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## 中枢神经系统感染患儿脑脊液中利奈唑胺浓度测定方法的初步研究

方玉婷



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(安徽省立医院, 安徽合肥 230001)

### 摘要:

目的: 建立测定利奈唑胺在中枢神经系统感染患儿脑脊液中浓度的高效液相色谱法 (HPLC)。方法: 采用Synchronis C18柱 (5 μm, 4.6 mm×250 mm); 流动相为乙腈:水 (含0.2%磷酸) =27 : 73; 流速1.0 mL/min; 检测波长254 nm; 柱温30 °C。结果: 利奈唑胺在脑脊液浓度为0.2~40 μg/mL范围内浓度和峰面积线性关系良好, 标准曲线为 $A_s=0.5539C-0.0193$  ( $r=0.9999$ ,  $n=5$ )。最低定量限、低浓度、中浓度、高浓度的日内和日间变异RSD均<9%, 准确度范围为99%~112%, 提取回收率在85%~107%。稳定性考察RSD<8%。结论: 该方法准确性高、灵敏度高且操作简便, 适用于监测利奈唑胺在中枢神经系统感染患儿脑脊液中的浓度, 进而为利奈唑胺的个体化用药提供依据。

关键词: [HPLC](#) [利奈唑胺](#) [脑脊液](#) [个体化](#) [儿童](#)

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## Preliminary Study on Determination of Linezolid Concentration in Cerebrospinal Fluid of Children with Central Nervous System Infection

Fang Yuting

(Anhui Provincial Hospital, Anhui Hefei 230001, China)

### Abstract:

Objective: To establish the high performance liquid chromatography (HPLC) method for determination of linezolid concentration in cerebrospinal fluid of children with central nervous system infection. Methods: Synchronis C18 column (5 μm, 4.6 mm×250 mm) was used, the mobile phase was acetonitrile : water (containing 0.2% phosphoric acid) =27 : 73, the flow rate was 1.0 mL/min, and the detection wavelength was 254 nm, with column temperature of 30 °C. Results: Linezolid had good linear relationship between concentration and peak area in the range of cerebrospinal fluid concentration of 0.2 to 40 μg/mL. The standard curve was  $A_s=0.5539C-0.0193$  ( $r=0.9999$ ,  $n=5$ ). The intra- and inter-day variation RSD of the lowest quantitative limit, low concentration, medium concentration and high concentration were all <9%, the accuracy ranged from 99% to 112%, and the extraction recovery rate ranged from 85% to 107%. Stability was investigated for RSD < 8%. Conclusion: The method has higher accuracy, better sensitivity and easier operation, and is suitable for monitoring the concentration of linezolid in the cerebrospinal fluid of children with central nervous system infection, thereby providing basis for the individualized administration of linezolid.

Key words: [high performance liquid chromatography](#), [linezolid](#), [cerebrospinal fluid](#), [individualize](#), [children](#)

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地址: 重庆市渝中区中山二路136号重庆医科大学儿童医院内 邮政编码: 400014

电话: 023-63626877; 023-63633143 传真: Email: [ekyzz@cqmu.edu.cn](mailto:ekyzz@cqmu.edu.cn)

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