

Managing the Dietetic Needs of Haematology Patients

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Overview

- Management of treatment side effects
- Food Safety advice
- Alternative diets
- Reliable Resources

Chemotherapy-nutritional impact symptoms:

Effect on oral cavity:

- Dysgeusia (taste changes)
- Hypogeusia (loss of taste)
- Thrush
- Dysphagia
(difficulty swallowing)
- Xerostomia
(dryness of the mouth)
- Odynophagia
(pain on swallowing)

Effect to GI tract:

- Musositis
- Nausea & vomiting
- Anorexia
- Early satiety
- Reflux
- Secretory diarrhoea

Practical management of nutritional impact symptoms:

Dysguesia/Taste changes:

- ❖ Usually temporary- bitter or sweet
- ❖ Pre-meal mouth care :oral rinses e.g. Kin mouthwash, a solution of water and baking powder to normalise taste
- ❖ Cold or lukewarm foods have a weaker taste than hot foods
- ❖ Metallic taste-plastic cutlery as stainless steel exacerbates this
- ❖ Marinating meats can also help with metallic tastes
- ❖ Constant stimulation of the taste buds – re-try foods every 2-3 weeks

Hypogeusia/Lack of taste:

- ❖ Bland foods: add herbs, spices, garlic, onion
- ❖ Fat carries flavour so add fat to foods
- ❖ Sharp tasting foods may stimulate taste buds
- ❖ Mouthcare to aid maximise taste from food

Management of side effects continued:

Candida:

- ❖ Prophylactic care- mycostatin, regular mouthwashes
- ❖ IV Fluconazole
- ❖ Viscosity of fluids and ONS – thin fluids are better tolerated

Dysphagia:

- ❖ Magic mouthwash: (80 ml viscous lidocaine 2% ,80 ml Mylanta, 80 ml diphenhydramine,80 ml nystatin, 80 ml prednisolone, 80 ml distilled water)
- ❖ Avoidance of stringy, fibrous foods e.g. Celery, kale
- ❖ Dry, rough foods to swallow e.g.crisps, biscuits, crackers
- ❖ Foods that crumble on eating e.g pie-crusts, crumble, bread crusts

Management of side effects continued:

Xerostomia:

- ❖ Regular sips
- ❖ Addition of sauces- soft, minced-moist foods
- ❖ Avoid salty or spicy foods, caffeine & alcohol as these dry out mouth further
- ❖ Chewing gum and lemon pastilles may stimulate salivary flow
- ❖ Artificial saliva: Glandosane[®] or alternative brand sprayed into mouth – 2 sprays, as often as required

Odynophagia:

- ❖ As per dysphagia and odynophagia + pre-meal analgesia
- ❖ BMX mouthwashes
- ❖ Pain Management

Management of side effects continued:

Mucositis:

- ❖ Severity depends on type of conditioning regimen used
- ❖ Ulceration of mucosal lesions by time of stem cell infusion

Management:

- ❖ Mouth care **
- ❖ Foods easy to swallow, soft-liquidised
- ❖ Avoidance of caffeine, spicy food, alcohol
- ❖ Chewing gum , lemon pastilles, ice-cubes
- ❖ Pain relief
- ❖ Ensure fluid adequacy – minimal 30-35mls/kg

Management of side effects continued:

Nausea & Vomiting:

- ❖ Little & Often – hunger worsens nausea
- ❖ Eat bland, cold foods – less taste & smell
- ❖ Greasy, spicy and sugary foods – more difficult to tolerate
- ❖ Ginger ale, ginger biscuits, ginger paste
- ❖ Sufficient anti-emetic cover

Anorexia & Early satiety:

- ❖ Appetite stimulants w/reducing dose of steroids
- ❖ E.g. Megace (megestrol acetate)– takes 3/52 to take effect. Use no longer than 6/12 due to risk of thromboembolic events, dyspnoea, oedema)

Management of side effects continued:

Diarrhoea

- ❖ Anti-diarrhoeal medications
- ❖ Oral rehydration solutions e.g. Dioralyte
- ❖ Fluid adequacy
- ❖ Consensus on fibre intakes- if and as tolerat
- ❖ Probiotics not recommended ***

Increased difficulty meeting patients requirements due to :

