfarin administered to healthy volunteers. There have been reports received in the post-marketing period of potentiated anticoagulation subsequent to coadministration of azithromycin and coumarin-type oral anticoagulants. Although a causal relationship has not been established, consideration should be given to the frequency of monitoring prothrombin time when azithromycin is used in patients receiving coumarin-type oral anticoagulants.

Cyclosporin: In a pharmacokinetic study with healthy volunteers that were administered a 500 mg/day oral dose of azithromycin for 3 days and were then administered a single 10 mg/kg oral dose of cyclosporin, the resulting cyclosporin Cmax and AUC0-5 were found to be significantly elevated. Consequently, caution should be exercised before considering concurrent administration of these drugs. If coadministration of these drugs is necessary, cyclosporin levels should be monitored and the dose adjusted accordingly.

Efavirenz: Coadministration of a 600 mg single dose of azithromycin and 400 mg efavirenz daily for 7 days did not result in any clinically significant pharmacokinetic interactions.

Fluconazole: Coadministration of a single dose of 1200 mg azithromycin did not alter the pharmacokinetics of a single dose of 800 mg fluconazole. Total exposure and half-life of azithromycin were unchanged by the coadministration of fluconazole, however, a clinically insignificant decrease in Cmax (18%) of azithromycin was observed.

SmPCPIL153552 1	16.07.2020 – Updated: 16.07.2020	Page 4 of 13



1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

Indinavir: Coadministration of a single dose of 1200 mg azithromycin had no statistically significant effect on the pharmacokinetics of indinavir administered as 800 mg three times daily for 5 days.

Methylprednisolone: In a pharmacokinetic interaction study in healthy volunteers, azithromycin had no significant effect on the pharmacokinetics of methylprednisolone.

Midazolam: In healthy volunteers, coadministration of azithromycin 500 mg/day for 3 days did not cause clinically significant changes in the pharmacokinetics and pharmacodynamics of a single 15 mg dose of midazolam.

Nelfinavir: Coadministration of azithromycin (1200 mg) and nelfinavir at steady state (750 mg three times daily) resulted in increased azithromycin concentrations. No clinically significant adverse effects were observed and no dose adjustment is required.

Rifabutin: Coadministration of azithromycin and rifabutin did not affect the serum concentrations of either drug.

Neutropenia was observed in subjects receiving concomitant treatment of azithromycin and rifabutin. Although neutropenia has been associated with the use of rifabutin, a causal relationship to combination with azithromycin has not been established (see Section 4.8).

Sildenafil: In normal healthy male volunteers, there was no evidence of an effect of azithromycin (500mg daily for 3 days) on the AUC and Cmax, of sildenafil or its major circulating metabolite.

Terfenadine: Pharmacokinetic studies have reported no evidence of an interaction between azithromycin and terfenadine. There have been rare cases reported where the possibility of such an interaction could not be entirely excluded; however there was no specific evidence that such an interaction had occurred.

Theophylline: There is no evidence of a clinically significant pharmacokinetic interaction when azithromycin and theophylline are co-administered to healthy volunteers.

Triazolam: In 14 healthy volunteers, coadministration of azithromycin 500 mg on Day 1 and 250 mg on Day 2 with 0.125 mg triazolam on Day 2 had no significant effect on any of the pharmacokinetic variables for triazolam compared to triazolam and placebo.

Trimethoprim/sulfamethoxazole: Coadministration of trimethoprim/sulfamethoxazole DS (160 mg/800 mg) for 7 days with azithromycin 1200 mg on Day 7 had no significant effect on peak concentrations, total exposure or urinary excretion of either trimethoprim or sulfamethoxazole. Azithromycin serum concentrations were similar to those seen in other studies.

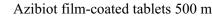
4.6 **Pregnancy and lactation**

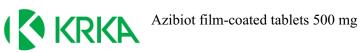
Pregnancy

There are no adequate data from the use of azithromycin in pregnant women. In reproduction toxicity studies in animals azithromycin was shown to pass the placenta, but no teratogenic effects were observed. The safety of azithromycin has not been confirmed with regard to the use of the active substance during pregnancy. Therefore azithromycin should only be used during pregnancy if the benefit outweighs the risk.

