manager 5.2 (statistical significance with two-sided p-value of 0.05).

Results Nine trials were included from 1622 non-duplicate records. The meta-analysis results were shown in a table with pooled risk ratios (RR) and 95% confidence interval (CI).

Abstract PS-284 Table 1

Outcomes	Studies (Number, N)	INSURE (events, n/N)	NCPAP (n/N)	RR [95% CI]
BPD	5	125/519	146/518	0.85[0.71,1.02]
Death	7	60/698	63/701	0.94[0.67,1.32]
BPD or Death	5	175/569	197/569	0.88[0.76,1.02]
Pneumothorax	9	21/775	43/774	0.51[0.24,1.07]
Sever intraventricular haemorrhage	7	22/660	29/665	0.79[0.45,1.39]

Conclusions The rates of BPD, Death or “BPD or Death” were lower in infants receiving INSURE versus NCPAP group although, the differences did not reach statistical significance.

PS-285 WITHDRAWN

PS-286 **SURFACTANT (S) SUPPLEMENTED WITH BUDESONIDE (B) FOR PREVENTION OF BRONCHOPULMONARY DYSPLASIA – BIOPHYSICAL AND CHEMICAL STABILITY OF S/B MIXTURE**

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Background and aims Intra-tracheal instillation of budesonide (B) using surfactant (S) as a vehicle significantly improved pulmonary status. The stability of the S/B mixture has not been studied. The aim of study is to investigate if S can be used as an vehicle to facilitate B delivery in rats and if the S/B mixture is biophysically and chemically stable.

Methods and materials A Nano/PET digital scan was performed on rat that was intratracheally injected with S/18-F labelled B mixture, with 18-F-B only, or with free 18-F. The 18-F radioactivity was measured at 30 min. after injection. To test biophysical property, the dynamic surface tension behaviour of S/B suspension was conducted in Surfactometer. HPLC was performed with various S/B concentration ratios within 24 hrs after S/B mixing.

Abstract PS-286 Table 1

System	S(mg/ml)	B(mg/ml)	Ye (mN/m)	Ymin	Ymax
S	25.0	-	19	-0	46
	12.5	-	21	-0	51
	1.00	-	22	5	49
B	-	0.50	31	27	47
	-	0.25	33	29	49
	-	0.125	34	30	50
S+B	12.5	0.25	20	-0	41
	1.0	0.25	28	20	45

Results 1) 18-F-B radioactivity was detected more in the peripheral lung in rat supplemented with S than in rat without S. 2) using a concentration of S/B $\geq 50:1$, the dynamic surface activity of S was minimally affected 3) HPLC analysis revealed no new compound detected within 24 h after mixing of S/B

Conclusions S can be used as an effective vehicle and that, with a S/B ratio of ≥ 50 , the mixture is biophysically and chemical stable.

Paediatric Surgery: Congenital Anomalies

PS-288 **THE PERFORMANCE OF IMAGING FOR SUSPECTED MALROTATION: NOT SO BAD AFTER ALL**

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Despite reports of imaging characteristics that would identify intestinal rotational anomalies that predispose to volvulus, most paediatric surgeons would proceed to an operation when imaging is suggestive. The aim of this study was to test the performance of the upper gastrointestinal (UGI) contrast studies and its restrictions that lead to false positive or false negative reports.

Methods We performed a retrospective analysis of patients investigated for malrotation, or treated for it over 5 years (2008–2013). Radiology reports were graded as positive, equivocal or negative. If the study was inconclusive, further imaging or treatment was dictated by clinical status.

Main

Results 279 patients were investigated due to suspected malrotation, while in 24 patients malrotation was an incidental finding. In total, 86 patients underwent a Ladd's procedure. If the definite positive and equivocal reports were considered as positive regarding the intention to intervene surgically, the sensitivity of UGIS was 94%, specificity was 95.4%, with 18% false positive results and 1.4% false negatives. In the 11 patients with proven false positive results, two had a negative laparotomy, but all the remaining 9 patients had surgical findings (including 3 duodenal stenoses, and 3 intestinal atresias).

Conclusion The UGI series proved to be very sensitive and specific for the diagnosis of malrotation, when the clinical pathway dictates prompt surgical intervention in the presence of positive or at least non-negative radiology report. This approach can lead to a significant number of false positive results, although other surgically treatable pathology is commonly identified in these patients.

PS-287 WITHDRAWN

PS-289 **DOES LOCAL EXPERIENCE IN THE MANAGEMENT OF SIMPLE GASTROSCHISIS (SG) MATTER? (LOCAL PRACTICE VERSUS NATIONAL BENCHMARK DATA)**

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Abstract PS-289 Table 1

Outcomes	local-OPC (%)	national-OPC (%)	p-value
RE-OP	16	14	0.76
AC	4	0	0.13
WI	8	3	0.22
MV	80	88	0.34
TPN (<28 days)	80	66	0.25
IFALD	4	4	1
LOS (<30 days)	68	46	0.04
Mortality	0	2	1

Background The most commonly performed procedures for SG are operative primary fascial-closure (OPC) and application of a preformed silo with delayed fascial-closure (PS). There is no consensus on optimal management.

