

PRESCRIBING INFORMATION (Great Britain)

▼ VABOREM® (meropenem/vaborbactam) 1g/1g powder for concentrate for solution for infusion.

Please consult the Summary of Product Characteristics (SmPC) for full prescribing information.

Presentation: Powder for concentrate for solution for infusion.

Use: Adults: complicated urinary tract infection (cUTI), including pyelonephritis; complicated intra-abdominal infection (cIAI); hospital-acquired pneumonia (HAP), including ventilator associated pneumonia (VAP). Patients with bacteraemia that occurs in association with, or is suspected to be associated with, any of the infections listed above. Treatment of infections due to aerobic Gram-negative organisms in adults with limited treatment options.

Dosage and administration: Dose: patients with creatinine clearance ≥ 40 ml/min, 2g/2g infused intravenously over 3 hours every 8 hours. 1g/1g infused intravenously over 3 hours every 8 hours recommended when creatinine clearance is between 20 and 39 ml/min, and every 12 hours when creatinine clearance is between 10 to 19 ml/min. When creatinine clearance is less than 10 ml/min 0.5g /0.5g should be infused intravenously over 3 hours every 12 hours. No dose adjustment for age is required, nor for hepatic impairment. Duration of treatment: 5 to 10 days (up to 14 days) for patients with cUTI, including pyelonephritis, and cIAI. 7 to 14 days for HAP, including VAP. Duration variable, in accordance with the site of infection: bacteraemia, and infections due to aerobic Gram-negative organisms in patients with limited treatment options.

Contra-indications: Hypersensitivity to any active constituent or excipient, or to any carbapenem antibacterial agent. History of severe hypersensitivity to any other type of beta-lactam antibacterial agent.

Warnings and Precautions: Serious and occasionally fatal hypersensitivity reactions have been reported with meropenem and/or meropenem/vaborbactam. Severe cutaneous adverse reactions have been reported with meropenem. Seizures have been reported with meropenem. Monitor hepatic function due to the risk of hepatic toxicity. A positive direct or indirect Coombs test may develop during treatment with meropenem/vaborbactam as seen with meropenem. The use of meropenem/vaborbactam may result in the overgrowth of non-susceptible organisms. *Clostridium difficile*-associated diarrhoea has been reported with meropenem/vaborbactam.

Concomitant use with valproic acid/sodium valproate/valpromide as carbapenems may reduce plasma levels of valproic acid to concentrations below the therapeutic range. Use of Vaborem in cIAI, HAP, including VAP is based on experience with meropenem alone and pharmacokinetic-pharmacodynamic analyses for meropenem-vaborbactam. Use of Vaborem in patients with limited treatment options is based on pharmacokinetic-pharmacodynamic analyses for meropenem-vaborbactam and on limited data from a randomised clinical trial. The inhibitory spectrum of vaborbactam includes class A carbapenemases (such as KPC) and class C carbapenemases. Vaborbactam does not inhibit class D carbapenemases such as OXA-48 or class B metallo- β -lactamases such as NDM and VIM. Contains 250 mg of sodium per vial.

Interactions: Patients taking medicinal products that are predominantly metabolised by CYP1A2 (e.g. theophylline), CYP3A4 (e.g. alprazolam, midazolam, tacrolimus, sirolimus, cyclosporine, simvastatin, omeprazole, nifedipine, quinidine and ethinylestradiol) and/or CYP2C (e.g. warfarin, phenytoin) and/or transported by P-gp (e.g. dabigatran, digoxin) should be monitored for possible clinical signs of altered therapeutic efficacy. Co-administration of probenecid is not recommended. When concomitant administration of valproic acid cannot be avoided, supplemental anticonvulsant therapy should be administered. Oral anticoagulants: It is recommended that the INR should be monitored frequently during and shortly after co-administration with an oral anticoagulant. Contraceptives: Women of childbearing potential should be advised to use alternative effective contraceptive methods during treatment and for a period of 28 days after discontinuation of treatment.

Pregnancy and lactation: Avoid during pregnancy. Discontinue breastfeeding prior to initiating therapy.

