death · diarrhoea · dyspnoea · fever · flushing · gastrointestinal disorder · haemoglobinuria · haemolysis · haemolytic uraemic syndrome · headache · hearing impairment · hypersensitivity · loss of consciousness · muscle weakness · myasthenia gravis aggravated · nausea · ocular toxicity · oedema · pancytopenia · photosensitivity reaction · QT interval prolongation · renal impairment · skin reactions · thrombocytopenia · tinnitus · vertigo · vision disorders · vomiting

Overdose Quinine is very toxic in overdosage; life-threatening features include arrhythmias (which can have a very rapid onset) and convulsions (which can be intractable). For details on the management of poisoning, see Emergency treatment of poisoning p. 859.

- **PREGNANCY** High doses are teratogenic in *first trimester*, but in malaria benefit of treatment outweighs risk.
- **BREAST FEEDING** Present in milk but not known to be harmful.
- **HEPATIC IMPAIRMENT**
  Dose adjustments ▸ With intravenous use For treatment of malaria in severe impairment, reduce parenteral maintenance dose to 5–7 mg/kg of quinine salt.
- **RENAL IMPAIRMENT**
  Dose adjustments ▸ With intravenous use For treatment of malaria in severe impairment, reduce parenteral maintenance dose to 5–7 mg/kg of quinine salt.
- **MONITORING REQUIREMENTS**
  ▸ With intravenous use Monitor blood glucose and electrolyte concentration during parenteral treatment.
- **DIRECTIONS FOR ADMINISTRATION**
  ▸ With intravenous use For *intravenous infusion*, dilute to a concentration of 2 mg/mL (max. 30 mg/mL in fluid restriction) with Glucose 5% *or* Sodium Chloride 0.9% and give over 4 hours.
- **PRESCRIBING AND DISPENSING INFORMATION**
  ▸ With intravenous use Intravenous injection of quinine is so hazardous that it has been superseded by infusion.

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug. Forms available from special-order manufacturers include: capsule, oral suspension, oral solution, solution for infusion

Tablet

▸ **Quinine (Non-proprietary)**
Quinine sulfate 200 mg Quinine sulfate 200mg tablets |
28 tablet PoM £2.90 DT = £1.53
Quinine bisulfate 300 mg Quinine bisulfate 300mg tablets |
28 tablet PoM £5.50 DT = £1.59
Quinine sulfate 300 mg Quinine sulfate 300mg tablets |
28 tablet PoM £3.79 DT = £1.94

4.3 Toxoplasmosis

Other drugs used for Toxoplasmosis Pyrimethamine, p. 412

ANTIBACTERIALS › MACROLIDES

Spiramycin

- **INDICATIONS AND DOSE**

Toxoplasmosis in pregnancy

▸ BY MOUTH
▸ Child 12–17 years: 1.5 g twice daily until delivery

Chemoprophylaxis of congenital toxoplasmosis

▸ BY MOUTH
▸ Neonate: 50 mg/kg twice daily.

DOSE EQUIVALENCE AND CONVERSION
▸ 3000 units ≡ 1 mg spiramycin.

- **UNLICENSED USE** Not licensed.
- **CAUTIONS** Arrhythmias · cardiac disease · predisposition to QT interval prolongation
- **SIDE-EFFECTS**
  ▸ **Rare or very rare** QT interval prolongation · thrombocytopenia · vasculitis
  ▸ **Frequency not known** Diarrhoea · dizziness · gastrointestinal disorder · headache · hepatotoxicity · nausea · rash · vomiting
- **ALLERGY AND CROSS-SENSITIVITY** Sensitivity to other macrolides.
- **BREAST FEEDING** Present in breast milk.
- **HEPATIC IMPAIRMENT** Manufacturer advises caution.

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

Tablet

▸ **Spiramycin (Non-proprietary)**
Spiramycin 1.5 mega u Rovamycine 1.5million unit tablets |
16 tablet PoM
Spiramycin 3 mega u Rovamycine 3million unit tablets |
10 tablet PoM

5 Viral infection

5.1 Hepatitis

Hepatitis

Overview

Treatment for viral hepatitis should be initiated by a specialist in hepatology or infectious diseases. The management of uncomplicated acute viral hepatitis is largely symptomatic. Hepatitis B and hepatitis C viruses are major causes of chronic hepatitis. Active or passive immunisation against hepatitis A and B infections can be given.

Chronic hepatitis B

Interferon alfa p. 577, **peginterferon alfa-2a**, lamivudine p. 436, adefovir dipivoxil, entecavir, and tenofovir disoproxil p. 437 have a role in the treatment of chronic hepatitis B in adults, but their role in children has not been well established. Specialist supervision is required for the management of chronic hepatitis B.

Tenofovir disoproxil, or a combination of tenofovir disoproxil with either emtricitabine p. 434 or lamivudine, may be used with other antiretrovirals, as part of 'highly active antiretroviral therapy' in children who require treatment for both HIV and chronic hepatitis B. If children infected with both HIV and chronic hepatitis B only require treatment for chronic hepatitis B, they should receive antivirals that are not active against HIV. Management of these children should be co-ordinated between HIV and hepatology specialists.

Chronic hepatitis C

Treatment should be considered for children with moderate or severe liver disease. Specialist supervision is required and the regimen is chosen according to the genotype of the infecting virus and the viral load. A combination of ribavirin p. 415 with either interferon alfa or **peginterferon alfa-2b** is licensed for use in children over 3 years with chronic hepatitis C. A combination of peginterferon alfa p. 419 and ribavirin is preferred.