ANESTHETIC HYPOTENSION

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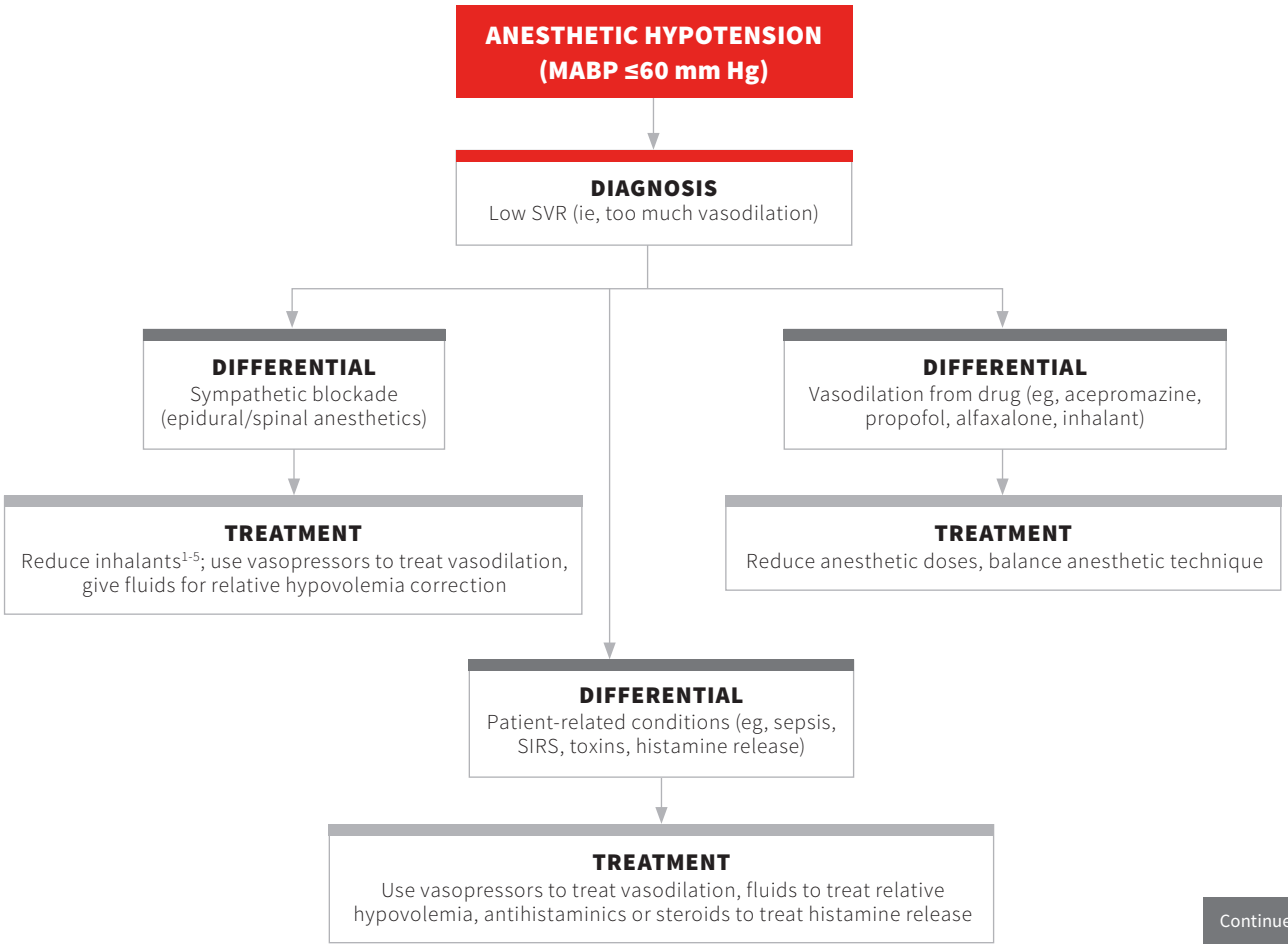

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PERTINENT CALCULATIONS

- Blood pressure = CO × SVR
- CO = SV × HR

CO = cardiac output
HR = heart rate
MABP = mean arterial blood pressure
SIRS = systemic inflammatory response syndrome
SV = stroke volume
SVR = systemic vascular resistance

