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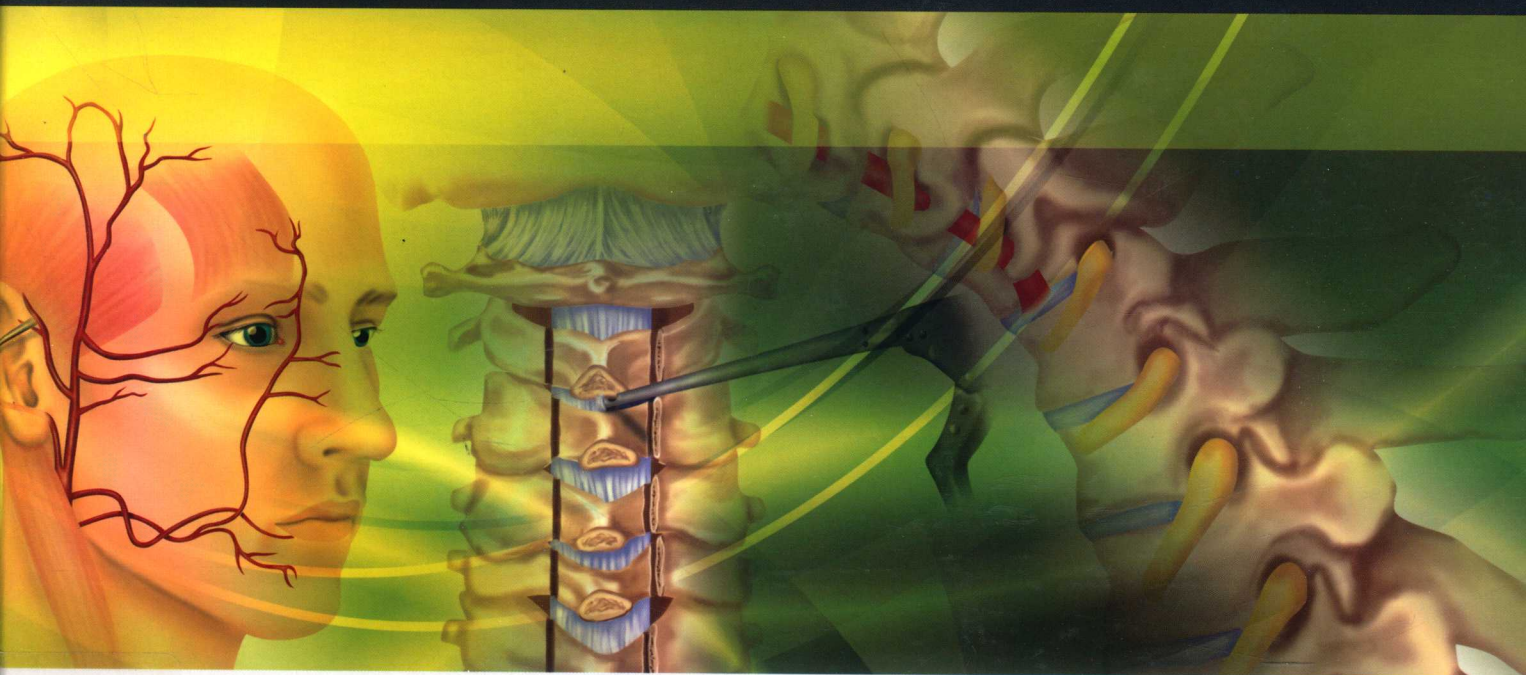
脊柱外科手术技术

OPERATIVE TECHNIQUES: SPINE SURGERY

(第2版)

原 著 Alexander R. Vaccaro
Eli M. Baron

主 译 吴 华



北京大学医学出版社

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译者前言

自20世纪80年代初期以来,伴随着脊柱矫形内植物的研制与开发以及生物力学的发展,脊柱外科从基础研究到临床实践均取得了很大进步,一些重要的概念、原则、诊断标准以及治疗手段变得更加先进、合理。对于脊柱外科医生而言,在继承传统脊柱外科技术的同时,了解并掌握新的技术和理论已迫在眉睫。目前,有关脊柱手术技术方面的书籍很多,而本书最大的优点是其实用性更强。