Side-effects: Most common adverse reactions in Phase 3 trials: headache (8.1%), diarrhoea (4.7%), infusion site phlebitis (2.2%) and nausea (2.2%). Severe and/or serious adverse effects occurred in 0.6% patients (2 infusion-related reactions and one increase of alkaline phosphatase). Additional adverse reactions with meropenem alone and/or in Phase 3 trials with Vaborem: Common: thrombocytopenia, hypokalaemia, hypoglycaemia, hypotension, vomiting, increased ALT, increased AST, increased blood alkaline phosphatase, increased blood lactate dehydrogenase, pyrexia.

Uncommon: *Clostridium difficile* colitis, vulvovaginal candidiasis, oral candidiasis, leucopenia, neutropenia, eosinophilia, thrombocytopenia, anaphylactic reaction, hypersensitivity, decreased appetite, hyperkalaemia, hyperglycaemia, insomnia, hallucination, tremor, lethargy, dizziness, paraesthesia, phlebitis, vascular pain, bronchospasm, abdominal distension, abdominal pain, increased blood bilirubin, pruritus, rash, urticaria, renal impairment, incontinence, increased blood creatinine, increased blood urea, chest discomfort, infusion site reaction, infusion site erythema, injection site phlebitis, infusion site thrombosis, pain, increased blood creatine phosphokinase, infusion related reaction. Rare: convulsions. Unknown frequency: agranulocytosis, haemolytic anaemia, angioedema, delirium, severe cutaneous adverse reactions (such as toxic epidermal necrolysis, Stevens-Johnson syndrome, erythema multiforme, DRESS syndrome, acute generalised exanthematous pustulosis), direct and indirect Coombs test positive.

Package quantities and price: Packs of 6 vials: £334.00.

Legal category: POM.

Marketing Authorisation Holder: Menarini International Operations Luxembourg S.A.

Marketing Authorisation number: PLGB 16239/0061

Marketed by: A. Menarini Farmaceutica Internazionale SRL.

Further information is available on request to A. Menarini Farmaceutica Internazionale SRL, Menarini House, Mercury Park, Wycombe Lane, Wooburn Green, Buckinghamshire, HP10 0HH, UK or may be found in the SmPC.

PI last updated: October 2023.

▼ This medicinal product is subject to additional monitoring.

Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store. Adverse events should also be reported to A. Menarini Farmaceutica Internazionale SRL. Phone 0800 085 8678 or email: menarini@medinformation.co.uk

PRESCRIBING INFORMATION (Northern Ireland)

VABOREM® (meropenem/vaborbactam) 1g/1g powder for concentrate for solution for infusion

Please consult the Summary of Product Characteristics (SmPC) for full prescribing information.

Presentation: Powder for concentrate for solution for infusion.

Use: Adults: complicated urinary tract infection (cUTI), including pyelonephritis; complicated intra-abdominal infection (cIAI); hospital-acquired pneumonia (HAP), including ventilator associated pneumonia (VAP). Patients with bacteraemia that occurs in association with, or is suspected to be associated with, any of the infections listed above. Treatment of infections due to aerobic Gram-negative organisms in adults with limited treatment options.

Dosage and administration: Dose: patients with creatinine clearance ≥ 40 ml/min, 2g/2g infused intravenously over 3 hours every 8 hours. 1g/1g infused intravenously over 3 hours every 8 hours recommended when creatinine clearance is between 20 and 39 ml/min, and every 12 hours when creatinine clearance is between 10 to 19 ml/min. When creatinine clearance is less than 10 ml/min 0.5g /0.5g should be infused intravenously over 3 hours every 12 hours. No dose adjustment for age is required, nor for hepatic impairment. Duration of treatment: 5 to 10 days (up to 14 days) for patients with cUTI, including pyelonephritis, and cIAI. 7 to 14 days for HAP, including VAP. Duration variable, in accordance with the site of infection: bacteraemia, and infections due to aerobic Gram-negative organisms in patients with limited treatment options.

Contra-indications: Hypersensitivity to any active constituent or excipient, or to any carbapenem antibacterial agent. History of severe hypersensitivity to any other type of beta-lactam antibacterial agent.

