DIETITIANS' ROUND TABLE DISCUSSION ON BLENDED DIET

Blended diet (BD), has gained attention as an alternative to traditional commercial enteral feeds for children requiring enteral nutrition (EN). The need for discussion around the topic of BD for home enteral feeding (HEF) resulted in Nestlé Health Science organising a round table in London at the end of June. *NHD*'s regular columnist and contributor, Priya Tew, RD, was at the helm, chairing the talks, and panellists included our regular contributor, Hazel Duncan, RD, who has much experience in paediatric enteral feeding using BD.

Priya Tew RD

Emma Green RD

Kezia Kite RD

Angharad Banner RD

Hazel Duncan RD

The event turned out to be hugely informative and forward-thinking, providing us with expert opinion and comment on the pros and cons, myths and miracles of using BD feeds, as well as the commercial feed with food-derived ingredients, Compleat® paediatric.* The whole event was a positive step in helping make healthcare professionals aware of alternatives when prescribing patients.

THE PANELLISTS

Emma Green, *Specialist Home Enteral Tube Feeding Dietitian with Mid-Cheshire Hospitals NHS Foundation Trust*

Kezia Kite, *Paediatric Dietitian at Great Ormond Street Hospital (GOSH), London*

Angharad Banner, *Private and NHS Dietitian, Member of BDA Paediatric Specialist Group*

Hazel Duncan, *freelance Paediatric Dietitian with experience in enteral feeding and blended diet*

WHAT IS BLENDED DIET?

BD refers to the use of whole foods that are processed into a liquid form as a means to provide the nutritional needs of a tube-fed child when they are unable to consume a regular diet orally. Solid food is blended and mixed with water or any other liquid and fed through the feeding device. It can be given as a sole source of nutrition or as an adjunct to commercial enteral feed to meet a patient's nutritional needs.

At present, whilst BD is becoming more popular and being requested by parents and carers of home enterally fed children, there are considerations that may make it difficult. In these instances, Nestlé Health Science's food-derived Compleat® paediatric may bridge the gap between other commercial enteral feeds and fully BD feeds. The primary difference between BD feeds and feeds with food-derived ingredients lies in their composition. BD feeds utilise whole foods, including fruits, vegetables, proteins and grains, which are liquidised to create a homogeneous mixture. In contrast, feeds with food-derived ingredients are typically commercially prepared enteral feeds that contain a combination of nutrients in a standardised and processed form.

"We are trying to start our own service at GOSH to use blended diet, and then work with community patients too. But there are policies in place currently that need to be worked around for children already set on commercial enteral feeds." **Kezia**

ESSENTIAL RESOURCES

Please visit: www.NHDmag.co.uk/article-references.html

*Compleat® paediatric contains 13.8% rehydrated chicken and rehydrated vegetables (peas and green beans), peach puree and orange juice from concentrate.

DISCUSSION AROUND THE TABLE

The round table panellists discussed in great depth the advantages and disadvantages of BD feeds. In doing so, they considered the reported positive clinical outcomes of food in enteral feeding, including physical and psychosocial outcomes, risks and challenges of BD, and the benefits of commercially prepared food-derived enteral feeds. Compleat® paediatric was seen as the go-to feed in some trusts and it was agreed that it plays an important role as a stepping stone for parents and carers to move onto a full BD.

KEY TAKEAWAYS - THE PROS

"Children with complex feeding requirements receive a healthier diet than most of the population through their blends." **Hazel**

Nutritional variety: BD feeds offer a wide range of nutrients derived from whole foods, providing a more diverse nutrient profile compared with commercial enteral feeds.

Reduced dependency on commercial enteral feeds: By using BD, patients may reduce their reliance on commercial enteral feeds, which can be expensive and may not always be readily available.

Improved quality of life: Children sleep better when they are not experiencing discomfort. Growth and weight improves too. Social benefits include parents feeding their children and being in control of their child's nutritional intake. The whole family can eat together.

Enhanced gut health: Whole foods used in BD contain dietary fibres and natural enzymes which can support gut health and normal bowel function. This may reduce the risk of constipation and improve overall gastrointestinal well-being.

Improved GI symptoms: Reduced incidence of reflux, gagging, vomiting and diarrhoea. Stool consistency improves.