本书由美国脊柱损伤协会前任主席Alexander R. Vaccaro教授及92位脊柱外科专家共同编写完成。全书共包括40种技术,将传统与现代、开放与微创的手术技术以图文并茂的方式展示给读者,并从手术适应证、外科解剖、手术过程以及术后护理等多个层面进行了详细的描述,条理清楚,重点突出。本著作配合使用真实术中照片和手绘插图,将复杂的手术过程诠释得简单易懂。

译者从事脊柱外科多年,在翻译过程中,常惊叹于书中精辟而丰富的技巧与论述。因此,特别期盼早日将其与同道分享。相信本书一定能成为脊柱外科医生的重要参考书籍,并且还能作为脊柱手术的术后护理和专科培训提供翔实的理论指导。

翻译过程中,译者尽量忠实于原文,但书中某些统计数据可能与国人情况不甚相符,请读者留意。由于时间仓促,水平所限,不足和遗憾在所难免,敬请批评斧正。

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第1版序

可以毫不夸张地说，脊柱外科在过去50年中取得了飞速发展。随着机械工程、生物材料以及解剖学的进步，脊柱疾病患者的外科治疗技术越来越成熟，应用也越来越广泛。在这段时期中，脊柱疾病的治疗越来越规范，专业性也越来越强。与此同时，关于脊柱疾病的书籍和杂志数量也在同步增加。该领域的多部经典著作都通过多卷册的形式对许多复杂的问题分别进行了翔实的论述。在此，引用Thomas De Quincey（1785—1859）的话：“精彩的智慧长眠于茫茫深渊……永远不会被发掘或受到人们的推崇”（摘自Coleridge《英格兰湖边诗人的追忆》）。的确，脊柱外科学方面的出版物众多，该领域的医护人员常常迷惑“我到底该先读哪一本？”或者“我怎样才能快速地找到关于……的描述？”等。

我非常荣幸地受邀为该书作序，这本书以一种新颖而真实的方式向广大读者展示了脊柱外科这个不断发展的知识领域。《脊柱外科操作技术》的作者Alexander Vaccaro和Eli Baron具有极其丰富的脊柱外科领域的临床经验，并且如同Medline数据库中显示的那样，他们都有非常出色的研究背景。他们将繁杂的脊柱外科手术知识进行汇总凝练，并将其条理清晰、结构分明地呈现给读者。手术技术按“颈椎”“胸椎”和“腰椎”三个部分进行编写，每部分的每种手术技术都包括了“外科解剖”“体位”、“入路/显露”，以及详细的手术过程讲解，并附有“要点”和“提示”内容。并在“争议”部分直接地提出一些开放性问题。这些问题可以引起包括高级脊柱外科医生在内的同行深思，以期达到进一步改进脊柱手术技术的目的。每种技术都以循证学目录的方式列出了主要参考文献，并附有相关的研究概述。书中近乎于艺术品的插图简明地突出了相关的重要解剖组织，帮助读者了解目标区域的结构。

毫无疑问，本书提供了极其丰富的理论知识，对于所有脊柱疾病医护工作者而言都是一份宝贵的财富。

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原著前言

当今，关于脊柱外科的专著繁多。大多数是关于脊柱护理和描述具体手术步骤的参考书。这些书的内容包含了某些特别观点提出的背景、临床疗效、治疗方案及预后等方面。通过对具体病例的保守与手术治疗效果进行讨论而回顾探讨仅有细微差别的病理过程。

本书的编写目的完全不同。尽管书中有详细的脊柱手术图谱，但都不能代表手术过程中的实际操作。我们期望这本书能够成为脊柱外科医生必备的工具书，利用该书强化理论知识，激发兴趣，同时指导日常临床工作。书中40种技术均由极富临床经验的专家精心编写。每部分内容按照手术步骤都配有详尽的插图和实用的专家指导意见。文中巧妙的提示有助于初学者尽快掌握操作技术，并且文中还指出操作中易犯的错误，提醒操作者避免发生。

