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Home Parenteral Nutrition in children: 10 year experience from a single centre

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Southampton provides tertiary services for a population of approximately 650 000 children. As part of the complex treatment of children referred to Southampton, a number require Home Parenteral Nutrition (HPN). Data was collected retrospectively from records of children receiving HPN managed at our centre over the last 10 years.

Nineteen children (12 girls) between April 2001 and June 2011 received a total of 13 187 days (36 years) of PN, of which 10 184 (27 years) was received at home. Children received PN in hospital for a median of 172 days, range 0 to 713 days, prior to discharge on HPN. Ten children started PN in the first weeks of life for; pseudo-obstruction (2), small bowel atresia/volvulus (3), Hirschprung's (2), gastroschisis (1), and enteropathies (2). In addition one child was transferred to our care already receiving HPN having been diagnosed with an enteropathy as an infant. Children started PN aged >one year for; graft versus host disease (GvH) post bone marrow transplant (2), Inflammatory Bowel Disease (2), short gut secondary to non IBD surgery (2) faltering growth (1), and pseudo-obstruction post surgery (1). Septic complications and line history are shown in the table below. Of the 53 lines removed, 33 were due to blood culture positive sepsis. More septic episodes occurred while children received PN in hospital than while on HPN.

	Surgical lines	Surgical lines removed due to sepsis	Surgical lines removed for thrombus	Surgical lines removed for occlusion	Episodes of blood culture + ve sepsis (total)	Episodes of blood culture + ve sepsis (on HPN)
Total	66	33	2	8	95	41
Total/1000 PN days	5	2.5	0.5	0.6	7	3
Median/ patient	3	1	0	0	4	1

Four children were weaned off PN and are thriving on oral diet including one child who received PN for 6 years. Nine children are still receiving HPN. Three children were still receiving HPN on discharge from our service, two were transferred to adult care and one moved out of area. Three children died; one child with GvH died following a cerebral infarct, one child with Hirschprung's died of overwhelming sepsis and one child with intractable pseudo-obstruction and advanced liver disease died following cardio-respiratory arrest during an episode of bronchiolitis. These last two patients were the only children that had PN associated liver disease.

Survival off PN and long term survival on HPN is achievable in a number of children with intestinal failure.