抗生素導管留滯技術治療血液透析永久導管感染併金黃色葡萄球菌菌血症之不良預後

Poor Outcome of Antibiotic-Lock Technique for Therapy of Hemodialysis Catheter Related Staphylococcus Aureus Bacteremia

陳作孝

Chu YC;Chen JD;Cheng CY;Chen HH;Hsu YH;Chen TH;Chen PY

摘要

血液透析永久導管(Perm cath)的感染，是血液透析病人住院的常見原因。其中金黃色葡萄球菌是最常見的菌株。標準的治療，包括導管的移除及靜脈注射抗生素。但導管的移除，常導致住院時間的延長。文獻已報告：抗生素導管內留滯技術並用靜脈注射抗生素，成功治療血液透析永久導管及其他長期留置型中央靜脈導管的感染，而免去拔除導管的記載。但這些成功的治療報告，集中地討論表皮葡萄球菌及部分格蘭氏陰性菌，至於金黃色葡萄球菌，則少有專門討論。我們回溯性分 8 位病人，罹患 12 次血液透析永久導管感染並發金黃色葡萄球菌菌血症，並回顧關於抗生素導管內留滯技術及萬古黴素導管內留滯技術的治療處方。這 8 位病人有 7 位是血管通路建立相當困難的病患，12 次金黃色葡萄球菌菌血症都以萬古黴素(Vancomycin)靜脈注射併用萬古黴素導管內留滯技術，作爲初始治療治療。結果有 8 次菌血症治療失敗，其中 5 次並且產生了嚴重的併發症（心內膜炎及血性休克），這 5 次治療嚴重的併發症的特徵是血液白血球數高、血中低白蛋白濃度低以及貧血。暗示疾病嚴重程度、營養狀況是考慮使用萬古黴素導管內留滯技術的條件。而另 4 次成功的治療分別在 1 至 5 個月後再度復發金黃色葡萄球菌菌血症，因此我們的結論是血液透析永久導管感染併發金黃色葡萄球菌菌血症與其他菌株已報告的成功經驗不同，萬古黴素導管內留滯技術只可考慮在疾病嚴重度輕、血中白血球數不高、營養狀況較好的病人使用，即使成功的治療而暫不必拔管，也應利用無感染的期間，儘速建立一個新的血管通路(例如 AV fistulae or graft)，而將曾感染的血液透析永久導管儘速拔除，以免金黃色葡萄球菌菌血症復發。

Abstract

Catheter-related Staphylococcus aureus bacteremia is a common cause of hospitalization in hemodialysis patients with a tunneled cuffed catheter as vascular

access. Although tunneled cuffed catheter-related bacteremia may occur, the catheter and the venous site may represent the last readily available form of access, and thus an initial attempt at salvaging an infected catheter is justified. The antibiotic lock technique has been advocated if the infected device is to remain in place for a certain period of time. Only a limited number of case studies, however, have described the effects of antibiotic lock in treating the catheter-related Staphylococcus aureus bacteremia. We retrospectively analyzed 8 patients with 12 episodes of tunneled cuffed-related Staphylococcus aureus bacteremia who received systemic Vancomycin and Vancomycin lock therapy. In only four episodes was the infection successfully treated (by definition). The other attempts failed and in five episodes severe complications arose, resulting in the death of four of the patients. The patients with leukocytosis, hypoalbuminemia or anemia tended to have a poor outcome; but only the presence of leukocytosis showed statistical significance (P=0.028). Leukocytosis might predict a poor outcome in patients receiving antibiotic lock protocol. We, therefore suggest the early removal of a catheter if the pathogen is Staphylococcus aureus. Due to a high recurrent infection rate, AV shunt operation should be done as soon as possible, even in patients with initial treatment success by antibiotic lock.