PROFESSIONAL INFORMATION

SCHEDULING STATUS

S4

1. NAME OF THE MEDICINE

AXIM POLIBAR ACB Powder for rectal suspension

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each 100 g of AXIM POLIBAR ACB powder contains 96 g of barium sulphate.

Each bag of 397 g AXIM POLIBAR ACB powder contains 383,02 g barium sulphate.

Each bag of 570 g AXIM POLIBAR ACB powder contains 549,99 g barium sulphate.

Each bag of 680 g AXIM POLIBAR ACB powder contains 656,06 g barium sulphate.

The pH of the 60 % aqueous suspension is between 4,5 and 6,5.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Powder for rectal suspension.

Dense, off-white, tasteless, bulky powder, without grittiness, odour or flavour.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Diagnostic product for X-ray visualisation of the gastrointestinal tract.

4.2 Posology and method of administration

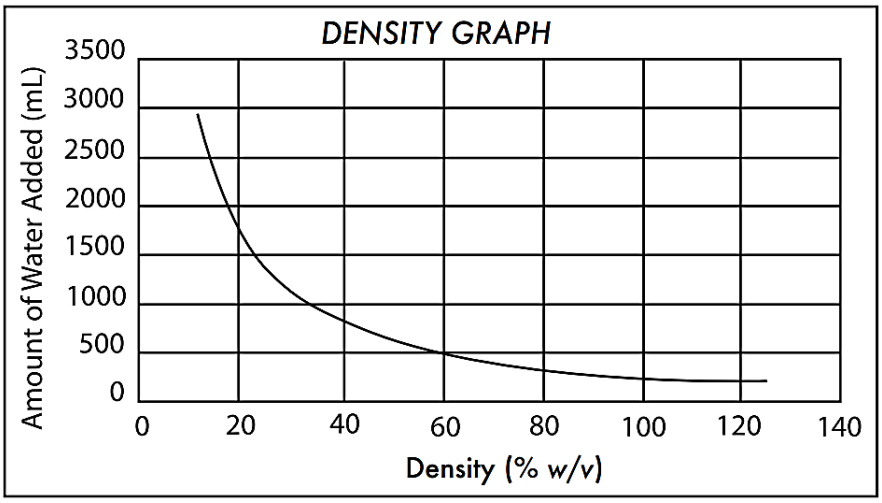
Posology:

Adults and elderly: 397 g in suspension.

For double contrast colon examination: Add 400 to 700 mL warm water (approximately 40 ºC) to give 47 % *m/v* at 700 L to 76 % *m/v* at 400 L.

For single contrast colon examination: Add 2 200 L warm water (approximately 40 ºC) to give 12 % *m/v*. The dose may be varied depending on the technique employed and patient involved.

Density graph:



Method of administration:

AXIM POLIBAR ACB is for rectal use only (enema).

Mixing instructions:

Attach the white ratchet clamp to tubing and close. See density graph. This shows the density range and how much water to use for each density. Measure the indicated quantity of warm (40 ºC) water and add this to the bag through the clear snap-cap seal. Hold the bag by the finger holes and shake vigorously for 10 to 20 seconds, so as to obtain a homogeneous suspension to be administered to the patient rectally before X-ray examination.
Close the tube with the appropriate seal.

The AXIM POLIBAR ACB powder must be reconstituted and mixed carefully before use and used immediately. When ready to use, shake again for 10 to 20 seconds. Then with the thumb and forefinger pop the red ball at the bag tube junction into the bag. Loosen the appropriate seal and run the suspension through the tubing after connecting it with the rectal catheter. For patient evacuation, bring the bag to the floor level. The kit is now ready.

For the double contrast

Place the bag on the X-ray table upside down with the tube connection upwards and press with constant pressure.