References

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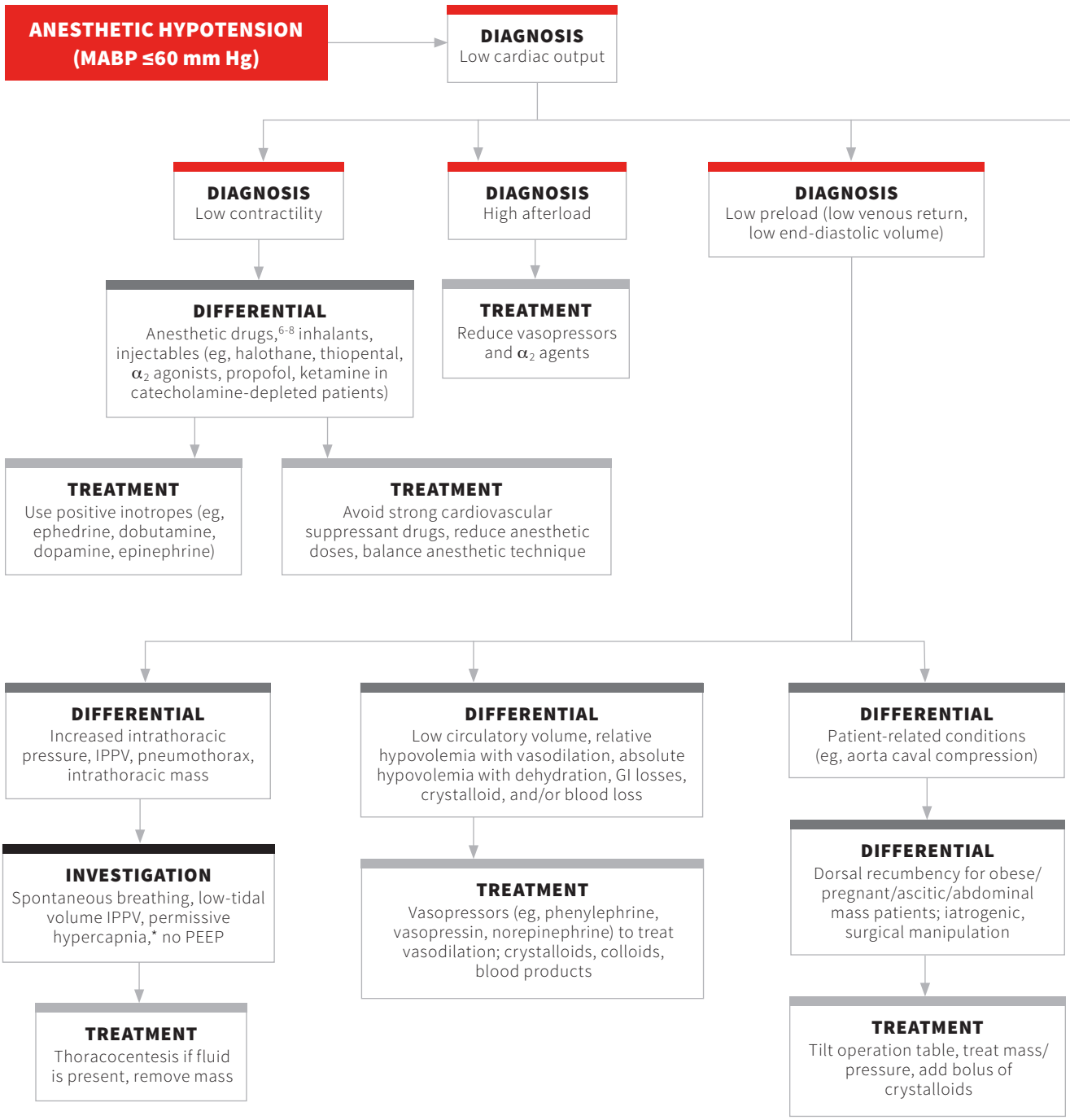