Aim To compare our outcomes of SG-newborns after OPC with outcomes from a national cohort (British Association of Paediatric Surgeons-Congenital-Anomalies-Surveillance-System, BAPS-CASS) after OPC or PS.

Methods Retrospective comparison of SG-infants from a tertiary centre (2006–2013) with SG-newborns from BAPS-CASS. We compared baseline characteristics and outcomes: Antenatal diagnosis (AD), in-utero-transfer (IUTR), vaginal delivery (VD), gestational age ≥ 37 weeks (GA), birthweight ≥ 2500 g (BW), male gender (MALE), associated anomalies (AA); type/success of surgery, re-operation (RE-OP), abdominal compartment (AC), wound infection (WI), mechanical-ventilation (MV), parenteral nutrition <28 days (TPN), intestinal failure associated liver disease (IFALD), length of stay <30 days (LOS) and mortality. Data-presentation: Percentage (%). Data-analysis: Fisher's-Exact-Test ($p < 0.05$).

Results 25 SG-newborns were compared with 336 newborns from BAPS-CASS. Baseline-characteristics were not significantly different (GA 60% vs 57% [$p = 0.78$], BW 56% vs 43% [$p = 0.21$]), rest not displayed). Significantly more OPC were intended and successfully completed locally than nationally (96% vs 42% [$p < 0.0001$]; 100% vs 82% [$p = 0.03$]). Outcomes were:

Compared to national PS TPN and LOS were significantly shorter after OPC locally (80% vs 48% [$p = 0.004$]; 68% vs 28% [$p < 0.0001$]); rest of outcomes not significantly different.

Conclusions Longstanding local experience with OPC positively affects outcomes in SG-infants exceeding some national outcomes irrespective of surgical method.

PS-290 HOW AN INDIVIDUALISED APPROACH COULD CHANGE THE SHORT BOWEL SYNDROME FATE. EXPERIENCE FROM PAEDIATRIC AUTOLOGOUS BOWEL RECONSTRUCTION AND REHABILITATION UNIT

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Background and aims Multidisciplinary treatment of short bowel syndrome (SBS) can be considered to be one of the success stories of paediatric surgery. The authors present their experience during the last decade as a specialist unit using improved techniques and individualised approaches in the management of this condition.

Methods Based on data from intestinal rehabilitation program started in 2000, children presenting with SBS were identified. Diagnosis, length of residual bowel, age at definitive surgery, length of bowel pre and post lengthening, and survival were recorded. Data are presented as mean $\pm$ SD.

Results Fifty-three children were identified (27 boys, 26 girls). Overall survival was 94%. Forty-five children required bowel lengthening and 8 children had simple bowel reconstruction while on our protocol. 7 patients were referred after lengthening complication and after our treatment managed postoperatively in other centres outside the UK. Age at definitive surgery was 10.74 ± 7.9 months. Residual bowel length in patients' primary treated in our unit was 32.48 ± 25.89 cm. After bowel lengthening, the bowel length was 69.91 ± 42.30 cm ($p = 0.0001$). Excluding the 3 patients who died, from 50 patients, 25 (50%) are now off TPN and 25 are weaning HPN (Home Parenteral Nutrition) regimen with a 3.87 ± 2.10 nights off.

Conclusions Our series shows improved results not only with survival but also in the number of patients that are off TPN. Individualised approach consisting of both medical and surgical expertise is necessary in the management of these patients. The authors advocate centralisation of short bowel services to experienced centres with multidisciplinary expertise.

PS-291 HETEROTAXIA AND INTESTINAL ROTATIONAL STATUS: IS IT SAFE TO WATCH AND WAIT?

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Background The association of heterotaxia with intestinal rotation anomalies is well documented. Controversy still persists though in regards to the optimal diagnostic strategy, as well as to the benefit of surgical correction of identified rotational abnormalities in patients with no gastrointestinal symptoms, especially given the frequent associated cardiac anomalies. The aim of this study was to test the validity of the watchful wait approach in a series of patients with heterotaxia.

Method A retrospective analysis of the case notes and electronic records of patients diagnosed with heterotaxia syndromes was performed at a single tertiary paediatric referral centre that offers paediatric cardiac surgery services. All patients with situs anomalies, born within the 1st January 1998 to 31st December 2013, were included.

Results 59 patients were identified, of which 13 underwent contrast studies to identify rotational anomalies. Only 2 studies were performed in symptomatic patients (vomiting, failure to thrive). 10 of the studies identified abnormal anatomy, but only 4 patients proceeded to surgical correction. No complications were reported following the Ladd's procedures. There was a single death within 30 days postoperatively, attributed to cardiac failure. Regarding the patients that had no surgery, during the follow-up period (median 9.2 years, range 11- 187 months), no patients presented clinically with malrotation or volvulus.

Conclusions This study supports the 'watch and wait' approach for children with heterotaxia, provided that close surveillance can be achieved. Diagnosis and treatment should be individualised and tailored to each patient's clinical characteristics in order to avoid unnecessary morbidity and mortality.