4.3 Contraindications

- Hypersensitivity to barium sulphate or any of the inactive ingredients of AXIM POLIBAR ACB (listed in section 6.1).
- AXIM POLIBAR ACB should not be used proximal to an obstruction of the colon, or in the presence of suspected or impending gastrointestinal perforation.
- AXIM POLIBAR ACB should not be given to patients with gastrointestinal haemorrhage, gastrointestinal ischaemia, megacolon or toxic megacolon, necrotising enterocolitis, severe constipation or ileus.
- If there is a known or suspected fistula in any part of the gastrointestinal tract.
- AXIM POLIBAR ACB is contraindicated in those at risk of perforation as in acute ulcerative colitis or diverticulitis and following rectal or colonic biopsy, sigmoidoscopy or snare polypectomy. If post-procedural leakage is expected AXIM POLIBAR ACB must not be used.
- Do not use during and up to six weeks after radiotherapy to the rectum or prostate.
- Do not use in case of new injuries or chemical burns of the gastrointestinal tract.

4.4 Special warnings and precautions for use

AXIM POLIBAR ACB is for diagnostic use only.

AXIM POLIBAR ACB should be administered under the supervision of your medical practitioner.

Diagnostic procedures which involve the use of radiopaque contrast media should be carried out under the direction of personnel with the requisite training and with a thorough knowledge of the particular procedure to be performed.

Hypersensitivity

Optimal treatment of hypersensitivity reactions starts with a well-designed plan of action and a properly staffed and equipped imaging facility. Rapid recognition, assessment, and diagnosis are crucial to the effective implementation of treatment. Training of on-site personnel attending to patients receiving contrast media should include cardiopulmonary resuscitation and/or advanced cardiac life support whenever possible.

A history of bronchial asthma, atopy, as evidenced by hay fever and eczema, a family history of allergy, or a previous reaction to a contrast medium warrant special attention.
Serious adverse reactions, including death, have been reported with the administration of barium sulphate formulations and are usually associated with the technique of administration, the underlying pathological condition and/or patient hypersensitivities. Anaphylactic and allergic reactions have been reported during double contrast examinations in which glucagon has been used. Barium sulphate preparations used as radiopaque media contain a number of additives to provide diagnostic properties. Allergic reactions following the use of barium sulphate suspensions have been reported (see section 4.8). Allergic reactions would most likely be diffuse erythema or urticaria. This generally will respond to an antihistamine. Skin irritation, redness, inflammation and hives have been reported for infants and small children following spillage of AXIM POLIBAR ACB suspension on skin. These responses are thought to be caused by the flavourants and/or preservatives used in the product.
The use of a retention cuff enema tip is not necessary or desirable in patients with normal sphincter tone. The presence of adequate sphincter tone can be judged by preliminary rectal digital examination.
More serious allergic reactions, rhinitis, laryngeal oedema or bronchospasm could develop (see section 4.8). This should be treated immediately with 0,3 to 0,5 mL or 1:1 000 adrenaline subcutaneously. If bronchospasm predominates, 0,25 to 0,5 g of aminophylline should be given slowly intravenously. Adrenocorticosteroids may also be given.

Perforation

Care is needed in those with conditions such as pyloric stenosis or lesions which may predispose

to obstruction. Careful consideration should be given in patients with a serious stenosis at any level of the gastrointestinal tract, especially if it is distal to the stomach, and in the presence of conditions and ailments that increase the risk of perforation such as known carcinomas, inflammatory intestinal disease, diverticulitis and diverticulosis and amoebiasis.

Where enema tips are used, care must be taken during insertion into the patient, since forceful or too deep insertion may cause tearing or perforation of the rectum. Insertion of an enema tip should be performed only after digital examination by qualified health care provider. When balloon retention tips are used, care should be taken to avoid over inflation of the balloon, since overfilling or asymmetrical filling may cause displacement of the tip. Such a displacement can lead to barium sulphate granulomas or rectal perforation.
Inflation of the balloon should be done under fluoroscopic control by the qualified health care provider. Do not unnecessarily move the enema tip once inserted. A specially designed enema tip is required for a barium sulphate suspension examination of a colostomy patient. Intubation of an enteroclysis catheter should be done by qualified medical personnel. Perforation of the duodenum has been reported.

Intravasation

AXIM POLIBAR ACB may also intravasate into the venous drainage of the large bowel and enter the circulation as a “barium embolus”. This complication occurs rarely, but can lead to potentially fatal complications, including systemic and pulmonary embolism, disseminated intravascular coagulation, septicaemia and prolonged hypotension. It is more likely to occur in elderly patients, due to thinning of the rectal wall and vaginal thinning with age, and in those with colorectal disease, when intraluminal pressure overcomes the resistance of the colonic wall affected by colitis, diverticulitis or intestinal obstruction. Intravasation has been associated with inadvertent vaginal placement of the rectal catheter. The diagnosis should be considered in any patient who collapses during or shortly after barium enema, and in those who become suddenly unwell in the hours following the procedure. The diagnosis can be confirmed by simple plain radiography; CT scanning may also be useful to detect dissemination of barium sulphate.