Breast-feeding

SmPCPIL153552 1	16.07.2020 – Updated: 16.07.2020	Page 5 of 13
	10.07.2020 Opaaloa: 10.07.2020	1 4 5 0 0 0 1





1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

Azithromycin has been reported to be secreted into human breast milk, but there are no adequate and well-controlled clinical studies in nursing women that have characterized the pharmacokinetics of azithromycin excretion into human breast milk.

Fertility

In fertility studies conducted in rat, reduced pregnancy rates were noted following administration of azithromycin. The relevance of this finding to humans is unknown.

4.7 Effects on ability to drive and use machines

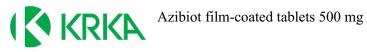
There is no evidence to suggest that azithromycin may have an effect on a patient's ability to drive or operate machinery.

4.8 **Undesirable effects**

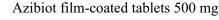
- Very common ($\geq 1/10$)
- Common ($\geq 1/100$ to < 1/10) _
- Uncommon ($\geq 1/1,000$ to < 1/100) _
- Rare ($\geq 1/10,000$ to < 1/1,000)
- Very rare (< 1/10,000) _
- Not known (cannot be estimated from the available data) _

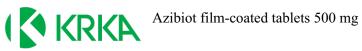
Adverse reactions possibly or probably related to azithromycin based on clinical trial experience and post-marketing surveillance:

	Very	Common	Uncommon	Rare	Not known
	common				
Infections and infestations			Candidiasis, oral candidiasis, vaginal infection, pneumonia, fungal infection, bacterial infection, pharyngitis, gastroenteritis, respiratory disorder, rhinitis		Pseudomembranou s colitis (See Section 4.4)
Blood and lymphatic system disorders			Leukopenia, neutropenia, eosinophilia		Thrombocytopenia, haemolytic anaemia
Immune system disorders			Angioedema, hypersensitivity		Anaphylactic reaction (See Section 4.4)
Metabolism and nutrition disorders			Anorexia		
Psychiatric disorders			Nervousness, insomnia	Agitation	Aggression, anxiety, delirium, hallucination
Nervous system		Headache	Dizziness,		Syncope,
SmPCPIL15355	52_1 1	6.07.2020 -	Updated: 16.07.20	020	Page 6 of



1.3.1			Azithromycin d	ihydrate	
SPC, Labeling and Package Leaflet			AM		
disorders			somnolence, dysgeusia, paraesthesia		convulsion, hypoestheia, psychomotor hyperactivity, anosmia, ageusia parosmia, myasthenia gravis (see Section 4.4)
Eye disorders			Visual impairment		
Ear and labyrinth disorders	<u> </u>		Ear disorder, vertigo		Hearing impairment including deafness and/or tinnitus
Cardiac disorders			Palpitations		Torsades de pointes (see section 4.4), arrhythmia (see section 4.4) including ventricular, electrocardiogram QT prolonged (see section 4.4)
Vascular disorders			Hot flush		Hypotension
Respiratory, thoracic and mediastinal disorders			Dyspnoea, epistaxis		
Gastrointestinal disorders	Diarrhoe a	Vomiting, abdominal pain, nausea	Constipation, flatulence, dyspepsia, gastritis, dysphagia, abdominal, distension, dry mouth eructation, mouth ulceration, salivary hypersecretion		Pancreatitis, tongue discolouration
Hepatobiliary disorders				Hepatic function abnormal, jaundice cholestatic	Hepatic failure (which has rarely resulted in death) (see section 4.4) hepatitis fulminant, hepatic necrosis
Skin and subcutaneous tissue disorders			Rash, Pruritus Urticaria, Dermatitis, Dry skin, Hyperhidrosis	Photosensitivit y reaction	Stevens-Johnson syndrome, toxic epidermal necrolysis, erythema
	2 1 1	6.07.2020 - 1			Page 7 of