我们相信繁忙的脊柱外科医生将会经常使用到书中讲解的内容。医生在术前可以从本书中得到他们所需要的内容，对所选择的手术方式更加熟悉与自信。

我们希望本书不仅能成为骨科医生、神经外科医生以及接受外科训练的住院医师很有价值的参考书，而且对医生助手、护理人员以及手术协作人员都会有所帮助。

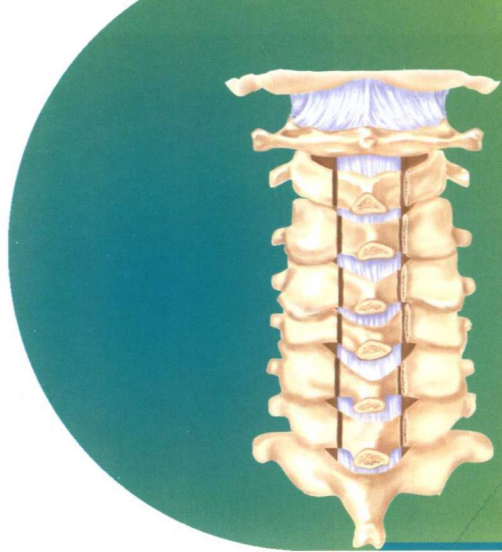
Alexander R. Vaccaro, MD

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颅骨牵引复位术

Michael J. Vives, Colin Harris



提示

- 患者必须保持神志清楚，并能够配合手术操作。
- 颅骨牵引进针点处骨折是该操作的禁忌证。

争议

- 一些学者提倡在使用颅骨牵引术整复颈椎小关节脱位之前应该先行 MRI 检查，以排除是否同时存在颈椎间盘突出。
- 对于神志清醒的患者，也可以直接尝试行颅骨牵引闭合复位术，而不需要行 MRI 检查。如果闭合复位操作失败，则必须先行 MRI 检查，再在麻醉下行手术复位。

其他治疗方案

- 经前路或后路切开复位
- 如果 MRI 结果提示在脱位的节段同时存在颈椎间盘突出，应该采用前方入路或前后联合入路进行复位。

解剖要点

- 后钉的作用是使颈椎前屈。
- 前钉的作用是使颈椎后伸。

解剖提示

- 进钉点偏浅（颅骨水平中线以上）将增加钉子脱出的可能性。
- 进钉点偏前有可能损伤到颞浅静脉。

适应证

- 下颈椎骨折伴脱位
- 单侧或双侧下颈椎小关节脱位
- 齿突骨折并移位、选择型 Hangman 骨折以及 C1-2 旋转半脱位

术前检查

- 在行颅骨牵引之前需进行全面的神经功能检查。
- 在行颅骨牵引之前需进行高质量的颈椎影像学检查，包括对枕颈段和颈胸段的检查（图 1-1）。

外科解剖

- 正确的进钉点在耳廓上方 1cm，位于与外耳道的连线上，并且在颅骨水平中线以下（图 1-2 和图 1-3）。
- 如进钉点偏前，可能会损伤到颞肌和颞浅动、静脉。



图1-1



图1-2



图1-3

体位

- 患者仰卧于操作台、Stryker 床或 Roto-Rest 床上。

入路/显露

- 使用聚维酮碘对皮肤进行消毒。
- 如使用 Gardner-Wells 钉，则可以不剃头发。这时应该使用消毒液将头发完全浸湿，避免头发环绕在钉道周围而影响钉的植入。
- 使用局部麻醉浸润皮肤直至颅骨骨膜。

手术步骤

步骤 1

- 两侧颅钉应该以略微向上偏的角度进针，直到弹簧压力指示器（两侧钉中有一侧）突出钉尾 1mm（图 1-4）。



图1-4

体位要点

- 采用头高脚低位或利用肢体的重量防止患者向手术床的头侧滑动。

体位提示

- 操作期间需要密切监测患者病情变化，并定时拍片检查，因此最好在急诊室（创伤急救室）、手术室或者是重症监护室进行牵引复位操作。

步骤1要点

- 术者应该站在患者的头侧，以保证牵引架安装的对称性。

步骤1提示

- 颅钉固定过紧会导致固定钉穿破颅骨内板，从而可能导致颅内感染或出血。
- 在操作前应该仔细检查所有设备，有时颅钉弹簧压力指示器会失效！

设备

- MRI 兼容的碳纤维颅骨牵引架和钛钉的强度均较低。如果预计的牵引力量大于 50 磅（1 磅 = 0.4536 千克），建议使用不锈钢牵引架。