PRESCRIBING INFORMATION
OMNIPAQUE™ (iohexol)

Please refer to full national Summary of Product Characteristics (SPC) before prescribing. Indications and approvals may vary in different countries. Further information available on request.

PRESENTATION

Aqueous solution for injection containing iohexol, a non-ionic, monomeric, triiodinated X-ray contrast medium, and available in strengths containing either 140 mg, 240 mg, 300 mg or 350 mg iodine per ml.

INDICATIONS

For diagnostic use only. X-ray contrast medium for use in adults and children for urography, phlebography, i.v. DSA, CT, arteriography, cardioangiography and i.a. DSA. Myelography. For use in body cavities: Arthrography, ERP/ERCP, herniography, hysterosalpingography, sialography and use in the G-I tract.

DOSAGE AND ADMINISTRATIONS

Adults & children: Dosage varies depending on the type of examination, age, weight, cardiac output and general condition of patient and the technique used (see SPC and package leaflet).

CONTRAINDICATIONS

Hypersensitivity to the active substance or to any of the excipients. Manifest thyrotoxicosis.

WARNINGS AND PRECAUTIONS

A positive history of allergy, asthma, or untoward reactions to iodinated contrast media indicates a need for special caution. Risk of serious reactions is regarded as minor. Iodinated contrast media may provoke serious, life-threatening, fatal anaphylactic/anaphylactoid reactions or other manifestations of hypersensitivity. Necessary drugs and equipment should be readily available for immediate treatment if a serious reaction occurs. Patients using β-blockers may present with atypical symptoms of anaphylaxis which may be interpreted as vagal reaction. Adequate hydration should be assured before and after contrast media administration. This applies especially to patients with multiple myeloma, diabetes mellitus, renal dysfunction, as well as to infants, small children and elderly patients. Care should also be taken in patients with serious cardiac disease and pulmonary hypertension as they may develop haemodynamic changes or arrhythmias. Patients with acute cerebral pathology, tumours or a history of epilepsy are predisposed for seizures and merit particular care. Also alcoholics and drug addicts have an increased risk for seizures and neurological reactions. A few patients have experienced a temporary hearing loss or even deafness after myelography. Use of iodinated contrast media may cause contrast induced nephropathy, impairment of renal function or acute renal failure. To prevent these conditions, special care should be exercised in patients at risk (preexisting renal impairment, diabetes mellitus and patients with paraproteinemias: myelomatosis and Waldenström's macroglobulinemia). Preventive measures include: Identification of high risk patients, ensuring adequate hydration, avoiding additional strain on the kidneys in the form of nephrotoxic drugs, oral cholecystographic agents, arterial clamping, renal arterial angioplasty, or major surgery, until the contrast medium has been cleared, postponing a repeat contrast medium examination until renal function returns to pre-examination levels. Diabetic patients receiving metformin: There is a risk of the development of lactic acidosis when iodinated contrast agents are administered to diabetic patients treated with metformin, particularly in those with impaired renal function. To reduce the risk of lactic acidosis, the serum creatinine level should be measured in diabetic patients treated with metformin prior to intravascular administration of iodinated contrast media and the following precautions undertaken in the following circumstances: Normal serum creatinine (<130µmol/litre)/normal renal function: Administration of metformin should be stopped at the time of administration of contrast medium and should not be resumed for 48 hours and only be restarted if renal function/serum creatinine remains in the normal range. Abnormal serum creatinine (>130µmol/litre)/impaired renal function: Metformin should be stopped and the contrast medium examination delayed for 48 hours. Metformin should only be restarted 48 hours later if renal function is not diminished (if serum creatinine is not increased) compared to pre-contrast values. In emergency cases where renal function is impaired or unknown, the physician should evaluate the risk/benefit of the contrast medium examination, and the following precautions should be implemented: Metformin should be stopped. It is particularly important that the patient is fully hydrated prior to contrast medium administration and for 24 hours afterwards. Renal function (e.g. serum creatinine), serum lactic acid and blood pH should be monitored. A pH <7.25 or a lactic acid level of >5 mmol/litre are indicative of lactic acidosis. The patient should be observed for symptoms of lactic acidosis. These include vomiting, somnolence, nausea, epigastric pain, anorexia, hyperpnoea, lethargy, diarrhoea and thirst. A potential risk of transient hepatic dysfunction exists. Particular care is required in patients with severe disturbance of both renal and hepatic function as they may have significantly delayed contrast medium clearance. Patients on haemodialysis may receive contrast media for radiological procedures. Correlation of the time of contrast media injection with the haemodialysis session is unnecessary. The administration of iodinated contrast media may aggravate the symptoms of myasthenia gravis. In patients with phaeochromocytoma undergoing interventional procedures, alpha blockers should be

