

Higher rate of technique failure of non-fluoroscopic insertion of left IJV tesio lines and associated outcomes from a single centre experience

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Introduction

UK Renal Association guidelines promote minimum standards of definite access use amongst individuals making planned HD starts (incident dialysis) at 60%. About 36% of incident dialysis patients have a tunneled dialysis line as their first access type. In our unit, the majority of tunneled dialysis lines are Tesio brand lines inserted into the internal jugular vein with ultrasound guided vein puncture and chest x-ray confirmation of line position after the procedure. The aim of this audit was to establish if left sided Tesio lines inserted without fluoroscopic guidance are more frequently malpositioned than right sided lines, requiring patients undergo further uncomfortable procedures and potentially delaying dialysis and prolonging inpatient stays.

Methods

We looked at the 50 most recent left sided Tesio lines inserted in our unit. We examined the notes and electronic medical record to identify the reason for left sided approach; if the line insertion was successful and correctly positioned; if no, what next action was taken; and if there was any delay in dialysis or discharge from hospital. We compared the above data against same dataset using the 25 most recent right sided Tesio line insertions to see if there was a difference.

Results

See table.

The 20 patients who required a repeat procedure waited for this for a mean of 3.65 days (median 1, range 0-20). It was not possible in all cases to quantify what delays in discharge and dialysis could be attributed solely to waiting for a repeat procedure as in many cases other medical issues were being addressed alongside dialysis access and in some patients alternative temporary dialysis access was placed. However in 5 patients it was possible to attribute 12 bed-days of delay in discharge. 3 patients were confirmed to have dialysis delayed by 1 day and 1 patient delayed starting dialysis by 8 days.

Discussion

In this group of patients non-fluoroscopic guided left sided Tesio lines were three times more likely to be malpositioned than right sided Tesio lines. The reason for this discrepancy is easily explained by the vascular anatomy. However, a right sided approach is not always possible. We recommend looking at the feasibility of fluoroscopy training for renal trainees. We also plan to look at the experience of other units and see if similar rates of malposition occur with different types of tunnelled line such as permcaths.