This complication may be prevented by ensuring correct placement of the rectal catheter and by reducing the use of balloon catheters.
Correct rectal catheter placement should be confirmed prior to enema administration.

Constipation or diarrhoea

Adequate hydration should be ensured after the procedure to prevent severe constipation. AXIM POLIBAR ACB should be used with care if the patient is dehydrated, suffers from any condition or is on any other treatment that can cause constipation, or if the patient has history of constipation. In this situation a mild bulk laxative should be administered following completion of the X-ray examination. Increased intake of liquids is recommended after rectal administration of AXIM POLIBAR ACB to prevent severe constipation and the risk of impaction.

Other possible complications

In patients with increased cranial pressure, AXIM POLIBAR ACB suspension enemas present an additional risk of further increasing intracranial pressure.

Care must be taken during enemas containing barium sulphate as vasovagal reactions, syncopal disorders, cardiac dysrhythmia and other cardiovascular side effects can occur.

All plastic/rubber accessories are disposable, single-use devices that must not be reused or left in the body cavity for an extended period of time.

Apprehensive patients may develop weakness, pallor, tinnitus, diaphoresis and bradycardia following the administration of any diagnostic medicine. Such reactions are usually unpredictable and are best treated by having the patient lie flat for an additional 10 to 30 minutes and observed with appropriate reassurance.

Patient preparation for diagnostic gastrointestinal examinations frequently requires cathartics and a

liquid diet. The various preparations can result in water loss for the patient. Patients should be rehydrated quickly following completion of the examination, to prevent impaction of the barium. In patients with constipation or reduced colon motility, saline cathartics may be required after the AXIM POLIBAR ACB suspension enema. Saline cathartics are recommended on a routine basis in patients with a history of
constipation unless clinically contraindicated.

Baroliths

Baroliths consist of inspissated barium associated with faeces. They are often asymptomatic, but may be associated with abdominal pain, appendicitis, bowel obstruction, or perforation. Patients who are elderly, with impaired gastrointestinal motility, electrolyte imbalance, dehydration or on a low residue diet may be at risk of developing baroliths. To reduce this risk, adequate hydration should be maintained during and in the days following barium sulphate procedure. The use of laxatives (especially in case of constipation) should be considered.

Special populations:

Elderly patients

As in the case of other barium sulphate preparations used for enema, care must be taken during the administration in elderly and debilitated patients. AXIM POLIBAR ACB should be used cautiously in patients with pre-existing heart disease.

4.5 Interaction with other medicines and other forms of interaction

AXIM POLIBAR ACB is biologically inert and there are no known interactions with other medicines, however, the presence of barium sulphate formulations in the gastrointestinal tract may alter the absorption of therapeutic medicines taken concomitantly. In order to minimise any potential change in absorption, the separate administration of barium sulphate from that of other medicines should be considered.

Other examinations of the same area of the gastrointestinal tract with another contrast medicine may be complicated by the presence of barium sulphate (residue) in the gastrointestinal tract up to

several days following the examination with AXIM POLIBAR ACB.

4.6 Fertility, pregnancy and lactation

Pregnancy:

Although this product is not contraindicated in pregnancy, it is known that X-ray procedures may damage the fetus during organogenesis.

No mutagenic and teratogenic potential studies have been performed. However, barium sulphate is not expected to cause effects during pregnancy, since the systemic exposure to barium sulphate is negligible.

Breastfeeding:

AXIM POLIBAR ACB can be used during lactation, since the systemic absorption of barium sulphate, after rectal administration, with intact mucosa, is negligible.

Fertility:

No data on male and female fertility are available.

4.7 Effects on ability to drive and use machines

There are no data available on the effect of AXIM POLIBAR ACB on the ability to drive and use machines. Before driving or using machines, take into consideration that undesirable effects such as confusion, dizziness and hypotension may occur with the use of AXIM POLIBAR ACB.

