

艾贝宁在术后镇痛中的应用

艾贝宁简介

【药品名称】

- 通用名称：盐酸右美托咪定注射液
- 商标名：**艾贝宁**（恒瑞医药5年研发，国内**首家**上市）
- 英文名称：Dexmedetomidine Hydrochloride Injection

【成份】

- 主要成份为**盐酸右美托咪定**
- 辅料为氯化钠

【性状】

- 无色或几乎无色的澄明液体

【作用机理】

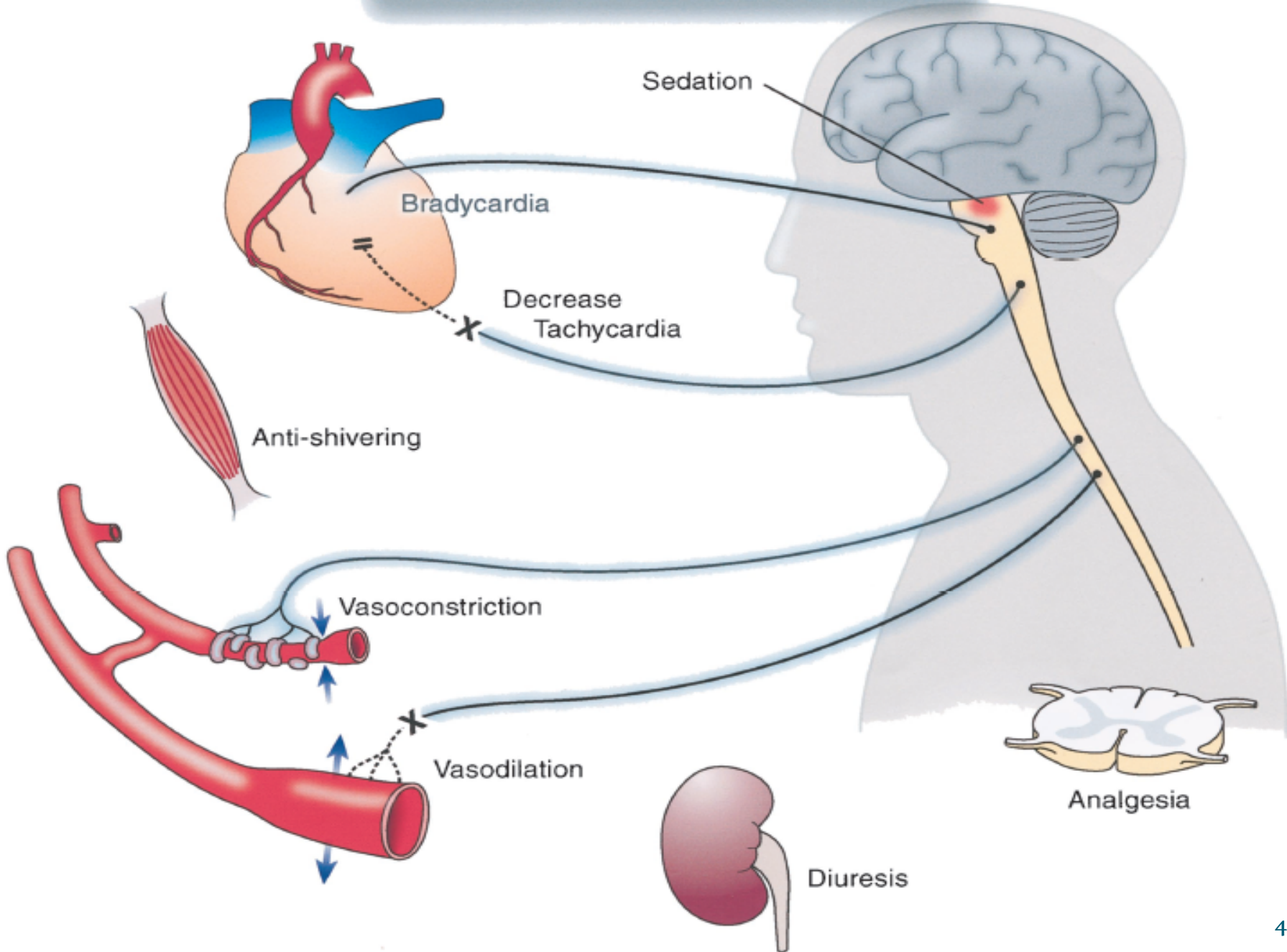
- 右美托咪定是一种相对选择性 α_2 肾上腺素受体激动剂



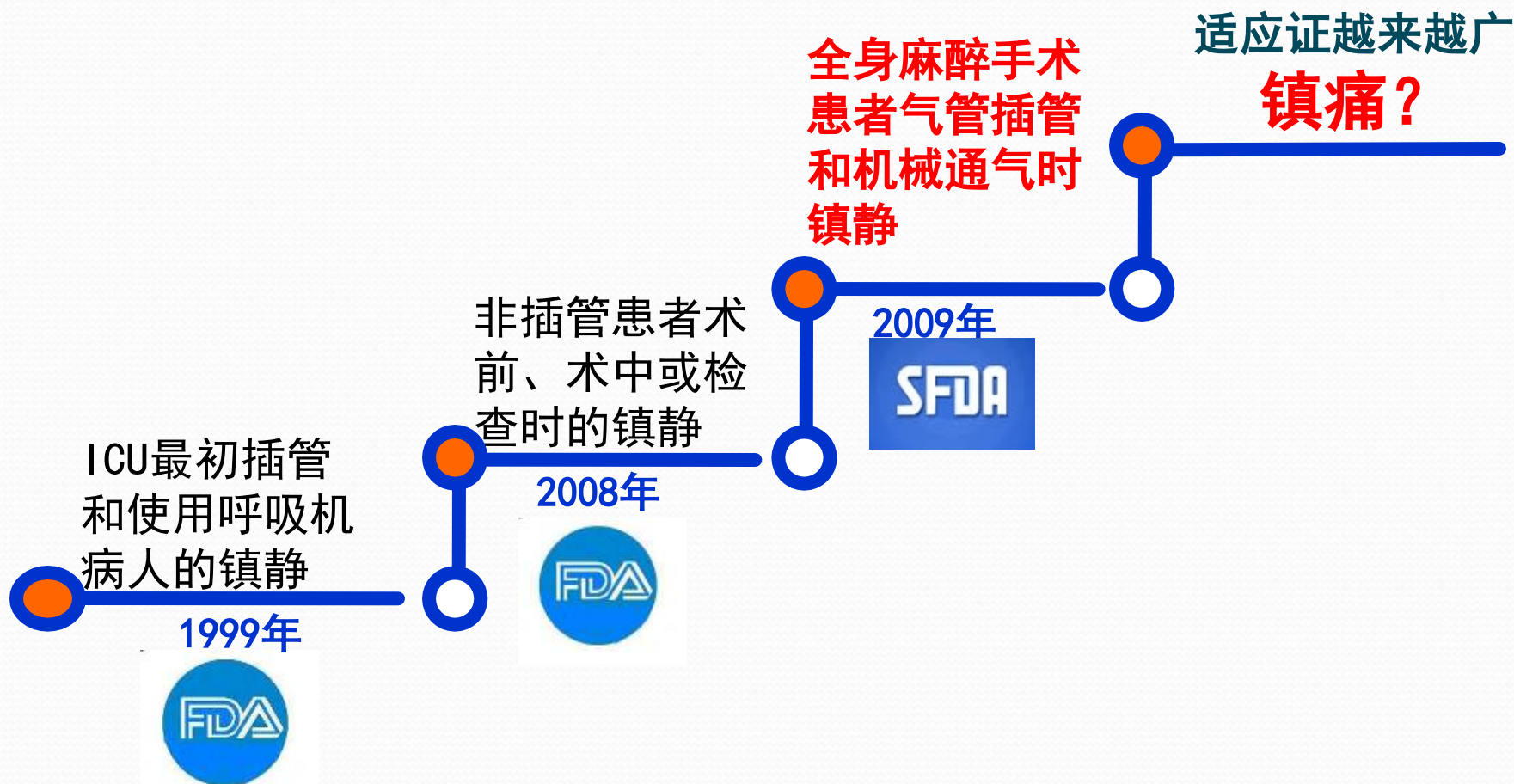
Some of the physiological/pharmacological effects mediated by different α_2 -adrenoceptor subtypes.

Actions	α_2 -Adrenoceptor subtype
Hypotensive, bradycardiac action	α_{2A}
Sedative action	α_{2A}
Arterial vasoconstriction	α_{2B} , α_{2A} ,
Venous vasoconstriction	α_{2C}
Salt-induced hypertension	α_{2B}
Antinociceptive effect	α_{2A}
Presynaptic inhibition of transmitter release	α_{2B} , α_{2C}
Anesthetic-sparing effect	α_{2A} , α_{2C} , α_{2B} ,
Increased spatial working memory	α_{2A}
Thrombus stabilization	α_{2A}
Hypothermic effect	α_{2A} ,
Inhibition of gastric acid secretion	α_{2C}
Inhibition of gastric motility	α_{2A}
Gastric mucosal protection	α_{2A}
Ion transport and fluid secretion in the small intestine	α_{2B}
Beneficial effects in attention deficit hyperactivity disorder	α_{2A}
	α_{2A} , α_{2C}

