FACT SHEET #15

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# medical management of irukandji syndrome

Further research is required to determine the optimal management of patients with irukandji syndrome. The mainstays of medical treatment of irukandji syndrome are provision of analgesia, control of severe hypertension and support if severe complications occur. In most patients the acute phase will not require any complex interventions and settle over 6-24 hours. Despite adverse publicity the rates of severe complications are low and fatalities exceedingly rare.

Practitioners unfamiliar with managing irukandji syndrome are strongly advised to contact either a senior clinician at their regional referral hospital's Emergency Department or ICU, or Poisons Information Centre (131126) for advice.

Patients should be observed closely and vital signs monitored, both to assess the progress of the syndrome and the response to therapy. Supplemental oxygen is recommended during the early management phase, especially as most patients will receive opioid analgesia and a small proportion will develop pulmonary oedema.

Incremental doses of morphine or fentanyl in standard doses are administered. Historically pethidine had been used although anecdotal experience is moving practice in most centres towards the use of morphine or fentanyl as these avoid the intrinsic cardiodepression and neurotoxicity of pethidine.

Overall there is no proven superiority of morphine over fentanyl in this setting and practitioners should use the agent with which they are familiar. Standard precautions regarding adverse effects need to be observed.

In some centres experience suggests the administration of magnesium sulfate improves analgesia and lowers blood pressure. Its use has been incorporated as a second-line agent in one management guideline. It is administered intravenously as a loading dose followed by a constant infusion which is progressively withdrawn as the illness settles.

Modest doses of benzodiazepines such as diazepam may facilitate anxiolysis.

The use of anti-histamines as an adjunct to analgesia is unclear. Their use has reduced the amount of analgesic required in one trial. However, the addition of a medication with a significant risk of side effects needs to be balanced against the risk of opiate toxicity.

The control of severe hypertension is a priority. Many patients' hypertension will settle with analgesia and/or magnesium sulfate. If this does not occur specific antihypertensive agents should be initiated. The use of GTN spray while awaiting infusions to be prepared is advocated by some authorities. Intravenous GTN by infusion is commonly used as this agent is familiar to many practitioners and readily available. The utilisation of catecholamine antagonists such as alpha-blockers, e.g Phentolamine has been described as effective in some cases, and has been associated with improved analgesia in these. Patients requiring this level of intervention should be discussed with a referral centre if this has not already happened.

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# medical management of irukandji syndrome (cont.)

The use of beta-blockers is widely held to be deleterious in this setting, with one published case of renal failure occurring after beta-blocker use.

Sweating in irukandji syndrome may be so profuse as to cause dehydration, which needs to be borne in mind. Judicious rehydration is sometimes required.

All agents must be titrated carefully to avoid complications of overzealous treatment.

Complications of irukandji syndrome include pulmonary oedema and low output heart failure from cardiovascular toxicity, and intracerebral haemorrhage due to uncontrolled hypertension. These should be dealt with immediately and referral initiated early.

Patients will generally have ongoing low-grade symptoms for some weeks. In a small subset this will persist longer and may require specific therapy.

The current guidelines for management of Irukandji syndrome developed by the Prevention and Response Working Group of the Irukandji Taskforce are available within Queensland Health facilities on http://qheps.health.qld.gov.au/ccrs/sops/sop13/sop13_2.pdf