Methods Under simulated conditions we investigated two single-light phototherapy setups - using Draeger PT4000®, and Natus NeoBlue Mini® lights - and one double-light phototherapy setup using both units.

Irradiance was measured using a Respiroics Joey Dosimeter® at predetermined body locations on a mannequin with and without reflectors.

We tested two reflective materials - a gloss-white cover, and a Mylar® silver foil cover.

Results We detected an increase in cumulative mean irradiance with the addition of reflective covers in two setups.

In the Draeger setup, irradiance increased by 22% when using either a white or Mylar cover over no cover [14.5 to 17.8 uW/cm2/nm (white cover) (p=0.037)] [14.5 to 17.9 uW/cm2/nm (Mylar cover) (p=0.036)]. The addition of a second phototherapy unit (Natus) without reflectors increased irradiance by 43% [14.5 to 20.8 uW/cm2/nm (p=0.001)].

In the double-light setup, irradiance rose by 17.8% compared to no cover [20.8 to 24.3 uW/cm2/nm (white) (p=0.003)] [20.8 to 24.5 uW/cm2/nm (Mylar) (p=0.002)].

In the Natus setup, reflective covers produced a small, non-significant increase in irradiance compared to no cover [6.5 to 7.0 uW/cm2/nm (white)] [6.5 to 7.1 uW/cm2/nm (Mylar)].

We detected no difference in irradiance between Mylar and white covers in any set up.

Conclusion The addition of reflective covers can optimise neonatal phototherapy. Our study suggests that total body irradiance can be improved in both single- and double-light phototherapy setups. Clinical trials would be useful in further exploring the role of reflective materials in phototherapy.

REFERENCES

- Maisels MJ, McDonagh AF, Phototherapy for neonatal jaundice, *N Engl J Med*. 2008 Feb 28;358(9):920–8
- Rostenberghe HV *et al*, Use of reflective materials during phototherapy for newborn infants with unconjugated hyperbilirubinaemia, *Cochrane Systematic Review protocol*, e-pub: Dec 2015, www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD012011/full

GP259 FRESH OR FROZEN: WHAT IS THE DIFFERENCE?

^{1,2}Saira Tabassum*, ³Emma Conlon, ¹Pamela O'Connor, ¹Anne O'Sullivan, ³Daniel McCartney, ^{1,2}Martin White, ¹Fiona Dunlevy, ^{1,2,4}Anne Doolan. ¹Coombe Women and Infants University Hospital, Dublin, Ireland; ²Royal College of Surgeons, Ireland, Dublin, Ireland; ³Dublin Institute of Technology, Dublin, Ireland; ⁴University College Dublin, Dublin, Ireland

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Background Maternal expressed breast milk is the feed of choice for the preterm infant who is unable to latch to feed. Most mothers express and store milk in the fridge or freezer for later use. Irish Breast feeding guidelines recommends storage of fridge freezer for 3 months and deep freezer for 6 months.¹ Some reports suggest no change in macronutrient content after freezing up to 3 months while others report a decrease in fat and caloric content of breast milk.²

Aim To compare the difference in macronutrient content between paired fresh and frozen maternal expressed breast milk samples.

Methods A total of 20 pooled expressed breast milk samples were collected from 15 mothers, expressing for their preterm infants with mean gestation at birth = 28.3 weeks. Mean infants birth weight was 1143 (±364) grams. As per local

hospital policy samples were frozen at -25°C within 24 hours of expression. Breast milk samples were analysed by human milk analyser (MIRIS®) after ultrasonic homogenization after thawing in room-air and warming to 40°C.

Results Median time of freezing was 33 (7–70) days. Macro-nutrient composition varied (as shown in table 2), with fat and caloric content most effected. Some loss of protein content was observed.

Abstract GP259 Table 1 Maternal and infants demographic details

Participant mothers of infants	n=15
Mean age(SD) years	36.2 (4.7)
mean infants gestation at birth (SD) weeks	28.3 (2.65)
mean birth weight of infant (SD) grams	1143(364)

Abstract GP259 Table 2 Macronutrients and caloric contents/ 100mls of expressed breast milk

Median (ran ge)	day 0 value	frozen value	difference
Fat g/100mls	3.85 (2.6–7)	3.45(2.4–6.2)	0.35 g
Protein g/100mls	1 (0.8–1.5)	1(0.8–1.45)	0.05 g
carbohydrate g/100mls	7.55 (7–8)	7.45 (7–7.8)	0.11 g (0–0.45)
energy kcal/100mls	70(61–101)	67 (61–89)	3.3 kcal (1–12)

Discussion Our study shows a decrease in fat and energy content of maternal expressed breast when frozen. This should be taken into consideration when using frozen expressed breast milk for preterm infants and fresh breast milk used where feasible.

REFERENCES

- www.Breastfeeding.ie/factsheet/
- Garcia-Lara NR, Escuder-Vieco D, Garcia-Algar O, De la Cruz J, Lora D, Pallas-Alonso C. Effect of freezing time on macronutrients and energy content of breast-milk. *Breastfeed Med*. 2012;**7**:295–301.
- Ahrabi AF, Handa D, Codipilly CN, Shah S, Williams JE, McGuire MA, *et al*. Effects of Extended Freezer Storage on the Integrity of Human Milk. *The Journal of pediatrics*. 2016;**177**:140–3.

GP260 INDICATION OF LUMBAR PUNCTURE IN WELL LOOKING NEONATES – NATIONAL BASED SURVEY

Sheik Fareed Virupachi*, Rizwan Khan. *University Hospital Kerry, Tralee, Ireland*

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Background The incidence of early onset neonatal bacterial meningitis (EONM) was estimated to be approximately 0.3 per 1000 live births. Sign of EONM in term infants typically present by first 6 hrs and the majority presents within the first 24hr of life. Diagnostic investigations varies widely. However rationale to do lumbar puncture in well looking neonates with raised CRP varies widely

Aims and methods To perform a national survey via questionnaire to all paediatric consultant & neonatologist in Republic of Ireland. Questionnaire consists of questions regarding indication of lumbar puncture in well looking neonates with raised CRP and what level of CRP is indicative for Lumbar puncture.