Warnings and Precautions: Serious and occasionally fatal hypersensitivity reactions have been reported with meropenem and/or meropenem/vaborbactam. Severe cutaneous adverse reactions have been reported with meropenem. Seizures have been reported with meropenem. Monitor hepatic function due to the risk of hepatic toxicity. A positive direct or indirect Coombs test may develop during treatment with meropenem/vaborbactam as seen with meropenem. The use of meropenem/vaborbactam may result in the overgrowth of non-susceptible organisms. *Clostridium difficile*-associated

diarrhoea has been reported with meropenem/vaborbactam. Concomitant use with valproic acid/sodium valproate/valpromide as carbapenems may reduce plasma levels of valproic acid to concentrations below the therapeutic range. Use of Vaborem in cIAI, HAP, including VAP is based on experience with meropenem alone and pharmacokinetic-pharmacodynamic analyses for meropenem-vaborbactam. Use of Vaborem in patients with limited treatment options is based on pharmacokinetic-pharmacodynamic analyses for meropenem-vaborbactam and on limited data from a randomised clinical trial. The inhibitory spectrum of vaborbactam includes class A carbapenemases (such as KPC) and class C carbapenemases. Vaborbactam does not inhibit class D carbapenemases such as OXA-48 or class B metallo- β -lactamases such as NDM and VIM. Contains 250 mg of sodium per vial.

Interactions: Patients taking medicinal products that are predominantly metabolised by CYP1A2 (e.g theophylline), CYP3A4 (e.g alprazolam, midazolam, tacrolimus, sirolimus, cyclosporine, simvastatin, omeprazole, nifedipine, quinidine and ethinylestradiol) and/or CYP2C (e.g. warfarin, phenytoin) and/or transported by P-gp (e.g. dabigatran, digoxin) should be monitored for possible clinical signs of altered therapeutic efficacy. Co-administration of probenecid is not recommended. When concomitant administration of valproic acid cannot be avoided, supplemental anticonvulsant therapy should be administered. Oral anticoagulants: It is recommended that the INR should be monitored frequently during and shortly after co-administration with an oral anticoagulant. Contraceptives: Women of childbearing potential should be advised to use alternative effective contraceptive methods during treatment and for a period of 28 days after discontinuation of treatment.

Pregnancy and lactation: Avoid during pregnancy. Discontinue breastfeeding prior to initiating therapy.

Side-effects: Most common adverse reactions in Phase 3 trials: headache (8.1%), diarrhoea (4.7%), infusion site phlebitis (2.2%) and nausea (2.2%). Severe and/or serious adverse effects occurred in 0.6% patients (2 infusion-related reactions and one increase of alkaline phosphatase). Additional adverse reactions with meropenem alone and/or in Phase 3 trials with Vaborem: Common: thrombocythaemia, hypokalaemia, hypoglycaemia, hypotension, vomiting, increased ALT, increased AST, increased blood alkaline

phosphatase, increased blood lactate dehydrogenase, pyrexia. Uncommon: *Clostridium difficile* colitis, vulvovaginal candidiasis, oral candidiasis, leucopenia, neutropenia, eosinophilia, thrombocytopenia, anaphylactic reaction, hypersensitivity, decreased appetite, hyperkalaemia, hyperglycaemia, insomnia, hallucination, tremor, lethargy, dizziness, paraesthesia, phlebitis, vascular pain, bronchospasm, abdominal distension, abdominal pain, increased blood bilirubin, pruritus, rash, urticaria, renal impairment, incontinence, increased blood creatinine, increased blood urea, chest discomfort, infusion site reaction, infusion site erythema, injection site phlebitis, infusion site thrombosis, pain, increased blood creatine phosphokinase, infusion related reaction. Rare: convulsions. Unknown frequency: agranulocytosis, haemolytic anaemia, angioedema, delirium, severe cutaneous adverse reactions (such as toxic epidermal necrolysis, Stevens-Johnson syndrome, erythema multiforme, DRESS syndrome, acute generalised exanthematous pustulosis), direct and indirect Coombs test positive.

Package quantities and price: Packs of 6 vials: £334.00.

Legal category: POM.

Marketing Authorisation Holder: Menarini International Operations Luxembourg S.A.

Marketing Authorisation number: EU/1/18/1334/001

Marketed by: A. Menarini Farmaceutica Internazionale SRL.

Further information is available on request to A. Menarini Farmaceutica Internazionale SRL, Menarini House, Mercury Park, Wycombe Lane, Wooburn Green, Buckinghamshire, HP10 0HH, UK, or may be found in the SmPC.

PI last updated: October 2023.

Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store. Adverse events should also be reported to A. Menarini Farmaceutica Internazionale SRL. Phone 0800 085 8678 or email: menarini@medinformation.co.uk