**Supplemental Digital Information 1**

**Methods**

This study involved the retrospective review of all children who had undergone a TIPSS procedure at Birmingham Children’s Hospital, UK, between 1st January 1995 - 1st January 2015. Patients with TIPSS performed at other centres were excluded. All hospital notes, operative and radiological records as well as clinical status were assessed. Follow-up was obtained for children until 31st December 2016.

Statistics

Data have been examined by analysis of variance using a commercial statistical software package (SPSS for Windows, version 22; IBM, USA). Continuous variables are expressed as median (range) or mean ± standard deviation. Binomial and ordinal data are expressed as percentage.

An estimate of technical success was calculated using an exponentially weighted moving average (EWMA), in which previous observations were systematically down-weighted by 10% per annum [16]. This technique discounts more remote results to emphasise current experience [17]. With a 10% memory loss, the experience from 8 years earlier carries about half the weight of the current case. The 95% confidence intervals (CI) for each estimate were calculated [18].

The effect of anatomical, pre-operative, and operative variables on technical success was examined by univariate and multivariate analyses. Variables studied included age and weight, diagnosis, transplantation status, Child-Pugh, Paediatric End-Stage Liver Disease (PELD) and Model for End-Stage Liver Disease (MELD) scores, operator, emergency vs. elective procedure, operation time, additional access requirements, pre-TIPSS PV pressure, pre-TIPSS trans-hepatic gradient, and change in PV pressure achieved.

Univariate analyses were made using the χ2 test, two-sided Fisher exact test and binomial logistic regression. Variables with a probability, P≤0.1, were included in a stepwise logistic regression model. The results of these multivariate analyses are expressed as odds ratios (OR) with 95% CI for variables with a probability, P<0.05.

Actuarial survival with TIPSS and freedom from TIPSS reintervention were estimated using the Kaplan–Meier product limit method. Censor points included the date of death, liver transplantation, loss of TIPSS; or the end of the follow-up period (31st December 2016). First reintervention date was an additional censor point for freedom from reintervention analyses. Results are expressed as probability estimate ± 1 standard error of the mean (SEM). Univariate analyses of actuarial outcome measures have been made using the log-rank test. Variables with a probability, P≤0.1 were included in a stepwise Cox regression analysis. Results of these multivariate analyses have been expressed as likelihood-ratios (LR) with 95% CI for variables with a probability, P<0.05.