

**Dose adjustments** Child 12–17 years, initially 200 mg twice daily if estimated glomerular filtration rate 50–70 mL/minute/1.73 m<sup>2</sup>. Initially 100 mg twice daily if estimated glomerular filtration rate 30–50 mL/minute/1.73 m<sup>2</sup>

● **MONITORING REQUIREMENTS**

- ▶ Monitor cognitive and neurological function.
- ▶ Monitor growth and platelet count in Niemann-Pick type C disease.

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

**Capsule**

- ▶ **Zavesca** (Actelion Pharmaceuticals UK Ltd)  
**Miglustat 100 mg** Zavesca 100mg capsules | 84 capsule [PoM] £3,934.17 (Hospital only)

## 3.11 Pompe disease

### ENZYMES

#### Alglucosidase alfa

- **DRUG ACTION** Alglucosidase alfa is an enzyme produced by recombinant DNA technology licensed for long-term replacement therapy in Pompe disease, a lysosomal storage disorder caused by deficiency of acid alpha-glucosidase.

● **INDICATIONS AND DOSE**

**Pompe disease (specialist use only)**

- ▶ **BY INTRAVENOUS INFUSION**
- ▶ Neonate: 20 mg/kg every 2 weeks.
- ▶ Child: 20 mg/kg every 2 weeks

- **CAUTIONS** Cardiac dysfunction · infusion-related reactions—consult product literature · respiratory dysfunction

● **SIDE-EFFECTS**

- ▶ **Common or very common** Anxiety · arrhythmias · chest discomfort · chills · cough · cyanosis · diarrhoea · dizziness · fatigue · feeling hot · fever · flushing · hyperhidrosis · hypersensitivity · hypertension · irritability · local swelling · muscle complaints · nausea · oedema · pallor · paraesthesia · respiratory disorders · skin reactions · throat complaints · tremor · vomiting
- ▶ **Frequency not known** Abdominal pain · angioedema · apnoea · arthralgia · cardiac arrest · dyspnoea · excessive tearing · eye inflammation · headache · hypotension · nephrotic syndrome · peripheral coldness · proteinuria · vasoconstriction

**SIDE-EFFECTS, FURTHER INFORMATION** Infusion-related reactions are very common, calling for use of antihistamine, antipyretic, or corticosteroid; consult product literature for details.

- **PREGNANCY** Toxicity in *animal* studies, but treatment should not be withheld.
- **BREAST FEEDING** Manufacturer advises avoid—no information available.
- **MONITORING REQUIREMENTS**
  - ▶ Monitor closely if cardiac dysfunction.
  - ▶ Monitor closely if respiratory dysfunction.
  - ▶ Monitor immunoglobulin G (IgG) antibody concentration.
- **DIRECTIONS FOR ADMINISTRATION** For *intravenous infusion*, reconstitute 50 mg with 10.3 mL water for injections to produce 5 mg/mL solution; gently rotate vial without shaking; dilute requisite dose with Sodium Chloride 0.9% to give a final concentration of 0.5–4 mg/mL; give through a low protein-binding in-line filter (0.2 micron) at an initial rate of 1 mg/kg/hour

increased by 2 mg/kg/hour every 30 minutes to max. 7mg/kg/hour.

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

**Powder for solution for infusion**

- ▶ **Myozyme** (Genzyme Therapeutics Ltd)  
**Alglucosidase alfa 50 mg** Myozyme 50mg powder for concentrate for solution for infusion vials | 1 vial [PoM] £356.06 (Hospital only)

## 3.12 Tyrosinaemia type I

### ENZYME INHIBITORS > 4-HYDROXYPHENYLPYRUVATE DIOXYGENASE INHIBITORS

#### Nitisinone

(NTBC)

● **INDICATIONS AND DOSE**

**Hereditary tyrosinaemia type I (in combination with dietary restriction of tyrosine and phenylalanine) (specialist use only)**

- ▶ **BY MOUTH**
- ▶ Neonate: Initially 500 micrograms/kg twice daily, adjusted according to response; maximum 2 mg/kg per day.
- ▶ Child: Initially 500 micrograms/kg twice daily, adjusted according to response; maximum 2 mg/kg per day

- **INTERACTIONS** → Appendix 1: nitisinone

● **SIDE-EFFECTS**

- ▶ **Common or very common** Corneal opacity · eye inflammation · eye pain · granulocytopenia · leucopenia · photophobia · thrombocytopenia
- ▶ **Uncommon** Leucocytosis · skin reactions
- **PREGNANCY** Manufacturer advises avoid unless potential benefit outweighs risk—toxicity in *animal* studies.
- **BREAST FEEDING** Manufacturer advises avoid—adverse effects in *animal* studies.
- **PRE-TREATMENT SCREENING** Slit-lamp examination of eyes recommended before treatment.
- **MONITORING REQUIREMENTS**
  - ▶ Monitor liver function regularly.
  - ▶ Monitor platelet and white blood cell count every 6 months.
- **DIRECTIONS FOR ADMINISTRATION** Capsules can be opened and the contents suspended in a small amount of water or formula diet and taken immediately.

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

**Oral suspension**

- ▶ **Orfadin** (Swedish Orphan Biovitrum Ltd)  
**Nitisinone 4 mg per 1 ml** Orfadin 4mg/1ml oral suspension sugar-free | 90 ml [PoM] £1,692.00 DT = £1,692.00

**Capsule**

- ▶ **Nitisinone (Non-proprietary)**  
**Nitisinone 2 mg** Nitisinone 2mg capsules | 60 capsule [PoM] £423.00  
**Nitisinone 5 mg** Nitisinone 5mg capsules | 60 capsule [PoM] £845.25  
**Nitisinone 10 mg** Nitisinone 10mg capsules | 60 capsule [PoM] £1,546.50
- ▶ **Orfadin** (Swedish Orphan Biovitrum Ltd)  
**Nitisinone 2 mg** Orfadin 2mg capsules | 60 capsule [PoM] £564.00  
**Nitisinone 5 mg** Orfadin 5mg capsules | 60 capsule [PoM] £1,127.00  
**Nitisinone 10 mg** Orfadin 10mg capsules | 60 capsule [PoM] £2,062.00  
**Nitisinone 20 mg** Orfadin 20mg capsules | 60 capsule [PoM] £4,512.00 DT = £4,512.00