

Time Spent in Hospital: Older Kidney Patients in the Last 12 Months of Life

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BACKGROUND

Older people, particularly those with advanced kidney disease, have a higher burden of co-morbidities resulting in increased mortality and time spent in hospital¹. There is a paucity of studies that compare time spent in hospital between dialysis and conservative patients within a KSC service in their final year of life.

AIM

To understand the hospital utilisation by older people with advanced kidney disease, on dialysis and conservative pathways, known to a kidney supportive care (KSC) service in the last 12 months of life.

METHODS

Retrospective analysis of people ≥75 years old, who died between February 2017 and March 2024 and were known to KSC service for >12 months prior to death. Demographic characteristics, health history, and occasions of hospital healthcare were extracted from medical records. Data were analysed descriptively, and group differences were compared using independent t-test and Mann-Whitney U test.

RESULTS

Ninety-one people were included, ages ranged from 75 to 93 years at referral, 53 were male (58.2%), 27 were on dialysis and 64 were managed conservatively.

Table 1: Patient demographics

Characteristics	Dialysis	Conservative
Total number of Patients, n (%)	27 (29.7)	64 (70.3)
Age, (time of referral to KSC)*	80.5 (4.7)	83 (4.1)
Gender (male), n (%)	20 (74.1)	33 (51.6)
Renal function (mL/min/1.73m2)*	-	16.5 (6.8)

*mean (SD)

People on a conservative pathway spent fewer days in hospital than those receiving dialysis (22 vs 165; p<0.001), had fewer emergency department presentations (3 vs 4; p=0.044), outpatient appointments (7.8 vs 9.7, p=0.1) and procedures (0 vs 1, p=0.002). Patients on haemodialysis spent approximately 45% of their last year in hospital whereas conservative patients spent 6%. The most common cause for admission for conservative patients was anaemia (9.5%) and dialysis patients was elective surgeries (11.9%). Conservative patients were also less likely to die in an acute hospital setting (35.9% vs 48.1%, p=0.28).

Table 2: Hospital utilisation in last year of life

Outcomes	Dialysis	Conservative	p-value
Time spent in Hospital (including HD sessions) (days) ^	167 (136-178)	22 (9-43)	<0.001
% Time spent in hospital in their last year	45	6	
Hospital Admissions, n (%)	134 (39)	210 (61)	
Admissions per patient^	4 (2-7)	2 (1-4)	0.001
Total admission LOS per patient (days) ^	29 (11-49)	14 (5-39)	0.044
Emergency Department Presentations, n (%)	116 (35.2)	214 (64.8)	
ED presentations per patient^	4 (2-5)	3 (2-5)	0.044
Total ED LOS per patient (minutes)*	1801 (1101)	1424 (1027)	0.07
Total ED LOS per patient (hours)*	30 (18.4)	23.7 (17.1)	0.07
Outpatient Appointments, n (%) (n=66)	192 (34.8)	360 (65.2)	
Outpatient appts per patient*	9.7 (4.6)	7.8 (4.3)	0.01
Procedures, n (%)	31 (50.8)	30 (49.2)	
Procedures per patient^	1 (0-2)	0 (0-0.75)	0.002
Number of Haemodialysis sessions^ (n=21)	140 (130-153)	-	
Deceased during acute hospital stay, n (%)	13 (48.1)	23 (35.9)	0.28

*mean (SD), ^median (IQR)

DISCUSSION/CONCLUSION

Older people receiving conservative management known to KSC spend less time in hospital in their final year of life compared to those on dialysis. The data is consistent with current literature that conservative patients spend less time in hospital than HD patients (47.5% vs 4.3%)¹. Elderly people on dialysis are more likely to die in an acute setting, which is also comparable with other studies^{1,2}.

Limitations of this study are that HD patients known to a KSC service are likely to be older and more frail, and so may not be representative of the wider population.

Nonetheless, elderly conservative patients known to a KSC service spend less time in hospital and have less engagement with all facets of hospital care. Further larger studies are needed to confirm this correlation.

REFERENCES

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