

Evaluation of the efficacy of single-shot, low-dose urokinase administration for the treatment of port catheter-associated fibrin sheaths” Chang et al (2017).

Abstract:

PURPOSE: Evaluation of the efficacy of single-shot, low-dose urokinase administration for the treatment of port catheter-associated fibrin sheaths.

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METHODS: Forty-six patients were retrospectively evaluated for 54 episodes of port catheter dysfunction. The presence of a fibrin sheath was detected by angiographic contrast examinations. On an outpatient basis, patients subsequently received thrombolysis consisting of a single injection of urokinase (15,000 IU in 1.5 mL normal saline) through the port system. A second attempt was made in cases of treatment failure. Patients were followed up for technical success, complications and long-term outcome.

RESULTS: Port dysfunction occurred at a median of 117 days after implantation (range: 7-825 days). The technical success after first port dysfunction by thrombolysis was 87% (40/46); thereof, initial thrombolysis was effective in 78% (36/46). Nine patients (20%) received a second dose of urokinase after previous treatment failure. Follow-up was available for 26 of 40 patients after successful thrombolysis. In 8 of these, rethrombosis occurred after a median of 98 days (range: 21-354 days), whereby rethrombolysis was effective in 5 of 7 (63%) patients. The overall success of all thrombolyses performed was 70% (45/64). No procedure-related technical or clinical complications occurred. After first favorable thrombolysis, a Kaplan-Meier analysis yielded a 30-, 90- and 180-day probability of patency of 96%, 87% and 81%.

CONCLUSION: Thrombolytic therapy on an outpatient basis appears to be a safe and efficient. Three-month patency rates are comparable to more invasive treatment options, including catheter exchange over a guide wire and percutaneous fibrin sheath stripping.

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Reference:

Chang, D.H., Mammadov, K., Hicketier, T., Borggreffe, J., Hellmich, M., Maintz, D. and Kabbasch, C. (2017) Fibrin sheaths in central venous port catheters: treatment with low-dose, single injection of urokinase on an outpatient basis. *Therapeutics and Clinical Risk Management*. January 24th. 13:111-115. eCollection 2017.

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