



Abstract PO-0606 Figure 1A Common hepatic artery injection shows multiple connections between hepatic artery branches and the left portal vein.



Abstract PO-0606 Figure 1B Late phase image shows aneurysmal dilatation of the left portal vein secondary to the fistulae.

embolization procedure celiacarteriography revealed only partial occlusion of APF due to diffuse involvement (Figure 2).

Discussion Our case is unique as it is the first case who was attempted to be treated with percutaneous transvascular coil embolization of the APF. Hepatic angiography is the gold standard to confirm the diagnosis and to demonstrate the vascular anatomy (5).

REFERENCES

- 1 Suchy FJ. Portal Hypertension and Varices, Nelson Text Book Of Pediatrics, 18 th ed. Philadelphia, WB Saunders, 2007, pp:1709–1712
- 2 Sarin SK, Kumar A. Noncirrhotic portal hypertension. *Clin Liver Dis.* 2006;10 (3):627–51
- 3 Landau YE, Schwarz M, Belenky A, Shapiro R, Amir J. Arteriovenous Fistula and Portal Hypertension in a Child with Down Syndrome. *IMAJ* 2007;9:825–826



Abstract PO-0606 Figure 2 Post embolization contrast injection shows occlusion of the hepatic artery. However, left portal vein still fills via small arterial branches from the proximal part of the common hepatic artery

4 Greene AK, Kim S, Rogers GF, Fishman S, *et al.* Risk of Vascular Anomalies With Down Syndrome. *Pediatrics* 2008;121(1):135–140

5 Karnak I, Cil BE, Akay H. Congenital Intrahepatic Arterioportal Fistula: An Unusual Cause of Portal Hypertension Treated by Coil Embolization in an Infant. *Eur J Pediatr Surg.* 2009;19:251–271

PO-0607 ADVISING MILK DONATION TO A HOSPITAL MILK BANK. QUALITY ANALYSIS

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Introduction Increasing needs of human donor milk in the Neonatal Units have arisen the interest to develop attention points for donors in hospital where the Milk Bank is not present.

Objectives To analyse the activity of the external points for donors attention of the Hospital "Virgen de las Nieves" Milk Bank. Assessment of quality of the process of these points.

Methods Staff members from these centres were trained, visiting the Milk Bank and with written protocol. A transfer system was established with refrigerators and temperature records along the process. The hospital milk bank is responsible for ensuring the traceability of the process. Several variables were analysed and compared: acidity, microbiological culture and volume of pasteurised milk rejected during 2013.

Results Two points of attention for milk donors have been operating regularly since 2012. Total number of donors was 43 and 158 litres of donor milk were collected. Analysing the percentage of rejected milk according to its origin: 4% the volume received in the bank was not processed, 12% point 2 and 8% point 1 were discarded. This difference led us to the revision of the storage system, transportation and adequate information for hygiene during milk collection.

Results in Table 1 and 2.

Comments Procedures for donors attention, registration, storage, transportation and milk collection from attention points to the Milk Bank should preserve the security and quality.

The comparison of average acidity according to the origin of milk, could be an adequate advisor in order to promote better strategies to minimise the percentage of rejected milk.

PO-0607a THE BENEFIT OF COMPUTER ASSISTED PRESCRIPTION OF PARENTERAL NUTRITION IN ELGANS

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Background To minimise extrauterine growth restriction in ELGANS computer assisted prescription of parenteral nutrition (CAPPN) was introduced.

Aim To evaluate the effectiveness of CAPPN in growth improvement of ELGANS.

Patients and methods In this retrospective, observational designed study with a nonprobability, convenience sampling to obtain medical records, we compared 20 ELGANS in the study group after CAPPN to 20 ELGANS in the control group before CAPPN. Daily parenteral and enteral intake of macronutrients, calcium and phosphate in five sequential time intervals of the first 28 days of life was calculated (day 1–3, 4–7, 2nd, 3rd, 4th week). Outcome measures were the length of PN, days to regain birth weight (BW), growth velocity, and weight and head circumference (HC) <10th percentile on day 28. Numerical data were analysed by independent-samples t-test or by Mann-Whitney U test, categorical data were analysed by chi-square.

