DEXMEDETOMIDINE

Dexmedetomidine is a centrally acting α2 agonist with hypnotic, anxiolytic, and analgesic properties. It has less amnesic effects than benzodiazepines. It's onset of action is relatively slow (10-15 minutes). Importantly it causes virtually no respiratory depression and can be continued safely in extubated patients. However, it commonly causes bradycardia. It has a short duration of action which wears off quickly, and is not thought to accumulate in hepatic and renal failure. Dexmeditomidine is currently an expensive sedative agent usually restricted to "difficult" sedation problems and/or drug withdrawal. It probably reduces the prevalence of delirium significantly compared with benzodiazepines.

DEXMEDEROMIDINE			
RECEPTOR TYPE	Gaba Receptors	α2-Receptors	Opioid Receptors
Receptor type		✓	
ONSET	Rapid (< 1 minute)	Intermediate (1-3 minutes)	Slow (> 3 minutes)
Rate of Onset			✓
Rate of Offset			✓
EFFECT	Strong	Weak	None
Sedative effect (hypnosis and anxiolysis)	✓		
Amnesic effect		✓	
Analgesic effect	✓		
RISKS	None	Lower Risk	Higher Risk
Cardiovascular effects (low pulse and/or blood pressure		✓	
Respiratory depression	✓		
Potential to cause delirium		✓	
Active metabolites and/or accumulation	✓		
Potential toxic effects		✓	
COST	Low	Intermediate	High
Cost			✓

DESIST