4.8 Undesirable effects

a. Summary of the safety profile

Skin and subcutaneous disorders together with immune system disorders, reflecting allergic reactions either to barium sulphate or the product excipients, are among the most frequently reported effects. Gastrointestinal disorders are also one of the most frequently reported class of

undesirable effects. Constipation may occur; cramping and diarrhoea have also been reported.

It is not always possible to differentiate procedural complications from pre-existing medical conditions. Adverse reactions have been reported with the administration of barium sulphate formulation and are usually associated with faulty technique of administration or with underlying pathological conditions. Complications occur and may include aspiration pneumonitis, barium impaction obstruction, adhesions, granuloma, intravasation, embolisation and peritonitis following gastrointestinal perforation.

Subsequent to existing or procedural gastrointestinal trauma, intravasation of barium sulphate with rare subsequent venous emboli formation, in portal or vena cava and pulmonary embolism may be fatal in approximately 50 % of cases.

Accidental aspiration into the lungs has led to pneumonitis or granuloma formation.

b. Summary of adverse reactions

Gastrointestinal disorders:

Rare: Abdominal pain, nausea, vomiting.

Post-marketing experience:

The following post-marketing experiences have been reported:

Infections and Infestations:

Rare: Bacteraemia, intestinal abscess, liver abscess, peritoneal infection, appendicitis.

Blood and lymphatic system disorders:

Rare: Lymphadenopathy.

Immune system disorders:

Rare: Anaphylactic shock, anaphylactic reaction, hypersensitivity.

Metabolism and nutrition disorders:

Rare: Hyperglycaemia.

Cases of hyperglycaemia have been reported in diabetic patients.

Psychiatric disorders:

Rare: Confusional state, agitation, nervousness.

Nervous system disorders:

Rare: Syncope, vasovagal syncope, loss of consciousness, dizziness, dysarthria, headache, burning sensation, hypotonia.

Eye disorders:

Rare: Eye swelling.

Ear and labyrinth disorders:

Rare: Tinnitus.

Cardiac disorders:

Rare: Bradycardia, tachycardia, cyanosis.

Vascular disorders:

Rare: Hypotension, vasodilatation, pallor.

Respiratory, thoracic and mediastinal disorders:

Rare: Bronchospasm, dyspnoea, laryngeal oedema, pharyngeal oedema, throat tightness, oropharyngeal pain, throat irritation, cough.

Gastrointestinal disorders:

Rare: Intestinal ischaemia, gastrointestinal perforation, gastrointestinal obstruction,

gastrointestinal ulcer, aggravated ulcerative colitis, gastrointestinal inflammation, abdominal distension, abdominal discomfort, constipation, diarrhoea, vomiting, swollen tongue, flatulence.

Skin and subcutaneous tissue disorders:

Rare: Urticaria, rash, erythema, dermatitis contact, face swelling, periorbital oedema, excessive granulation tissue, pruritus, hyperhidrosis.

Renal and urinary disorders:

Rare: Dysuria.

General disorders and administration site conditions:

Rare: Pain, pyrexia, face oedema, swelling, asthenia, malaise.

Investigations:

Rare: Abnormal changes in electrocardiogram.

Injury, poisoning and procedural complications:

Rare: Barium impaction, venous intravasation.

Venous intravasation was associated with pre-existing bowel disease or diverticulitis.

c. Description of selected adverse reactions

Very rare cases of death associated with barium sulphate administration have been reported in the literature. The majority of the deaths relate to procedural complications usually caused by failure to follow generally accepted radiological practice. Some cases had a history indicating that barium sulphate administration was highly unlikely to be a primary or even secondary causative factor in patient fatality.

Reporting of suspected adverse reactions:

Reporting suspected adverse reactions after authorisation of AXIM POLIBAR ACB is important. It allows continued monitoring of the benefit/risk balance of AXIM POLIBAR ACB. Health care providers are asked to report any suspected adverse reactions to SAHPRA via the "Adverse Drug Reactions Reporting Form", found online under SAHPRA's publications: https://www.sahpra.org.za/Publications/Index/8

4.9 Overdose

Symptoms of overdosage:

See section 4.8. Treatment is symptomatic and supportive.