Reduced costs: With improved gut health comes reduced use of medications, particularly laxatives. This has a cost saving, as less medication means less expense.

Better tolerated than commercial enteral feeds: This means volumes can be increased, which leads to shorter feeding times.

KEY TAKEAWAYS - THE CONS

"People are wary of blended diet in our trust because of the limited evidence behind it. People are scared of the possible contraindications." **Emma**

Nutritional imbalance: Some may worry that BD can be a challenge to ensure all essential nutrients are provided in adequate amounts. The panel agreed that BD is no different to a family feeding their child homecooked meals and can provide a well-balanced and nutritious diet if done well.

Tube blockage: This can be a concern, but Hazel pointed out that the risk is minimised if blends are given via a 60ml syringe.

POINTS TO NOTE The consistency of blends should be clearly explained to parents/carers to minimise to minimise tube blockage risk. The International Dysphagia Diet Standardisation Initiative (IDDSI) provides a framework[1] explaining textures of food and liquids and can be a useful starting resource to explain the consistency of blends:
• IDDSI Level 4 is the blend usually required to provide adequate consistency.[1]
• It is recommended that blends are given via a 60ml syringe.
• Typically, children will take two to four syringes for meals depending on age and tolerance.
• Thicker blends should be given in 5-10ml increments, which is felt to be a similar rate to children chewing and swallowing a meal.
• The full volume of blends should be administered in around 20 minutes.
• It is not recommended to give BD via feeding pump.

NHD would like to thank Nestlé Health Science and their supporting staff for organising this first *NHD*/Nestlé dietitians' round table discussion. We also thank Priya Tew for chairing the event and all the panellists for their time and invaluable contribution.

Food safety concerns and hygiene: BD is not sterile and, therefore, can cause infection or food poisoning. Discussion around food hygiene is crucial, including thorough food preparation, safe cooking, cooling and storage of blends, and proper cleaning and handling techniques. This all minimises any risk of contamination and foodborne illnesses.

Cost: The panel acknowledged that families starting on their BD journey require a high-power blender to ensure meals are blended smoothly enough to prevent tube blockage. There are a variety of blenders available and the higher the power the smoother the blender should be able to get the food, making it safer and reducing the risk of tube blockage. The cost of equipment and food, plus the time involved, however, can be prohibitive for some parents and carers.

Storage and preparation sites: The panel highlighted that this can be a particular issue with NHS trusts when storage is limited. Preparation of foods for BD would need to be strictly controlled too.

Research and evidence: Although BD feeds are gaining popularity, the evidence supporting their use is still limited. Existing studies have primarily focused on small-scale observational research or references. These studies have reported positive outcomes such as improved tolerance, gastrointestinal function, and quality of life in select patient populations. However, it was acknowledged in the room that further large-scale, randomised controlled trials are needed to establish the safety, efficacy, and long-term impact of BD on children.

WHAT DOES THE FUTURE HOLD FOR BD?

Currently, healthcare professionals can advise on BD and use the BDA Practice Toolkit, ESPGHAN guidelines and individual NHS Trust pathways. With more and more parents and carers requesting BD, our chair, Priya, asked, "Will the profession accept it?" There was a resounding "yes" in the room, with the proviso that there will always be some that won't. However, as the number of commercial feeds with food-derived ingredients such as Compleat® paediatric coming onto the market increases, this will bridge the gap, making it easier for hospital trusts to get on board. In fact, Hazel made a direct request to Nestlé Health Science to please expand the Compleat® product range to include different volumes! Watch this space…

RAISING AWARENESS OF THE BENEFITS OF BD

Home enteral BD feeds offer an alternative approach to EN by utilising whole foods processed into a liquid form. Whilst they provide nutritional variety and potential benefits for gut health, challenges are perceived to remain in ensuring proper nutrient balance and food safety. The evidence supporting the use of BD feeds is currently limited, underscoring the need for more research to establish their efficacy and safety in clinical settings. However, the substantial rhetorical evidence we are seeing in clinical practice and in the community from dietitians and parents/carers, which supports improved patient outcomes, particularly GI symptom relief, means that raising awareness of BD in EN is crucial.