given as prophylaxis to avoid a hypertensive crisis. Special care should be exercised in patients with hyperthyroidism. Patients with multinodular goiter may be at risk of developing hyperthyroidism following injection of iodinated contrast media. Extravasation of contrast media may on rare occasions give rise to local pain, and oedema, which usually recedes without sequelae. However, inflammation and even tissue necrosis have been seen. Elevating and cooling the affected site is recommended as routine measures. Surgical decompression may be necessary in cases of compartment syndrome. Observation-time: Patients must be kept under close observation for 15 minutes following the last injection as the majority of severe reactions occur at this time. The patient should remain in the hospital environment (but not necessarily the radiology department) for one hour after the last injection, and should return to the radiology department if any symptoms develop. Intrathecal use: Following myelography the patient should rest with the head and thorax elevated by 20° for one hour. Thereafter he/she may ambulate carefully but bending down must be avoided. The head and thorax should be kept elevated for the first 6 hours if remaining in bed. Patients suspected of having a low seizure threshold should be observed during this period. Outpatients should not be completely alone for the first 24 hours. Paediatric population: Premature infants are particularly sensitive to the effect of iodine. It is advisable to monitor thyroid function. Thyroid function should be checked in neonates during the first week of life, following administration of iodinated contrast agents to the mother during pregnancy. Repeat testing of thyroid function is recommended at 2 to 6 weeks of age, particularly in low birth weight newborn or premature newborn. Especially in infants and small children, adequate hydration should be assured before and after contrast media administration. Nephrotoxic medication should be suspended. The age dependent reduced glomerular filtration rate in infants can also result in delayed excretion of contrast agents. Young infants (age < 1 year) and especially neonates are susceptible to electrolyte disturbance and haemodynamic alterations.

PREGNANCY AND LACTATION

The safety of OMNIPAQUE in human pregnancy has not been established (see SPC). OMNIPAQUE should not be used in pregnancy unless considered essential. Breast feeding may be continued normally when iodinated contrast media are given to the mother.

ABILITY TO DRIVE AND USE MACHINES

There is no known effect on the ability to drive or operate machines. However, it is not advisable to drive a car or use machines for one hour after the last injection or for 24 hours following intrathecal procedure.

UNDESIRABLE EFFECTS

All routes of administration: Serious reactions as well as fatalities are only seen on very rare occasions. Undesirable effects associated with OMNIPAQUE are usually mild to moderate and transient in nature. Hypersensitivity reactions may occur irrespective of the dose and mode of administration and mild symptoms may represent the first signs of a serious anafylactoid reaction/shock. Administration of the contrast medium must be discontinued immediately and, if necessary, specific therapy instituted via the vascular access. Transient increase in S-creatinine is common after iodinated contrast media, contrast induced nephropathy may occur. Iodism or "iodide mumps" is a very rare complication of iodinated contrast media resulting in swelling and tenderness of the salivary glands for up to approximately 10 days after the examination. Common: feeling hot. Uncommon: nausea. Rare: Hypersensitivity (including dyspnoea, rash, erythema, urticaria, pruritus, skin reaction, vasculitis, angioneurotic oedema, laryngeal oedema, laryngospasm, bronchospasm or non-cardiogenic pulmonary oedema - may appear either immediately after the injection or up to a few days later), headache, bradycardia, vomiting, pyrexia. Very rare: dysgeusia, hypertension, hypotension, diarrhoea, abdominal pain/discomfort, shivering. Frequency unknown: Anaphylactic/anaphylactoid reaction, anaphylactic/anaphylactoid shock, vasovagal syncope, salivary gland enlargement, iodism.