- ❖ GI Complications – severe gut injury- absorption & metabolism of nutrients
- ❖ Stress induced catabolic state due to chemo, sepsis
Which results in:
- ❖ Poor nutrition during treatment - increased morbidity & mortality , decreased treatment tolerance
- ❖ ‘Leaky gut; bacterial translocation
- ❖ Decrease in essential vitamin & mineral stores – decreased cell growth
- ❖ Decreased protein – decreased oncotic pressure & increased oedema
- ❖ Decreased mobility- pressure sores and longer rehab requirements

(Gauvreau-Stern et al.,1989 ; Herrman & Petruska, 1993)

What our focus is when considering Nutritional support:

- ❖ To enhance anti-cancer treatment effects by supporting patients immune function
- ❖ To prevent infection, development of pressure sores and reduce the adverse effects of anti-tumour therapies
- ❖ To maintain patients lean muscle mass and prevent loss of function
- ❖ To improve patients quality of life
- ❖ To prevent apathy associated with anorexia
(Arends et al.,2006)

How we manage this:

- High protein, high calorie diet – food fortification strategies
- Oral nutritional supplements
- Enteral feeding (tube feeding)
- Parenteral feeding (feeding through an IV line)

Oral Nutrition Support

- High protein , high calorie diets
- Focus on choosing foods that nutritionally dense in energy and protein e.g. milk, cheese, yoghurt, creamed rice
- Food fortification : focuses on fortifying foods with extra calories and protein e.g adding cream, butter, sauces to food
- Oral Nutritional Supplements : OTC e.g. Complan
- Prescription Oral Nutritional Supplements: Fortisip, Ensure, Scandishake, Procal, Fresubin 2kcal Drink

***Ask your dietitian **

Oral Nutritional Supplements

- Recent systematic reviews and meta-analyses consistently show clinical benefits for the use of ONS
- ONS reduced overall complication rate (both inpatient and community), healing of surgical wounds, pressure ulcers and infections.
- ONS reduced length of stay in hospital and readmission rates, both important economic implications (*Cawood et al 2011*).



Food Safety :

- British Dietetic Association (BDA) produced a Policy Statement which provided evidence/best practice guidance for haematology patients undergoing chemotherapy.
- Limited evidence for the neutropenic diet-some centres have removed restrictions w/out any corresponding increase in Infection
- Recent UK audit revealed a variety of practices in different centres, Irish centres vary also
- Standardise neutropenic dietary advise given to haematology patients

Food Safety:

❖ Reheating food:

✓ correctly reheated food does not increase infection risk

✗ Rice -spores of bacillus cereus & bacillus subtilis found in rice survive the cooking process-develop into bacteria – multiply quickly – not adequately killed during reheating

❖ Water:

✗ bottled/mineral : campylobacter can flourish

✗ bottled still water: legionella, pseudomonas aeruginosa & pseudomonas fluorescens

✗ Non-carbonated bottled water: gram neg bacteria e.g. Stenotrophomonas maltophilia

✗ Water coolers & dispensers – contamination and poor maintenance

Food Safety:

❖ Ice:

✓ Appropriate water sources

✗ avoid slush puppies

❖ Ice-cream:

✓ safe when stored at correct temperatures, not previously thawed, individually wrapped and reliable source

✗ Avoid mobile vans and soft serve machines

❖ Probiotics:

✗ Disruption of the intestinal epithelial barrier during cancer treatment – lead to translocation of Lactobacilli or Bifidobacteria

Food Safety:

❖ Live Yoghurt:

- ✓ All yoghurts made w/live bacterial starter cultures-considered non-pathogenic by Food Industry
- Majority yoghurts not pasturised post production – refers to milk used
- Bacterial starter cultures cannot survive in human stomach

❖ Honey:

Contains yeasts and spore forming bacteria

- X Raw honey, unpasteurised honey, strained honey, fresh honey comb
- ✓ Filtered honey, pasteurised honey
- X Large jars, contaminated from food handlers & equipment

Food Safety:

❖ Nuts & Dried Fruit:

Salmonella & eschrichia linked to nut consumption

X Peanuts, almonds, pistachios, pine nuts, macadamias, hazelnuts, brazil nuts, walnuts –product recalls due to salmonella

✓ Application of heat reduces pathogens

✓ Cooked and processed dried fruit-flap jacks, cereal bars

❖ Vegetable & fruit smoothies:

✓ Pasteurised or undergone heat treatment

❖ Smoked Fish

✓ FSA- vacuum packed, eaten within 24 hours of opening- neutrophil count >0.5

Complementary diets and CLL

- No proof that diet or dietary supplements can treat or cure cancer
- Extreme diets can have harmful and devastating consequences
- Research shows that losing weight, especially muscle during cancer treatment can reduce ability to tolerate treatment and overall survival
- The role of nutrition is to keep you as strong as possible during your treatment

Ketogenic diet

The hype:

- All body cells use a type of sugar called glucose as a source of fuel
- As cancer cells divide more rapidly than normal cells- they use more glucose
- Ketogenic diet – high in fat, moderate amounts of protein and low is carbohydrate
- Claims to starve the tumour of glucose- its source of fuel
- All starchy foods to be cut out e.g. pasta, bread, rice

Ketogenic Diet

The facts..

- The body tightly regulates the glucose level in the blood and will not allow glucose levels fall low enough to starve the tumour
- Side effects; weight loss, nausea, diarrhoea – make it difficult to tolerate treatment
- No evidence to support the use of this diet in CLL

Alkaline diet

The hype:

- Based on eating alkaline foods – mainly fruit and veg based
- Avoid acidic foods eg cheese, red meat to help control the pH levels of your body
- It is claimed that cancer cells thrive in an acid environment (low pH)- more alkaline – cancer cell death

The facts..

- The body has its own mechanisms for controlling pH
- The pH of bodily fluids e.g saliva and urine can change depending on foods eaten but it does not affect blood pH

The Gerson Diet/juicing

- Based on the concept that people with cancer have too much salt in their bodies & that cancer develops when there is a build up of toxins in the body
- Very strict low-salt, low fat, vegetarian diet
- Includes drinking juice from approx. 9kg of freshly squeezed fruits and vegetables per day to detoxify the liver and cleanse the body of toxins
- Includes coffee enemas, dietary supplements and enzymes

The Gerson Diet/Juicing

The facts..

- Side effects: malnutrition, nutrient deficiencies & electrolyte imbalances
- Regular use of enemas could cause damage to the bowel
- Juicing reduces the amount of fibre you get from fruit (found in skins and peels)

Macrobiotic diet

The hype..

- Aims to avoid foods containing toxins
- Use of vegetables and whole grains – organic and locally grown
- Avoid processed foods, dairy products, red meat, coffee, eggs & sugar
- Vitamin and mineral supplements discouraged
- Specifics on cooking foods and utensils used

Macrobiotic Diet

The facts..

- Very restrictive – weight loss and treatment tolerance may be affected
- Loss of essential nutrients e.g. protein, iron and calcium

Superfoods

- The hype..
- A nutrient rich food considered to be especially beneficial for health & wellbeing
- e.g tumeric, green tea, berries, wheatgrass, broccoli, green leafy vegetables e.g. kale
- The facts..
- Eating a variety of different foods provides our body with different antioxidants & phytochemicals
- ‘Super foods’ contain antioxidants, phytochemicals, vitamins & minerals- shown to be beneficial in laboratory studies but not in human studies

Does sugar feed cancer?

- This is an oversimplification of a complex process
- All carbohydrates are broken down into simple sugar units – glucose
- All body cells whether cancerous or not, use this glucose as energy
- Giving more sugar to your body won't speed up the growth of cancer cells and deprivation of carbohydrate won't slow down their growth either
- If you eliminate carbohydrate your body will adapt and create glucose from other sources

Reliable resources:

- ‘Good Nutrition for cancer recovery’ – UCC & INDI
- ‘Eating well with swallowing difficulties in cancer’ – UCC & INDI
- Irish Nutrition & Dietetic Institute www.indi.ie
- Safe Food www.safefood.eu
- World Cancer Research Fund www.wcrf.org
- Memorial Sloan Kettering Cancer Centre www.mskcc.org - Plants and Botanicals
- Irish Cancer Society www.cancer.ie

Conclusion:

- Weight maintenance is key during treatment for haematological cancers
- No scientific evidence for alternative or exclusion diets – if there was strong scientific evidence it is the role of the healthcare professional to inform you of this
- Many strategies for managing side effects of treatments – alert nursing staff &/or dietitian for evidence based advice and guidance
- Food safety advice should be applied where possible
- If in doubt about an ingredient/food stuff – ask a healthcare professional before you incorporate this into your diet – it may interact with your treatment

Thank you for listening!

All Questions & Opinions Welcome