
UK Renal Registry 14th Annual Report: Chapter 14 Comparative Audit of Peritoneal Dialysis Catheter Placement in England, Northern Ireland and Wales in 2011: a summary of progress to July 2012

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Key Words

Adequacy · Haemodialysis · Urea reduction ratio

Summary

- The first PD access audit covering England, Northern Ireland and Wales was conducted during April to June 2012 looking at incident dialysis patients in 2011.
- Forty three data collection spreadsheets were returned from a total of 63 centres describing 863 PD catheter placements of which 225 had a missing date of insertion.
- A comparative PD catheter audit has the potential to provide valuable information on an important patient related outcome measure and lead to an improvement in patient experience.
- Results will be published on the UK Renal Registry website as soon as they are available.

Introduction

The central paradigm of effective peritoneal dialysis (PD) is an appropriate standard of PD catheter function. Catheter function defines clinical value and ultimately influences the modality experience of the patient. The obvious question therefore arises – what represents an ‘appropriate standard’ of PD catheter function? Unfortunately, until relatively recently, PD catheter access outcomes have been neglected, although a UK access survey did report that most catheters were placed using the open surgical technique [1]. To date, only the French speaking registry collects and reports comparative data on the PD access procedure and catheter survival (92% at 2 years post insertion) [2]. In an attempt to address this deficit, a 2009 Renal Association working party recommended that the UK Renal Registry should collect centre specific information on various PD access outcome measures including catheter functionality and post-insertion complications [3]. Until now, there has been no provision for this in the UK, however, guidelines for the placement of peritoneal dialysis access including audit standards were published in conjunction with the International Society of Peritoneal Dialysis in 2010 [4].

In 2010, multisite audit conducted across Yorkshire and the Humber (Y & H) demonstrated both significant centre variation in one year catheter function as well as ambiguities in audit standard interpretation. One example being the definition of ‘significant haemorrhage’ as applied to complications post PD catheter insertion [5]. Together this highlights a need for robust national PD access data to support a responsive access service with a high quality patient experience.

Methods

During 2011 a successful application was made on behalf of the Y & H Renal Network to the Healthcare Quality Improvement Partnership (HQIP) to support a larger multisite (more than 10 sites) audit of PD access in collaboration with the UK Renal Registry. The ultimate aim of the project was to develop an effective national PD access audit with governance arrangements relating to data protection and patient confidentiality held within the UK Renal Registry. The brief permitted a spreadsheet based data collection process for the first year, with subsequent data collection through the Renal Registry’s electronic processes. Patient and public partnership were engaged at several levels: during guideline development; at discussions of the Y & H Home Therapies and Self Care strategy; the UK Renal Registry

Table 14.1. Data fields for peritoneal dialysis access audit

Data field
Access in use at first ever dialysis (during 2011)
Date of first ever dialysis
Date first seen by renal physician
Access in use at 3 months
Assessed by surgeon for an AVF ^a , AVG ^b or peritoneal dialysis catheter at least 3 months before dialysis
Date PD catheter first used
PD catheter Insertion technique
Date of PD catheter failure
PD catheter insertion technique
Detail of surveillance/complication intervention type
Reason for catheter failure
Primary renal diagnosis
BMI
Diabetes – had diabetes at time of catheter insertion (types 1 and 2)
Peritonitis episode within 2/52 of insertion

^aArteriovenous fistula

^bArteriovenous graft

committee and as part of the access audit steering group. Opportunity has arisen to combine the collection of these with a vascular access audit providing valuable data on both PD and haemodialysis access.

During the development of the audit several competing objectives have had to be balanced. It was realised that there was a need to minimise the data to strengthen data completeness including clinically relevant data and objective reproducible measures. The principal data fields (table 14.1) have been refined following a pilot audit of six centres in Y & H and discussed extensively through the Y & H PD audit group and the Dialysis Study Group of the UK Renal Registry. However an existing UK Renal Registry list of causes of access complications had to be used in the interests of expedience with the consequence that it was not piloted and included a number of anomalies (for example there was no option for the possibility that the cause of impaired drainage was unknown (table 14.2) and drainage pain is not listed as a possible cause).

Results

The first PD access audit covering England, Northern Ireland and Wales was conducted during April to June 2012 looking at incident dialysis patients in 2011. Forty three data collection spreadsheets were returned from a total of 63 centres describing 863 PD catheter placements of which 225 had a missing date of insertion.

Although a report is not currently (August 2012) available, electronic information will be made available as soon as possible via the UK Renal Registry website.

Table 14.2. Access complications

UKRR code	Description	Essential
80	Subcutaneous haematoma	
81	Tunnel infection	Y
82	Peritonitis	
83	Subcutaneous leak	
84	Peritoneal leak	
85	Peritoneo-pleural leak	
86	Inadequate inflow – malposition	
87	Inadequate inflow – fibrin	
88	Inadequate inflow – omental wrap <i>Drainage problem – leak, inadequate flow^a</i>	Y
89	Inadequate outflow – malposition	
90	Inadequate outflow – fibrin	
91	Inadequate outflow – omental wrap	
92	Hernia	
93	Catheter fell out	Y
94	Externalisation of the cuff	
95	EPS encapsulating peritoneal sclerosis	
96	Bowel Perforation	
97	PD catheter exit site infection	Y

^aNot collected for this audit phase

It is intended to publish centre specific primary PD catheter access success as well as peritonitis rates at less than two weeks post PD catheter insertion. Centres that are identified as outliers through this process will

References

- 1 Wilkie M, Wild J. Peritoneal Dialysis Access – Results from a UK Survey. *Perit Dial Int.* 2009 May–Jun;29(3):355–357
- 2 Verger C, Ryckelynck JP, Duman M, Veniez G, Lobbedez T, Boulanger E, et al. French peritoneal dialysis registry (RDPLF): outline and main results. *Kidney Int Suppl.* 2006 Nov(103):S12–S20
- 3 Renal Association. Report of the Renal Association Working Party on Peritoneal Access, Renal Association UK. 2009
- 4 Figueiredo A, Goh BL, Jenkins S, Johnson DW, Mactier R, Ramalakshmi S, et al. Clinical practice guidelines for peritoneal access. *Perit Dial Int.* 2010 Jul–Aug;30(4):424–429
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need to conduct a local review of procedures in order to optimise outcome.

Discussion

There is clearly much to be learned as the project is progressed, including minimising data ambiguities and trying to maximise data completeness (for example it is possible that a patient with a catheter that never worked and never had PD may be overlooked in this audit). However, a comparative PD catheter audit has the potential to provide valuable information on an important patient related outcome measure and lead to an improvement in patient experience.

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Conflicts of interest: none