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#### ONE DAY PREVALENCE STUDY OF INDWELLING URINARY CATHETERS IN SOUTH CUMBRIA, ENGLAND.

##### Aims of Study

Studies of catheterised populations have reported prevalence rates of 4% in the community (1), 12.6% in the hospital (2) and 12 to 27.5% in Nursing homes (3). Urinary catheterisation has high morbidity and mortality amongst the elderly population (4). Appropriate management of indwelling catheters is important to minimise the catheter related complications. As the prevalence of urinary catheterisation among the population in South Cumbria was unknown, we undertook this study with the following aims.

- a) Ascertain the number of persons in South Cumbria with an indwelling urinary catheter in the hospital, community and nursing homes.
- b) Determine the current trends of catheter management in order to assess the need for standardisation in local clinical practice.

##### Methods

A proforma was designed to seek the following information: gender and age of the patient, reason and duration of catheterisation, type of catheter, size and length; size of balloon, material and manufacturer; average frequency of catheter change and by whom; related complications, frequency of antibiotic courses, frequency and type of bladder irrigations. The reasons for catheterisation were grouped as non-specific incontinence; obstruction, neurogenic bladder; post-operative drainage; monitoring urinary output; others; and reason unknown. This study involved 3 National Health Service hospitals, 1 private hospital, 26 district nurse case load holders 14 nursing homes and 1 hospice. The study was conducted as a one day prevalence study on 1 February 1996. No case was missed.

The results of this study were widely circulated at study meetings. This led to the development of a multidisciplinary collaboration in catheter care. A comprehensive system of education, establishment of link nurses and a standardised care proforma were subsequently introduced throughout the district. Five part time continence promotion nurses were established. A repeat survey was undertaken 3 years later on 25 February 1999.

##### Results

**First survey:** there were 331 patients with indwelling catheters giving a prevalence rate of 2.34 per 1000 adult population. 51.6% were living in private homes, 25.7% were in hospital, 22.7% were living in private nursing homes. There were 156 males, with a median age of 79 years and 175 females, with median age of 82 years.

69% of the patients had been catheterised for > 8 weeks and 12% for > 5 years (range < 1 week to 20+ years). Only 8.7% of these patients had been catheterised for < 1 week and were all in hospital. 95.8% of these patient had urethral and 4.2% had suprapubic catheterisation. 27% of females were using male length catheters. 14 to 16 gauge catheters were used in 72% of patients. 93.1% had 10 ml balloons. 63.1% were using Hydrogel and 3.9% Silicone catheters. 54.5% of patients were catheterised every 2 to 3 months, 17.8% every 1 to 2 months and 5.4% every week or fortnightly.

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There were 485 complications of which urinary tract infection was seen in 52.6% of patients, blockage of catheters in 30.2% and bypassing of urine in 36.2%. Other complications noted were haematuria, bladder spasm, catheter expulsion, urethral discomfort, bladder calculi, granulation at the insertion site for suprapubic catheterisation and severe septicaemia. There was a strong correlation between the duration of catheterisation and number of complications. 29% of patients had no complications. Most of these were having catheters for < 1 week and were in hospital. 44% of patients had < 3 and 27% had 3 or more complications. There was overlapping of complications among 37.8% of patients.

The indication for urinary catheterisation were no specific incontinence in 48%, neurogenic bladder dysfunction in 21%, urinary obstruction, either awaiting surgery or unfit for surgery, 21%. Other causes were seen in 9.5% of patients.

**The repeat survey** 3 years later showed that the total number of catheterised patients were 316 and the median age of both males and females were 80 years. Urinary incontinence was unspecified among 32% of patients only and permanent catheterisation in patients with neurogenic bladder dysfunction had reduced to 11%. The overall number of complications had fallen by 35% to 315.

#### Conclusions

This study has been helpful in planning a better management of patients with indwelling urinary catheters. Increased awareness and education has shown to improve the assessment and diagnosis of urinary incontinence, reduction in complication rates and morbidity although the total number of catheterisations have not diminished.

#### References

1. Nursing Times, Vol 85, 1989: 43-4.
2. New England Journal of Medicine, Vol 291, 1981: 731-5.
3. American Journal of Medicine, Vol 82, 1987: 405-11.
4. American Journal of Epidemiology, Vol 135, 1992: 291-301.