

The Use of Probiotics (Labinic™) in Preterm Infants

| | |
|--|--|
| Written by: | Anna Gregory, Consultant Paediatrician Sarah Scott, Paediatric Pharmacist |
| Date Approved: | 18 th November 2020 |
| Approved by: | Paediatric Quality Improvement Meeting |
| Next revision due: This is the most current document and should be used until a revised version is in place | 18 th November 2023 |

Aim and scope of procedure:

To supplement babies born <32 weeks gestation with probiotics to help reduce rates of necrotising enterocolitis (NEC), late onset sepsis and morbidity and mortality associated with them.

Background:

NEC is the end result of multifactorial processes in preterm infants and leads to significant long-term morbidity and mortality. Bacterial colonisation with organisms such as lactobacilli and Bifidobacterium, found in the gastrointestinal tract of healthy breastfed infants has been demonstrated to protect the preterm infant's gut from colonisation with more pathogenic species. Enteral supplementation of feeds with probiotics is an area of research which has shown significantly reduced rates of NEC and late onset sepsis.^{1,2,3}

Indications for use:

- ALL babies born <32 weeks gestation should be commenced on Labinic™ when receiving trophic enteral feeds of 20ml/kg/day regardless of milk type.
- Labinic™ should be discontinued when the baby reaches 34 weeks corrected gestational age
- Labinic™ should be stopped any time the baby is nil by mouth and recommenced when the feeds are at 20ml/kg/day.

Preparation:

Liquid formulation containing lactobacillus acidophilus, Bifidobacterium infantis and Bifidobacterium bifidum 2.0 billion colony forming units (cfu) per 0.2ml.

Although classed as a foodstuff, Labinic™ should be prescribed on the drug chart and be checked by 2 trained nursing staff prior to administration.

Storage: Stored at room temperature (max 25C)

Dosage:

0.2ml once daily. Extremely low birthweight babies may have a dose of 0.1ml twice a day.

Prescribed at 18.00pm

Administration:

- Oral/NG (nasogastric). Labinic™ is oily, therefore a milk feed should be given straight afterwards to 'flush' it through the NG tube to avoid blockage
- Swirl the bottle gently prior to use to mix the contents properly, keeping the lid upright. Use a sterile 1ml oral syringe to draw up the dose taking care not to spill the excess medication around the sides of the bottle. If spillage occurs use sterile gloves to wipe it as it contains live bacteria
- Labinic™ is classed as a foodstuff and therefore does not undergo the same quality control/assurance processes as drugs do. The details of the batch number given to each baby must be recorded in the Labinic™ folder kept on the ward

Side-effects

Dietary supplements containing live enteric bacteria are usually well tolerated. Labinic™ will not cause an increase in milk osmolality and is well tolerated, with a neutral taste. It may occasionally cause abdominal discomfort, diarrhoea and /or flatulence. Not recommended for use where gut or general immunity is compromised. Systemic infection is possible but very rare according to published literature for probiotics in general.

Compatibility:

Does NOT mix with other medicines but can be mixed with milk.

Other:



MUST inform parents Labinic™ is being commenced and provide the patient information leaflet (appendix 1)

No added sweeteners / preservatives / allergens / animal products. Suitable for Vegans

Monitoring effectiveness:

Key outcomes (incidence of NEC and late onset sepsis) will be recorded on BadgerNet for infants receiving Labinic™. This will be presented annually at morbidity and mortality meetings both locally and within the West Midlands ODN.

References:

| Internal Documents | WAHT- Neonatal Key Documents |
|--------------------|---|
| External Documents | <ol style="list-style-type: none"> 1. Al Faleh K, Anabrees J. Probiotics for prevention of NEC in preterm infants. <i>Cochrane Database of Systematic Reviews</i>.2014. 2. Robertson C et al. Incidence of necrotising enterocolitis before and after introducing routine prophylactic Lactobacillus and Bifidobacterium probiotics. <i>Archives of disease in childhood, Fetal Neonatal edition</i>. 2020. 3. Dermysi et al. The ‘golden age’ of probiotics: A systematic review and meta-analysis of randomised and observational studies in preterm infants. <i>Neonatology</i>. 2017 <div style="text-align: center;">  Product Information Clinician_pharmacist l </div> <ol style="list-style-type: none"> 4. <div style="text-align: center;">  Labnic™ Drops Manufacturing Inform </div> <ol style="list-style-type: none"> 5. |

Please note that the key documents are not designed to be printed, but to be used on-line. This is to ensure that the correct and most up-to-date version is being used. If, in exceptional circumstances, you need to print a copy, please note that the information will only be valid for 24 hours and should be read in conjunction with the key document supporting information and/or Key Document intranet page, which will provide approval and review information.