Physiology of Alpha-2 Adrenoceptors



艾贝宁适应证



镇痛作用机制

- ① 对外周神经的镇痛，通过对A δ 纤维和C纤维的抑制作用而产生镇痛效果；
- ② 脊髓水平的镇痛，通过激动脊髓突触前膜和后膜上的 α_2 受体，使细胞产生超极化，从而使传递的疼痛信号受抑制；
- ③ 脊髓上水平的镇痛，主要使蓝斑核以及投射到脊髓的下行去甲肾上腺素能通路突触前膜去极化，抑制突触前膜P物质和其他伤害性肽类的释放，从而抑制脊髓背角伤害性刺激的传递，进而终止疼痛的信号转导；
- ④ 不排除Dex存在类可乐定的局部镇痛机制，通过对 α_2 受体的激动来调节痛觉过敏作用；

Is intraoperative dexmedetomidine a new option for postoperative pain treatment? A meta-analysis of randomized controlled trials

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- ∞ 28个RCT，1420名术中使用了DEX患者
- ∞ 术后疼痛减轻
- ∞ 术后阿片类药物用量减少
- ∞ 术后阿片类药物副作用发生少

局部应用

British Journal of Anaesthesia 101 (3): 395–9 (2008)
doi:10.1093/bja/aen184 Advance Access publication June 20, 2008

BJA

PAIN

Effect of intra-articular dexmedetomidine on postoperative analgesia after arthroscopic knee surgery

- ❧ 60名行TKA患者随机分三组，每组20人；
- ❧ control组静脉和关节腔内给予N. S； intra-articular组静脉给予N. S， 关节腔内给予DEX； i. v. 组静脉给予DEX， 关节腔内给予N. S ；（DEX 1 ug/ kg）
- ❧ 结论： 关节内应用优于静脉应用优于对照

外周神经阻滞

Fritsch, G., T. Danninger, et al. (2014). "Dexmedetomidine added to ropivacaine extends the duration of interscalene brachial plexus blocks for elective shoulder surgery when compared with ropivacaine alone: a single-center, prospective, triple-blind, randomized controlled trial." Reg Anesth Pain Med 39(1): 37-47.

Bengisun, Z. K., P. Ekmekci, et al. (2013). "The Effect of Adding Dexmedetomidine to Levobupivacaine for Interscalene Block for Postoperative Pain Management After Arthroscopic Shoulder Surgery." Clin J Pain.

- ❧ DEX加入局部麻醉药，用于臂丛神经阻滞
- ❧ 延长神经阻滞时程，降低肩关节术后痛觉评分，提高病人满意度；

椎管内

Journal of Clinical Anesthesia (2009) 21, 493–501



ELSEVIER

Journal of
Clinical
Anesthesia

Original contribution

Comparison of patient-controlled analgesia with and without dexmedetomidine following spine surgery in children

Senthilkumar Sadhasivam MD, MPH (Associate Professor)*,
Anne Boat MD, Mohamed Mahmoud MD

Sadhasivam等比较单纯吗啡与Dex复合吗啡用于脊柱手术术后椎管内镇痛的效果，结果表明复合使用Dex对吗啡具有“节俭效应”，并可增加其镇痛作用，降低术后的恶心、呕吐的发生率。

椎管内

Rev Bras Anesthesiol
2004; 54:4: 473 - 478

ARTIGO CIENTÍFICO
SCIENTIFIC ARTICLE

Clonidina e Dexmedetomidina por Via Peridural para Analgesia e Sedação Pós-Operatória de Colectomia * *Epidural Clonidine or Dexmedetomidine for Post-Cholecystectomy Analgesia and Sedation*

Antônio Mauro Vieira, TSA¹; Taylor Brandão Schnaider²; Antônio Carlos Aguiar Brandão, TSA³;
Flávio Aparecido Pereira⁴; Everaldo Donizeti Costa⁴; Carlos Eduardo Povoá Fonseca⁵

Vieira等的研究发现，对开腹胆囊切除患者，硬膜外腔给予Dex 2ug / kg复合0.75%罗哌卡因20 ml，至术后6 h仍维持镇痛效果。

椎管内

CNS Neuroscience & Therapeutics

CNS Neuroscience & Therapeutics

META-ANALYSIS

Effects of Intravenous and Intrathecal Dexmedetomidine in Spinal Anesthesia: A Meta-Analysis

Xiao-Yin Niu, Xi-Bing Ding, Ting Guo, Ming-Hui Chen, Shu-Kun Fu & Quan Li

Department of Anesthesiology, Shanghai Tenth People's Hospital, Tongji University School of Medicine, Shanghai, China

- 来自上海十院的作者对于椎管内应用DEX进行了荟萃分析；
- 纳入8个RCT, 412名患者；
- 延长椎管内麻醉时间，提高术后镇痛质量，未增加低血压等并发症的发生。

以上内容仅为本文档的试下载部分，为可阅读页数的一半内容。如要下载或阅读全文，请访问：<https://d.book118.com/756134222045010202>