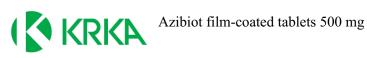
1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

			multiforme
Musculoskeletal		Osteoarthritis,	Arthralgia
, connective		myalgia, back	
tissue and bone		pain, neck pain	
disorders			
Renal and		Dysuria, renal	Renal failure, acute
urinary		pain	nephritis interstitial
disorders			
Reproductive		Metrorrhagia,	
system and		testicular	
breast disorders		disorder	
General	Fatigue	Oedema,	
disorders and		asthenia,	
administration		malaise, fatigue,	
site conditions		face edema,	
		chest pain,	
		pyrexia, pain,	
		peripheral	
		edema	
Investigations	Lymphocyt	Aspartate	
C	e count	aminotransferas	
	decreased,	e increased,	
	eosinophil	alanine	
	count	aminotransferas	
	increased,	e increased,	
	blood	blood bilirubin	
	bicarbonate	increased, blood	
	decreased,	urea increased,	
	basophils	blood creatinine	
	increased,	increased, blood	
	monocytes	potassium	
	increased,	abnormal, blood	
	neutrophils	alkaline	
	increased	phosphatase	
		increased,	
		chloride	
		increased,	
		glucose	
		increased,	
		platelets	
		increased,	
		hematocrit	
		decreased,	
		bicarbonate	
		increased,	
		abnormal	
		sodium	
Injury and		Post procedural	
poisoning		complication	

4.9 Overdose

Symptoms

SmPCPIL153552_1	16.07.2020 – Updated: 16.07.2020	Page 8 of 13



1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

Adverse events experienced in higher than recommended doses were similar to those seen at normal doses. The typical symptoms of an overdose with macrolide antibiotics include reversible loss of hearing, severe nausea, vomiting and diarrhoea.

Management

In the event of overdosage, general symptomatic and supportive measures are indicated as required.

5. PHARMACOLOGICAL PROPERTIES

5.1 **Pharmacodynamic properties**

Pharmacotherapeutic group: macrolides, ATC code: J01FA10.

Mechanism of action

Azibiot is a macrolide antibiotic belonging to the azalide group. The molecule is constructed by adding a nitrogen atom to the lactone ring of erythromycin A. The mechanism of action of azithromycin is based upon the suppression of bacterial protein synthesis by means of binding to the ribosomal 50s sub-unit and inhibition of peptide translocation.

PK/PD relationship:

For azithromycin the AUC/MIC is the major PK/PD parameter correlating best with the efficacy of azithromycin.

Mechanism of resistance:

Resistance of gram-positive organisms to the macrolides usually involves an alteration of the antimicrobial binding site. The MLSB type of resistance (see below), which may be constitutive in staphylococci or induced in staphylococci and streptococci by exposure to certain macrolides, is mediated by a variety of acquired genes (erm family) encoding methylases targeted at the peptidyl transferase centre of 23S ribosomal RNA.

Methylation impedes binding of antibacterials to the ribosome and gives rise to cross-resistance to macrolides (all macrolides when constitutive), lincosamides and type B streptogramins but not to type A streptogramins. Less frequent mechanisms of resistance include antimicrobial degradation by inactivating enzymes such as esterases and active efflux of the antimicrobial from the bacteria.

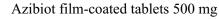
Gram-negative organisms may be intrinsically resistant to the macrolides because of the inability of the macrolide to effectively penetrate the outer cell membrane. Macrolides having a better penetration may have activity against some gram-negative organisms.

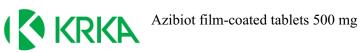
Gram-negative organisms may also produce ribosomal methylase or macrolide-inactivating enzymes.

