Milrinone Intravenous for Adults

Who can administer

Administration RESTRICTED - see Appendix 1

Important information

- See under 'Dose' for adjustments required in **renal** impairment
- For Y-site compatibility see below

Available preparations

Milrinone injection 10mg per 10ml ampoule

Reconstitution

Already in solution

Draw up using a 5 micron filter needle

Dilute further prior to administration

Infusion fluids

Sodium chloride 0.9% or Glucose 5%

Methods of intravenous administration

Intermittent intravenous infusion

Loading dose (using an electronically controlled infusion device)

- Add 50 microgram**/kg** to 10 or 20ml infusion fluid, or use undiluted. Administer over 10 minutes [ref 1]

Continuous intravenous infusion

Maintenance dose (using an electronically controlled infusion device)

- **Syringe driver:** Add 10mg (10ml) to 40ml infusion fluid i.e. final infusion contains 10mg in 50ml
- **or Infusion Bag:** Add 50mg (50ml) to 200ml infusion fluid, i.e. final infusion contains 50mg in **250ml**

- Rate adjusted according to response - see 'Dose'

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Dose in adults

Loading dose

- Give 50microgram/**kg** over 10 minutes (3.5mg in a 70kg patient) followed by maintenance dose below

Maintenance dose

- Use a **200microgram/ml infusion** i.e. 10mg in 50ml or 50mg in 250ml solution
- 0.375 to 0.75 microgram/kg/minute according to haemodynamic/clinical response (time to steady-state in **normal** renal function approximately 10 hours) - see table 1 below for rates
- Normal maximum daily dose is 1.13**mg**/kg/**day** (79mg/24hr/70kg)
- Cardiac failure: Usual duration of use 48 to 72 hours (normal maximum = 5 days)
- Following cardiac surgery: usually for up to 12 hours

Table 1: Infusion rates (ml/hour) using Milrinone 200microgram/ml

Dose (micrograms/kg/minute)	0.375	0.4	0.5	0.6	0.7	0.75
Weight (kg)						
40	4.5	4.8	6	7.2	8.4	9
45	5.1	5.4	6.8	8.1	9.5	10.1
50	5.6	6	7.5	9	10.5	11.3
55	6.2	6.6	8.3	9.9	11.6	12.4
60	6.8	7.2	9	10.8	12.6	13.5
65	7.3	7.8	9.8	11.7	13.7	14.6
70	7.9	8.4	10.5	12.6	14.7	15.8
75	8.4	9	11.3	13.5	15.8	16.9
80	9	9.6	12	14.4	16.8	18
85	9.6	10.2	12.8	15.3	17.9	19.1
90	10.1	10.8	13.5	16.2	18.9	20.3
95	10.7	11.4	14.3	17.1	20	21.4
100	11.3	12	15	18	21	22.5
105	11.8	12.6	15.8	18.9	22.1	23.6
110	12.4	13.2	16.5	19.8	23.1	24.8
115	12.9	13.8	17.3	20.7	24.2	25.9
120	13.5	14.4	18	21.6	25.2	27

Renal impairment

- Significantly increases terminal elimination half-life
- Loading dose NOT affected but REDUCE maintenance DOSE based on table below

eGFR (ml/min/1.73 m^2)	Maintenance infusion dose	Infusion delivery rate of 200microgram/ml solution in ml/kg/hour
50	0.43 microgram/kg/minute	0.13 **ml/kg**/hour
40	0.38 microgram/kg/minute	0.11 **ml/kg**/hour
30	0.33 microgram/kg/minute	0.1 **ml/kg**/hour
20	0.28 microgram/kg/minute	0.08 **ml/kg**/hour
10	0.23 microgram/kg/minute	0.07 **ml/kg**/hour
5	0.20 microgram/kg/minute	0.06 **ml/kg**/hour

Monitoring

- Blood pressure, continuous ECG, heart rate, fluid balance and renal function [ref 1]

Storage

Store below 25^0C. Do not freeze.

References

SPC (Pinewood) June 2022

1. Medusa Injectable Medicines Guide: downloaded 25/06/2025

Label for syringe drivers -see below

Therapeutic classification

Phosphodiesterase enzyme inhibitor