AV = atrioventricular

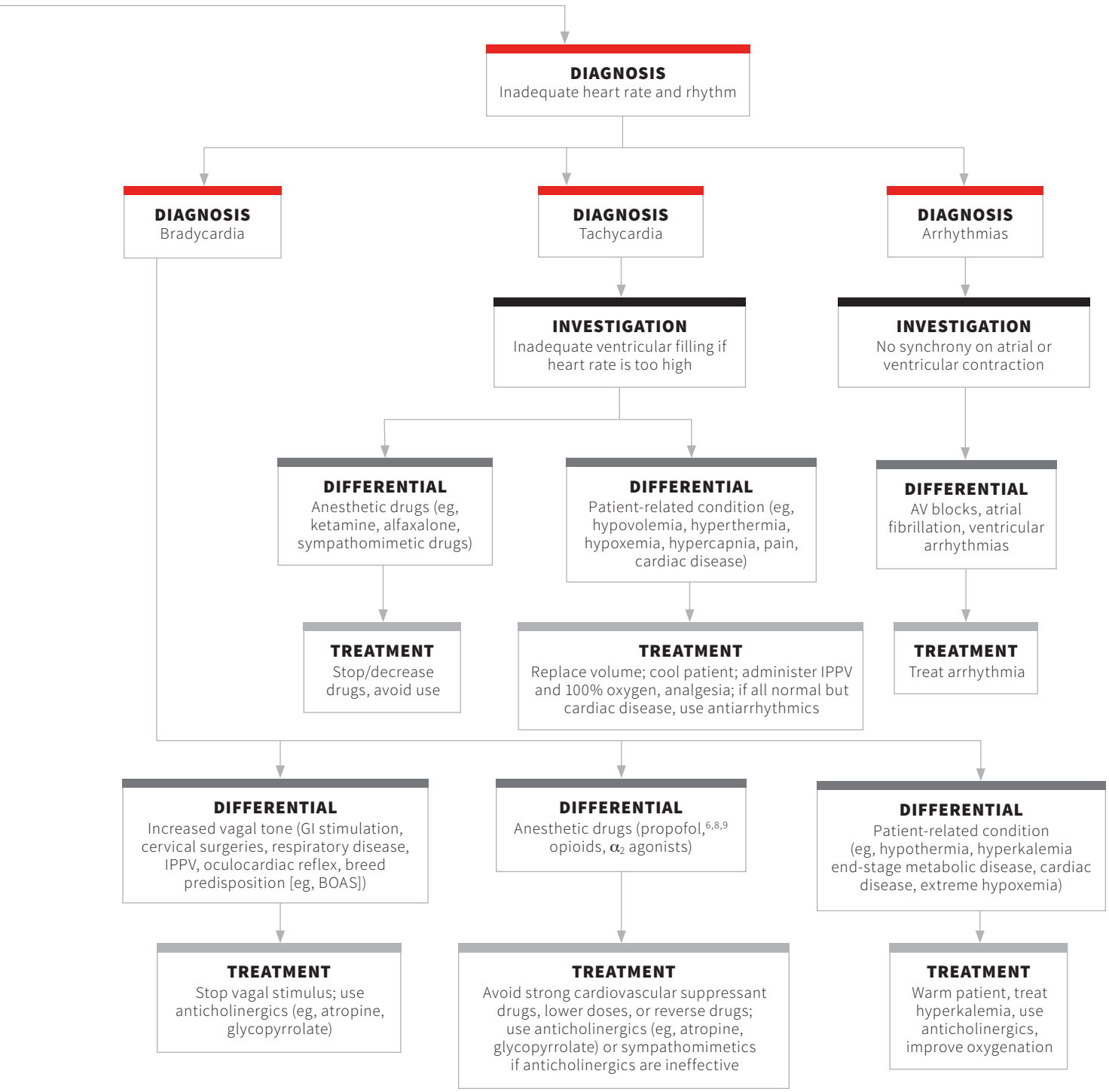
BOAS = brachycephalic obstructive airway syndrome

IPPV = intermittent positive pressure ventilation

MABP = mean arterial blood pressure

PEEP = positive end-expiratory pressure

*Permissive hypercapnia is a ventilation strategy in which oxygenation is prioritized over expired carbon dioxide. Higher than normal carbon dioxide levels are allowed because of low ventilation that preserves the lungs.


DIAGNOSIS
Inadequate heart rate and rhythm
DIAGNOSIS
Bradycardia
DIAGNOSIS
Tachycardia
DIAGNOSIS
Arrhythmias
INVESTIGATION
Inadequate ventricular filling if heart rate is too high
INVESTIGATION
No synchrony on atrial or ventricular contraction
DIFFERENTIAL
Anesthetic drugs (eg, ketamine, alfaxalone, sympathomimetic drugs)
DIFFERENTIAL
Patient-related condition (eg, hypovolemia, hyperthermia, hypoxemia, hypercapnia, pain, cardiac disease)
DIFFERENTIAL
AV blocks, atrial fibrillation, ventricular arrhythmias
TREATMENT
Stop/decrease drugs, avoid use
TREATMENT
Replace volume; cool patient; administer IPPV and 100% oxygen, analgesia; if all normal but cardiac disease, use antiarrhythmics
TREATMENT
Treat arrhythmia
DIFFERENTIAL
Increased vagal tone (GI stimulation, cervical surgeries, respiratory disease, IPPV, oculocardiac reflex, breed predisposition [eg, BOAS])
DIFFERENTIAL
Anesthetic drugs (propofol,[6,8,9] opioids, α_2 agonists)
DIFFERENTIAL
Patient-related condition (eg, hypothermia, hyperkalemia end-stage metabolic disease, cardiac disease, extreme hypoxemia)
TREATMENT
Stop vagal stimulus; use anticholinergics (eg, atropine, glycopyrrolate)
TREATMENT
Avoid strong cardiovascular suppressant drugs, lower doses, or reverse drugs; use anticholinergics (eg, atropine, glycopyrrolate) or sympathomimetics if anticholinergics are ineffective
TREATMENT
Warm patient, treat hyperkalemia, use anticholinergics, improve oxygenation