The present study compared percutaneous transluminal angioplasty (PTA) with percutaneous transluminal angioplasty and stent placement (PTS) for treatment of central venous stenosis or central vein occlusion in hemodialysis patients” Wu et al (2020).

Abstract:

OBJECTIVES: A common cause of hemodialysis vascular access dysfunction, a primary cause of morbidity and mortality in patients undergoing hemodialysis, is central venous stenosis or occlusion. The present study compared percutaneous transluminal angioplasty (PTA) with percutaneous transluminal angioplasty and stent placement (PTS) for treatment of central venous stenosis or central vein occlusion in hemodialysis patients.

METHODS: A systematic literature review was conducted using database searches of PubMed, Cochrane, and Embase. Articles were selected using the Population/Intervention/Comparator/Outcomes (PICO) process. Outcomes included the rate of procedural success, primary patency, assisted primary patency, re-intervention subjects, re-intervention rate, and adverse events.

RESULTS: A total of eight studies were included in the meta-analysis with subjects in the PTA group (n = 281) or PTS group (n = 192). Primary patency rate between PTA and PTS groups at 3-, 6-, 12-, or 24-month follow-up was not different (all p > 0.05). Patients treated with PTA had greater assisted primary patency rates than the PTS group (OR = 1.03, 1.73, 1.03, and 2.00 at 3, 6, 12, and 24 months, respectively). However, the statistical assessment only showed significantly at 24-month follow-up (p = 0.01).

CONCLUSIONS: The present meta-analysis revealed that, compared to PTS, PTA may provide increased assisted primary patency for endovascular treatment of central vein stenosis or occlusion in patients undergoing hemodialysis.

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