AXIM POLIBAR ACB is non-toxic and is absorbed systemically, with intact mucosa, in negligible amounts.

Overdose can cause abdominal cramps, nausea, vomiting, diarrhoea and constipation. These symptoms are transitory in nature and may be allowed to resolve without medical intervention or may be treated according to currently accepted standards of care.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Category and class: A 28. Contrast media

Pharmacotherapeutic group: Radiological contrast agent, non-iodinated, containing barium sulfate with suspending agents

ATC code: V08BA01.

Barium sulphate is an insoluble radiopaque material which provides a positive contrast for X-ray examination. The use of barium sulphate is not based on a pharmacological effect but on its physical distribution into the gastrointestinal tract. Barium sulphate increases the X-ray absorption enabling delineation of gastrointestinal tract.

Barium has a much higher atomic number than atoms in the soft tissues (hydrogen, carbon, oxygen, nitrogen). A higher atomic number is associated with an increased ability to attenuate X-rays. At the photon energies which are used in diagnostic radiology, the radiation is attenuated by photoelectric absorption and Compton scatter. Barium atoms attenuate radiation 50 – 1 000 times more than atoms of the soft tissues.

5.2 Pharmacokinetic properties

Distribution:

Barium sulphate is biologically inert and systemic absorption with intact mucosa is extremely limited.

Under physiological conditions, AXIM POLIBAR ACB passes through the gastrointestinal tract in an unchanged form and is absorbed only in small, pharmacologically insignificant amounts. It is described that AXIM POLIBAR ACB particles in the 0,04 – 0,1 µm range can be absorbed from the bowel. Eventually they end up in the lymphatic system.

Biotransformation:

Barium sulphate is biologically inert and, therefore, is not metabolised and is eliminated unchanged mainly in the faeces.

Elimination:

The emptying time from the colon is from one to several days. As a result of water absorption from the colon, the AXIM POLIBAR ACB suspension is thickened and therefore may be difficult to pass. A minor amount of barium sulphate is excreted through urine. A study showed that barium baseline urinary elimination was 4,2 µg/24 hours. Following oral intake of 350 g barium sulphate, its urinary elimination rose to 13,4 µg/24 hours.

5.3 Preclinical safety data

Intragastric administration of barium sulphate to albino rats did not produce deaths (up to 160 g/kg)

until the dose reached 25 % to 40 % of body weight. Death was due to stomach rupture or to bowel obstruction followed by gastrointestinal haemorrhage and generalised arteriovenous thromboses, which produced further toxic changes in many body organs.

Barium sulphate does not appear to be a factor of significance in the acute toxicity of tannic acid-barium sulphate formulations used in diagnostic radiology.

Studies of mutagenicity, teratogenicity and carcinogenicity are not available.

It is concluded that due to the insolubility and biological inertness of barium sulphate, no activities of these types have been observed or are to be expected.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Citric acid anhydrous

Pectin

Polysorbate 80

Simeticone

Sodium citrate

Sorbitol

Tragacanth.

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

36 months.

After reconstitution, the product should be used immediately.

6.4 Special precautions for storage

Store at or below 25 °C.

Protect from moisture.

For storage conditions after reconstitution, see section 6.3.

ALWAYS RESHAKE PRIOR TO USE.

6.5 Nature and contents of container

Frosty and clear polyvinyl chloride film enema bag. Each bag is marked with graduations in increments of 500 mL. The bag is equipped with a polyvinyl chloride rectal tube, an enema tip and sealing plugs and valves.

Pack sizes: Polyvinyl chloride bag containing either 397 g, 570 g or 680 g of AXIM POLIBAR ACB powder.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

Any unused medicine or waste material should be disposed of in accordance with local requirements.

The reconstituted AXIM POLIBAR ACB powder results in a white, unflavoured, non-gritty suspension.

7. HOLDER OF CERTIFICATE OF REGISTRATION

AXIM PHARMACEUTICALS (Pty) Ltd

63 Old Pretoria Main Road

Halfway House 1685

Midrand, South Africa

8. REGISTRATION NUMBER

35/28/0129

9. DATE OF FIRST AUTHORISATION

6 December 2001.

10. DATE OF REVISION OF THE TEXT

02 February 2023