Breakpoints

Azithromycin susceptibility breakpoints for typical bacterial pathogens: EUCAST (European Committee on Antimicrobial Susceptibility Testing)

		MIC breakpoint (mg/L	4)	
Pathogens		Susceptible (mg/L)	Resistant (mg/L)	
Staphylococcus spp.		≤ 1	> 2	
Streptococcus spp. (Group A, B, C, G)		≤ 0.25	> 0.5	
Streptococcus pneumoniae		≤ 0.25	> 0.5	
Haemophilus influenzae		≤ 0.125	> 4	
Moraxella catarrhalis		≤ 0.25	> 0.5	
Neisseria gonorrhoeae		≤ 0.25	> 0.5	
SmPCPIL153552 1 16.07.2020 -		– Updated: 16.07.2020		Page 9 of 1





1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

Susceptibility

The prevalence of acquired resistance may vary geographically and with time for selected species and local information on resistance is desirable, particularly when treating severe infections. As necessary, expert advice should be sought when the local prevalence of resistance is such that the utility of the agent in at least some types of infections is questionable.

Table of susceptibilities

Commonly susceptible species	
Aerobic Gram-positive	
Mycobacterium avium ^o	
Streptococcus pyogenes ¹	
Aerobic Gram-negative	
Haemophilus influenzae ^{\$}	
Idemophilus influenzae Moraxella catarrhalis°	
Neisseria gonorrhoeae	
Other microorganisms	
Chlamydophila pneumoniae°	
Chlamydia trachomatis°	
Legionella spp. °	
Mycoplasma pneumoniae°	
Species for which acquired resistance may be a problem.	
Aerobic Gram-positive	
Staphylococcus aureus (methicillin-susceptible)	
Staphylococcus aureus (methicillin-resistant) ⁺	
Streptococcus pneumoniae	
Streptococcus agalactiae	
nherently resistant organisms	
Aerobic Gram-negative	
Escherichia coli.	
Klebsiella spp.	
Pseudomonas aeruginosa	
At the time of publication there are no current data. In primary literature, standard works	an

At the time of publication there are no current data. In primary literature, standard works and treatment guidelines susceptibility is assumed.

Resistance rate in some studies $\geq 10\%$.

\$ Species that show natural intermediate susceptibility (in the absence if acquired mechanism of resistance)

Resistance rate more than 50% in at least one region within the EU.

5.2 **Pharmacokinetic properties**

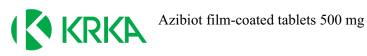
Absorption

Absorption

Bioavailability after oral administration is approximately 37%. Peak concentrations in the plasma are attained 2-3 hours after taking the medicinal product.

Distribution

SmPCPIL153552_1 16.07.2020 – Updated: 16.07.2020 Page 10 of 13
--



1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

Orally administered azithromycin is widely distributed throughout the body. In pharmacokinetic studies it has been demonstrated that the concentrations of azithromycin in tissues are noticeably higher (as much as 50 times) than those in plasma, which indicates that the agent binds strongly to tissues. Concentrations in target tissues such as lung, tonsil, and prostate exceed the MIC₉₀ for likely pathogens after a single dose of 500 mg.

In animal tests, high concentrations of azithromycin have been found in phagocytes. It has also been established that during active phagocytosis higher concentrations of azithromycin are released than are released from inactive phagocytes. Consequently, in animal tests the azithromycin concentrations measured in inflammation foci were high.

Binding to serum proteins varies according to concentration and ranges from 12% at 0.5 microgram/ml up to 52% at 0.05 microgram/ml. The mean volume of distribution at steady state (VVss) has been calculated to be 31.1 l/kg.

Elimination

Terminal plasma elimination half-life closely reflects the elimination half-life from tissues of 2-4 days. Approximately 12% of an intravenously administered dose of azithromycin is excreted unchanged in urine within the following three days. Particularly high concentrations of unchanged azithromycin have been found in human bile. Ten metabolites were also detected in bile, which were formed through N- and O-demethylation, hydroxylation of desosamine and aglycone rings and degradation of cladinose conjugate. Comparison of the results of liquid chromatography and microbiological analyses has shown that the metabolites of azithromycin are not microbiologically active.