Results The combined enteral and parenteral intake of the study group in all five sequential intervals after birth exceeded the intake of the control group. The length of PN and days to regain BW did not differ, however growth velocity (14,5 [3,7] vs 11.6 [0,4] g/day ($p = 0.03$)) and HG velocity (0.9 [0.3] vs 0.7 [0.4] cm/day ($p = 0.03$)) were higher in the study group. Less growth retardation on day 28 was obtained (weight 2/20 vs 9/20 ($p < 0.001$); HC 3/20 vs 13/20 ($p < 0.001$)).

Conclusion In ELGANS delivery of nutrients and growth during the first month of life were significantly improved with CAPPN.

PO-0607b METABOLOMIC DETERMINANTS OF NECROTIZING ENTEROCOLITIS IN PRETERM PIGLETS

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Background and aim Studies in premature infants and animals show that carbohydrate malabsorption and gut microbiota colonisation are key elements for triggering necrotizing enterocolitis (NEC). Our aim was to determine how dietary carbohydrate composition affects the metabolomic profile and whether unique metabolite signatures correlate with NEC incidence.

Methods Cecal contents and plasma were collected from a group of preterm pigs at birth and from three groups fed

formula containing either lactose, corn syrup solids (CSS) or a 1:1 mixture of lactose:CSS (MIX) as the sole carbohydrate. We performed metabolomic analysis by LC/GC mass spectroscopy, clinical and histological NEC scoring, and distal ileum tissue expression of inflammatory markers.

Results Based on clinical and histological scores NEC incidence rates were 12%, 35%, and 40% in the lactose, CSS and MIX groups, respectively. Ileum inflammatory markers (IL-8, IL-6, and IL1b) were highest in CSS vs. MIX and lactose groups and also correlated with NEC. Metabolomic analysis showed that lactose vs. CSS formula increased abundance of several cecal endocannabinoids. CSS and MIX formula increased plasma histamine, cecal and plasma lactate, beta-hydroxybutyrate, and butanediol, and decreased the abundance of several primary and secondary bile acids vs. lactose fed pigs.

Conclusions We conclude that lactose-based formula protects against inflammation and NEC and that this correlates with increased cecal levels of anti-inflammatory neurotransmitters and reduced levels of carbohydrate fermentation products and bile acids. This novel finding suggests that endocannabinoids, normally found in breast milk, may be produced endogenously and modulate inflammation in preterm neonates fed a lactose-based formula.

PO-0607c ADMINISTRATION OF BIFIDOBACTERIUM BREVE AND LACTOBACILLUS SALIVARIUS, TWO STRAINS ISOLATED FROM HUMAN MILK, TO VERY LOW AND EXTREMELY LOW BIRTH WEIGHT PRETERM INFANTS: A PILOT STUDY

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Preterm infant gut has been described as immature and colonised by an aberrant microbiota.

Objectives Elucidate if administration of two probiotic strains isolated from human milk to preterm infants led to their presence in faeces. Secondly, evolution of immunological compounds in blood and faecal samples was also assessed.

Materials and methods Inclusion criteria: Birth weight <1,300 g, gestational age <29 weeks. Preterms received two daily doses (~10⁹CFU) of a mixture of *B. breve* PS12929 and *L. salivarius* PS12934 after meconiorrhexis. Meconium samples were collected prior to and faecal and blood samples were collected weekly for up to 28 days. Faecal bacterial growth was detected by culture-dependent techniques. Cytokines, chemokines, growth factors and immunoglobulins were determined by multiplex technologies. The statistical analysis was performed using R2.15.3.

Result and discussion Supplementation of five with this probiotics was effective in enhancing the levels of *L. salivarius* PS12934 that could be isolated from day 7 of intervention and its presence remained constant throughout the study; *B. breve* PS12929 was detected later, after day 14, but had an increasing presence in the faecal samples. IL-4, IL-10 and IL-13 concentrations, related to anti-inflammatory processes, and IL-8 and MCP-1 were similar to those values previously reported for 'late-preterms' at 7 days of life, this may reflect the immunomodulatory activity of the probiotic strains on this population. It demonstrated an increase in IgA since day 7. A reduction of