

Ambulance management of paediatric adrenal crisis

Adrenal crisis is a life-threatening emergency, which occurs when there is insufficient glucocorticoid for the body to cope with major stress.

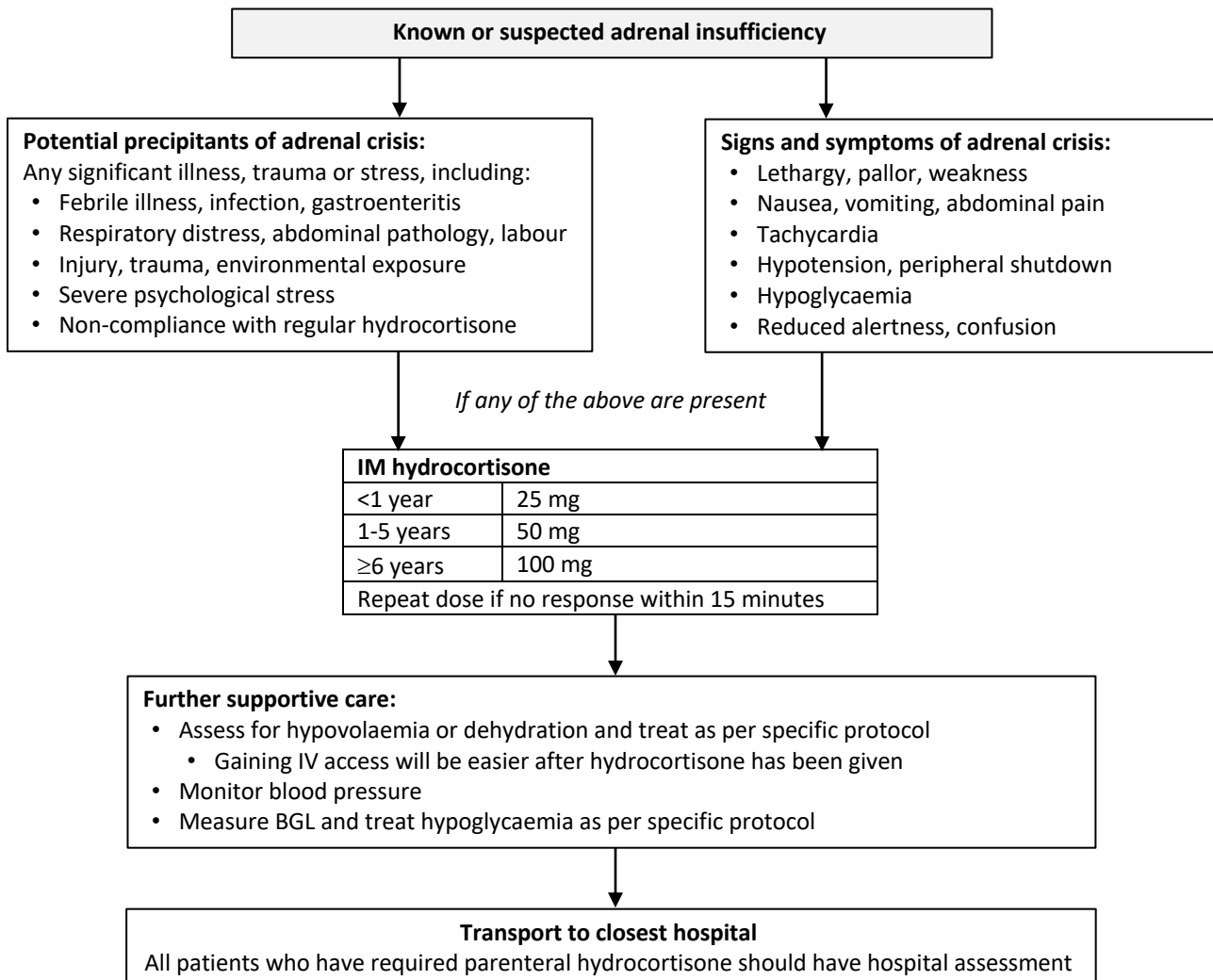
This usually occurs in the context of **adrenal insufficiency**, a condition in which the adrenal glands do not produce sufficient cortisol (glucocorticoid) for the body's needs.

Synthetic glucocorticoids (corticosteroids) include hydrocortisone, prednisolone and dexamethasone, and hydrocortisone is most commonly used to treat adrenal insufficiency.

Types of adrenal insufficiency:

- **Primary:** caused by diseases of the adrenal gland, including Addison's disease, congenital adrenal hyperplasia (CAH), adrenoleukodystrophy. Usually involves both glucocorticoid and mineralocorticoid insufficiency.
- **Secondary:** caused by deficiency of adrenocorticotropic hormone secretion by the pituitary gland, e.g. hypopituitarism, craniopharyngioma or other suprasellar tumours, head injuries.
- **Iatrogenic:** caused by suppression of the hypothalamic-pituitary-adrenal axis due to chronic corticosteroid use, e.g. autoimmune disease, nephrotic syndrome, asthma, oncology patients, transplant patients.

Management Algorithm



If there is any doubt as to whether IM hydrocortisone is warranted, it should be given. It will not cause any harm if given unnecessarily. If a parent requests IM hydrocortisone be given, this should not be ignored.

Some patients may have a written Emergency Action Plan, which should be followed if it is readily available to paramedics. However, the above protocol is safe to follow in all patients with adrenal insufficiency and should be used if there is any doubt.