Pharmacokinetics in special populations:

Renal impairment

Following a single oral dose of azithromycin 1 g, mean Cmax and AUC0-120 increased by 5.1% and 4.2% respectively, in subjects with mild to moderate renal impairment (glomerular filtration rate of 10-80 ml/min) compared with normal renal function (GFR>80 ml/min). In subjects with severe renal impairment, the mean C_{max} and AUC₀₋₁₂₀ increased 61% and 35%, respectively compared to normal.

Hepatic insufficiency

In patients with mild to moderate hepatic impairment, there is no evidence of a marked change in serum pharmacokinetics of azithromycin compared to normal hepatic function. In these patients, urinary recovery of azithromycin appears to increase perhaps to compensate for reduced hepatic clearance.

Elderlv

The pharmacokinetics of azithromycin in elderly men was similar to that of young adults; however, in elderly women, although higher peak concentrations (increased by 30-50%) were observed, no significant accumulation occurred.

In elderly volunteers (>65 years), higher (29 %) AUC values were always observed after a 5-day course than in younger volunteers (<40 years). However, these differences are not considered to be clinically relevant; no dose adjustment is therefore recommended.

Paediatric population

Pharmacokinetics has been studied in paediatric patients aged 4 months -15 years taking capsules, granules or suspension. At 10 mg/kg on day 1 followed by 5 mg/kg on days 2-5, Cmax achieved was slightly lower than in adults with 224 microgram/l in infants, toddlers and children aged 0.6-5 years after 3 days dosing and 383 microgram/l in children and adolescents aged 6-15 years. The t_{1/2} of 36 h in the older children and adolescents was within the expected range for adults.

5.3 Preclinical safety data

SmPCPIL153552_1	16.07.2020 – Updated: 16.07.2020	Page 11 of 13
-----------------	----------------------------------	---------------

CONFIDENTIAL



1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

In animal tests in which the dosages used amounted to 40 times the therapeutic dosage, azithromycin was found to have caused reversible phospholipidosis, but as a rule, no true toxicological consequences were observed.

Electrophysiological investigations have shown that azithromycin prolongs the QT interval.

Carcinogenic Potential:

Long-term studies in animals to evaluate carcinogenic potential have not been performed because the drug is indicated for short-term treatment only. No signs indicative of carcinogenic activity have been observed in other studies.

Mutagenic Potential:

There was no evidence of a potential for genetic and chromosomal mutations in in vivo and in vitro test models.

Reproductive Toxicity:

In studies of the embryotoxic effects of azithromycin in mice and rats, no teratogenic effect has been observed. In rats, azithromycin dosages of 100 and 200 mg/kg bodyweight/day led to mild retardation of foetal ossification and maternal weight gain. In peri- and post-natal studies in rats, mild retardation was observed following treatment with 50 mg/kg/day azithromycin and above.

PHARMACEUTICAL PARTICULARS 6.

6.1 List of excipients

Tablet core: Pregelatinised starch Crospovidone Anhydrous calcium hydrogen phosphate Sodium laurilsulfate Magnesium stearate (E572) Film coating: Hypromellose (E464) Titanium dioxide (E171) Lactose monohydrate Triacetin (E1518)

6.2 Incompatibilities

Not applicable.

Shelf life 6.3

5 years.

6.4 Special precautions for storage Keep out of reach of children Store below 30°C.

6.5 Nature and contents of container

SmPCPIL153552 1	16.07.2020 – Updated: 16.07.2020	Page 12 of 13

1.3.1	Azithromycin dihydrate
SPC, Labeling and Package Leaflet	AM

Blister pack: 3 film-coated tablets of 500 mg (1 blister pack of 3 tablets), in a box with package leaflet.

6.6 Special precautions for disposal and other handling

No special requirements.

7. MARKETING AUTHORISATION HOLDER

KRKA, d. d., Novo mesto, Šmarješka cesta 6, 8501 Novo mesto, Slovenia

8. MARKETING AUTHORISATION NUMBER(S)

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

10. DATE OF REVISION OF THE TEXT