Intravascular use (Intraarterial and Intravenous use): Common: feeling hot. Uncommon: pain and discomfort. Rare: dizziness, arrhythmia, cough, diarrhoea, impairment of renal function including acute renal failure, asthenic conditions. Very rare; Seizures, disturbance in consciousness, transient contrast-induced encephalopathy (including transient memory loss, coma, stupor, retrograde amnesia), sensory abnormalities (including hypoaesthesia), paraesthesia, tremor, myocardial infarction, flushing, dyspnoea, non-cardiogenic pulmonary oedema. Frequency unknown: severe pustular or exfoliative or bullous skin reactions, thyrotoxicosis**,** transient hypothyroidism, confusion, transient motor dysfunction (including speech disorder, aphasia, dysarthria), disorientation, transient cortical blindness, transient hearing loss, severe cardiac complications (including cardiac arrest, cardio-respiratory arrest), spasm of coronary arteries, chest pain, shock, arterial spasm, ischaemia, thrombophlebitis and thrombosis, severe respiratory symptoms and signs**,** bronchospasm, laryngospasm, asthma attack, aggravation of pancreatitis, acute pancreatitis, bullous dermatitis, Stevens-Johnson syndrome, erythema multiforme, toxic epidermal necrolysis, acute generalised exanthematous pustulosis, drug rash with eosinophilia and systemic symptoms, psoriasis flare-up, arthralgia, administration site reactions, including extravasation, back pain.

Intrathecal use: Undesirable effects following intrathecal use may be delayed and present some hours or even days after the procedure. The frequency is similar to lumbar puncture alone. Headache, nausea, vomiting or dizziness may largely be attributed to pressure loss in the sub-arachnoid space resulting from leakage at the puncture site. Excessive removal of cerebrospinal fluid should be avoided in order to minimise pressure loss. Very common: Headache (may be severe and

prolonged). Common: nausea, vomiting. Uncommon: aseptic meningitis (including chemical meningitis). Rare: seizures, dizziness, neck pain, back pain, pain in extremity. Frequency unknown: confusion, electroencephalogram abnormal, meningism, transient contrast-induced encephalopathy (including transient memory loss, coma, stupor, retrograde amnesia), motor dysfunction (including speech disorder, aphasia, dysarthria), paraesthesia, hypoesthesia and sensory disturbance, transient cortical blindness, photophobia, transient hearing loss, muscle spasm, administration site conditions.
Use in Body Cavities Endoscopic Retrograde Cholangiopancreatography (ERCP): Common: elevation of amylase levels, pancreatitis. Oral use: Very common: diarrhoea. Common: nausea, vomiting. Uncommon: abdominal pain. Hysterosalpingography (HSG): Very common: lower abdominal pain. Arthrography: Very common: pain. Not known: Arthritis. Herniography: Frequency unknown: post procedural pain. For description of selected adverse reactions: please see SPC.

INSTRUCTIONS FOR USE AND HANDLING
Like all parenteral products, OMNIPAQUE should be inspected visually for particulate contamination, discolouration and the integrity of the container prior to use. The product should be drawn into the syringe immediately before use. Vials and bottles are intended for single use only, any unused portions must be discarded. OMNIPAQUE may be warmed to body temperature (37°C) before administration.

MARKETING AUTHORISATION HOLDER
GE Healthcare AS, Nycoveien 1-2, P.O. Box 4220 Nydalen, NO-0401 Oslo, Norway.

CLASSIFICATION FOR SUPPLY
Subject to medical prescription (POM).

MARKETING AUTHORISATION NUMBER
PL 00637/0034,0035,0036,0038.

DATE OF REVISION OF TEXT
November 2013.

PRICE
350mgI/ml, 10x50ml: £208.01.

Adverse events should be reported.
Reporting forms and information can be found at www.mhra.gov.uk/yellowcard.
Adverse events should also be reported to GE Healthcare Limited.

JB5825 UK