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Neuraxial Analgesia

Essay

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In

Anaesthesiology

By

Raafat Mohamed El-sharkasy

(M.B.B.CH.,)

Supervisors

Prof.

Abd El-aziz Hamed El-badawy

Professor of Anaesthesiology

Faculty of Medicine

Tanta University

Prof.

Said Anwar Amer

Professor of Anaesthesiology

Faculty of Medicine

Tanta University

Dr.

Yasser Mohamed Amr Ahmed

Lecturer of Anaesthesiology

Faculty of Medicine

Tanta University

FACULTY OF MEDICINE

TANTA UNIVERSITY

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Abstract

Neuraxial drug administration describes techniques that deliver drugs in close proximity to the spinal cord, i.e. intrathecally into the CSF or epidurally into the fatty tissues surrounding the dura, by injection or infusion. This approach was initially developed in the form of spinal anaesthesia over 100 years ago. Since then, neuraxial drug administration has evolved and now includes a wide range of techniques to administer a large number of different drugs to provide anaesthesia, but also analgesia and treatment of a variety of acute and chronic settings. The choice of systems and drugs is based on the nature and duration of the patient's pain, his or her other medical problems, and patient resources. Various delivery systems are available for intraspinal access, including short-term epidural catheters, permanent epidural or intrathecal catheters, implantable epidural or intrathecal ports, or implanted intrathecal catheter and pumps. The use of intraspinal drug delivery should be based upon the principle of optimum benefit and minimal harm for both the patient and the health system as a whole. Consequently, technical improvement is still necessary to help reduce the complications and side effects associated with the procedure.

Key Words: Neuraxial analgesia; Intrathecal drug delivery; Implantable pain pump; Spinal analgesia; Opioids; Chronic pain; Neuraxial infusions.

المستخلص العربي :

يعتبر الحقن العقاقيري الشوكي واحد من أهم الطرق الفعالة والغير تقليدية لمعالجة الآلام الحادة والمزمنة ؛ فهناك عقاقير كثيرة يمكن إعطاؤها بطرق متعددة ، ووسائل مختلفة وذلك بالحقن والتسريب خارج الأم الجافية وداخل السائل النخاعي ؛ واختيار الطريقة والعقار المناسب إنما يعتمد على طبيعة الألم ومدته و المشاكل الصحية الأخرى لدى المريض . ويعتبر الحقن العقاقيري الشوكي للمورفينات مساعد قوى وفعال في علاج الآلام الحادة والمزمنة . وهناك عدد من العقاقير الأخرى غير المورفينية لها تأثير تسكيني قوى أيضا يمكن استخدامها في هذا المجال . وهناك أجيال جديدة ومتنوعة من أنظمة الحقن المختلفة في هذا المجال مثل قساطر الحقن خارج الأم الجافية قصيرة الأمد ، و قساطر الحقن خارج الأم الجافية وتحت العنكبوتية طويلة الأمد ، وكذلك القساطر والناقلات المدفونة وذات المضخات المبرمجة على إعطاء جرعات دوامية محددة من العقار المطلوب . ومع كل ذلك فنحن نلاحظ في احتياج إلى تطوير أنظمة الحقن المختلفة وطريقة الاستخدام واختيار العقار المناسب للمريض المناسب وذلك لتقليل الآثار السلبية وتحسين النتائج .

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