INTRODUCING CLEVIDIPINE IN PHAEOCHROMOCYTOMA SURGERY PROTOCOLS

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64 year old woman. Hypertension with hypertensive cardiopathy, left ventricle hypertrophy. Multinodular goitre, anxiety disorder.
Chronic medication: Nifedipine 30mg (1-0-0); Venlafaxine 75mg (1-0-0); Alprazolam 0,25mg (0,5-0-0,5)
Admission for laparoscopic adrenalectomy in the context of phaeochromocytoma.

PREOPERATIVE MANAGEMENT:

Because of blood pressure values over target (120/60mmHg), adrenergic blockade with Doxazosine 30 mg in the morning and volumen optimization with crystalloids because of orthostatic hypotension were required.

Surgery was delayed until blood pressure was controlled below 120/60mmHg values.

INTRAOPERATIVE MANAGEMENT:

Anesthetic induction with close blood pressure monitoring with an arterial cannula.

As the surgeon manipulates the tumor, a hypertensive peak (SBP>180mmHg) occurs.

We administered a continuous infusion of Clevidipine with a maximum speed of 16 mg/h. Once the tumor was removed, requirement of clevidipine drops to 4mg/h.

Hemodynamic stability was assured during the whole procedure.

POSTOPERATIVE MANAGEMENT:

Admission in the Intensive Care Unit.

Clevidipine infusión continues to be necessary for some hours (4mg/h).

The day after surgery, blood pressure values could be controlled with oral Nifedipine.

Discharge to regular hospitalization area with optimal blood pressure control. Habitual medication was reintroduced and patient was discharged home.

CLEVIDIPINE

MECHANISM OF ACTION:

- 4th generation dihydropyridine L-type calcium channel blocker.
- Direct arterial vasodilatation with no effect on venous capacitance.

DRUG PROPERTIES:

- Ultra-short half-life.
- Rapidly metabolized by plasmatic esterases.

DOSING:

- Starting dose 4ml/h (2mg/h) titrated every 60-90seconds
- Dose Maximum 8 mcg/kg/min
- Maximum 500 ml in 24 hours

DISCUSSION:

Clevidipine continuous infusion use in phaeochromocytoma surgery is not common. Clevidipine can be a new and very useful resource to be introduced in this kind of surgery. Its rapid onset of effect and ultra-short half-life, make it a really interesting drug. On top of that, it has a very low incidence of adverse effects and it can be easily titrated to get to our targeted blood pressure.

REFERENCES:

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