

VASOACTIVE MEDICATIONS

Aims:

To appraise junior nursing staff and nursing students of mechanism of action, indications, uses, advantages and disadvantages of commonly used vasoactive medications.

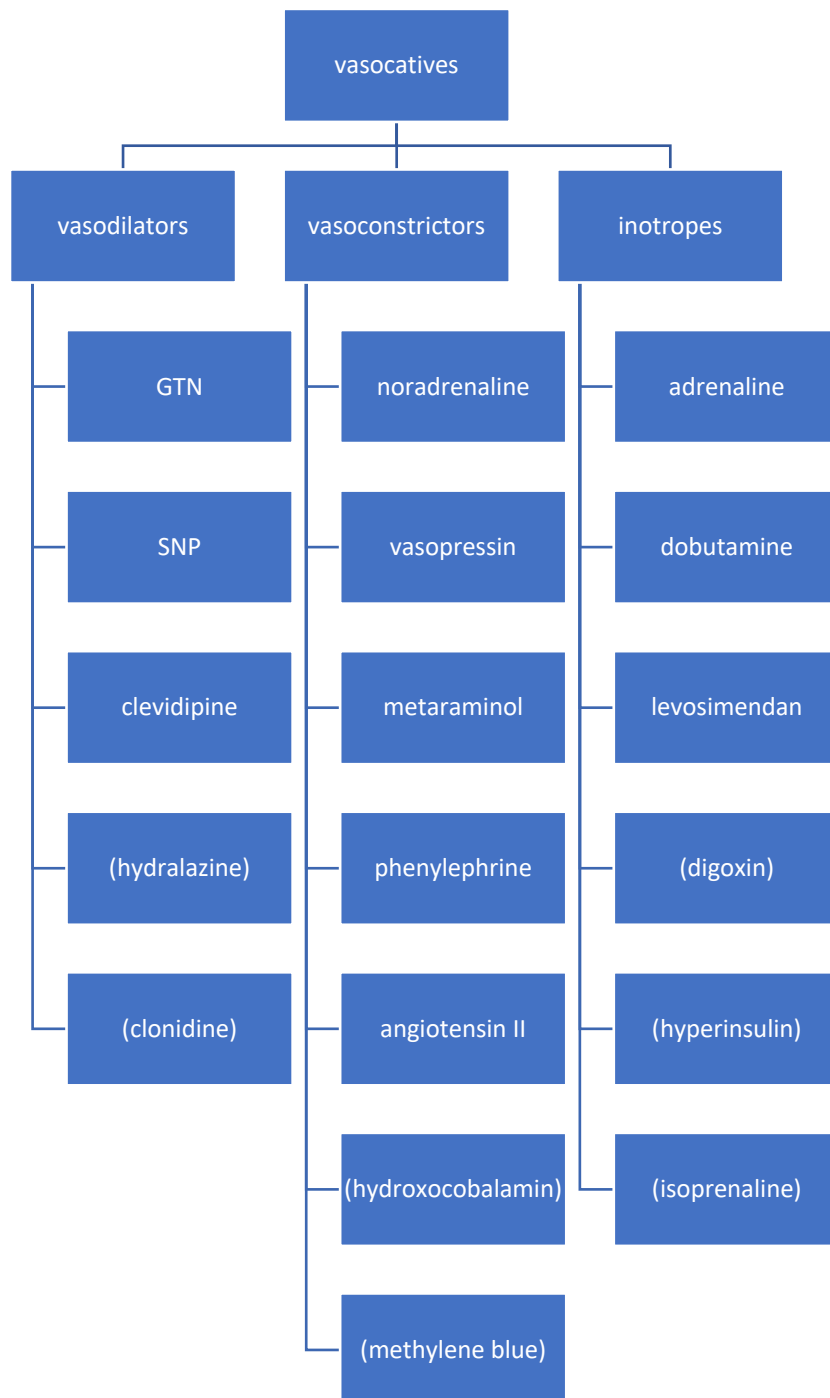
For senior nurses this session may supplement their knowledge on pharmacodynamics, pharmacokinetics and the inputs into medical decision-making around the use of vasoactive infusions.

Structure:

Start with an introductory spiel that includes:

- Definition of the term “haemodynamics”
 - o Haemo- from Greek “haimo” meaning “blood”
 - o -dynamics from Greek “δυναμικός” meaning “movement, energy, interaction”
- Assessment and measurement of haemodynamics
 - o Clinical
 - o PAC/PiCCO
 - Define CI, SVR; mention other parameters spewed out by machine
 - Explain how thermodilution works
 - o Echo
- Basic cardiac output equations
 - o $BP = CO.SVR$
 - o $CO = HR.SV$
 - o Inputs to SV ie preload, contractility, afterload
 - o Acknowledgement of the recursive influence of rate, preload and afterload
- Ways in which we manipulate the parameters to effect haemodynamic management

I recommend drawing on the board. Try to interact with the audience. Ask them to suggest drugs which they think fit the categories you draw. The usual rubrics and structure to employ would be :



You should be able to get most of these example drugs out of the audience with encouragement. If any others are suggested then include them in the appropriate category. As each drug is written up on the board, briefly discuss its pharmacodynamic properties, pharmaceuticals, how it effects the changes we are using it for, and any practice pearls. Most important things are mechanism of action, onset and offset times.

Toward the end of the talk find a case (usually from CSICU) where some drugs have been deployed in response to haemodynamic data and run through it chronologically to see the

decision making process applied IRL. Pulling up the patient file on ICCA and going through the flow sheets works well.