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The slides have been reviewed for off label information by Ferring Pharmaceuticals

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#### Disclosures

- Ferring
- Pfizer
- Takeda
- Abbvie
- Pharmacosmos
- Dr Falk



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# Introduction: what is fatigue and how common is it in IBD?





# What is fatigue?

- Fatigue is a continuing tiredness, lack of energy, or feeling of exhaustion that is not relieved after rest or sleep
- Fatigue can be described as physical (lack of energy or strength) but without other medical symptoms such as shortness of breath or syncope
- Fatigue can also be mental (brain fog, poor concentration, low motivation
- There is often overlap of physical and mental symptoms

#### How common is fatigue?

- Fatigue the most common symptoms found in IBD patients
- It is twice as common in IBD patients vs healthy controls
- Approximately 80% of patients experience fatigue when they are flaring
- Approximately 40% of patients in remission continue to experience fatigue



# Causes of fatigue



# Inflammation & fatigue

- Fatigue strongly correlates with inflammation
- Inflammatory states release multiple cytokines which activate the hypothalamic pituitary axis
- Active inflammation/disease also can lead to nutritional deficiencies such as iron deficiency
- There can be a mismatch between mucosal inflammation and overall symptoms: we need to go looking!
- Concurrent extraintestinal manifestations such as PSC can be associated with fatigue

#### Anaemia

- Iron deficiency is common and can cause significant fatigue even in the absence of anaemia check ferritin and transferrin saturation together
- Oral iron is often poor tolerated in patients with IBD due to GI side effects
- Sometime dose reduction or formula change can help
- Ferric maltol (Ferracru<sup>®</sup>) can be helpful in patients who fail other preparation
- IV iron is effective, well tolerated and should be used where oral preparations have failed even in absence of anaemia where fatigue is significant



#### Nutrient deficiencies

- Vitamin B12 is absorbed in the TI and thus is often low in CD esp those with previous ileocolic resections. Usually needs longterm parenteral replacement.
- Vitamin D is often depressed in patients with IBD and is easy to replace orally and occasionally require IV replacement.
- Micronutrient deficiencies (e.g. zinc, selenium) are less common causes of fatigue and are not part of routine screening

#### Medications

- Steroids cause sleep disruption and contribute to fatigue
- Azathioprine, mercaptopurine and methotrexate have all been associated with fatigue
- Most biologics have fatigue listed as a rare side effect of therapy. This
  is confounded by the fact that most people starting biologics have
  active disease but a very direct relationship to injections should be
  taken seriously
- Opiates and other pain management medication can contribute to fatigue

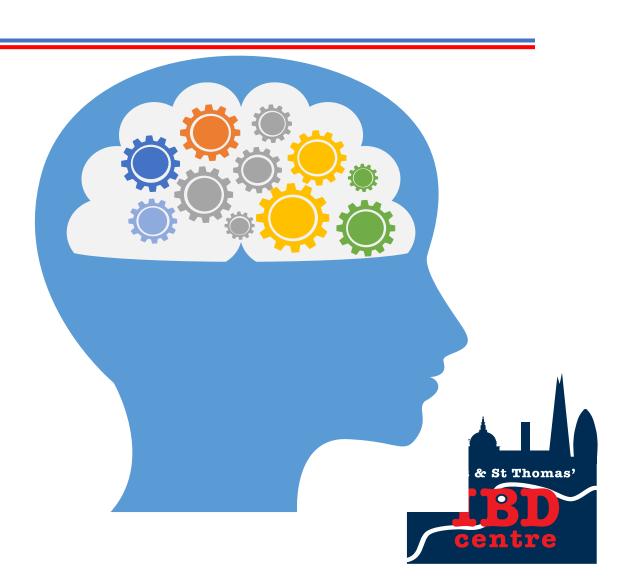
# Pain and sleep disturbance

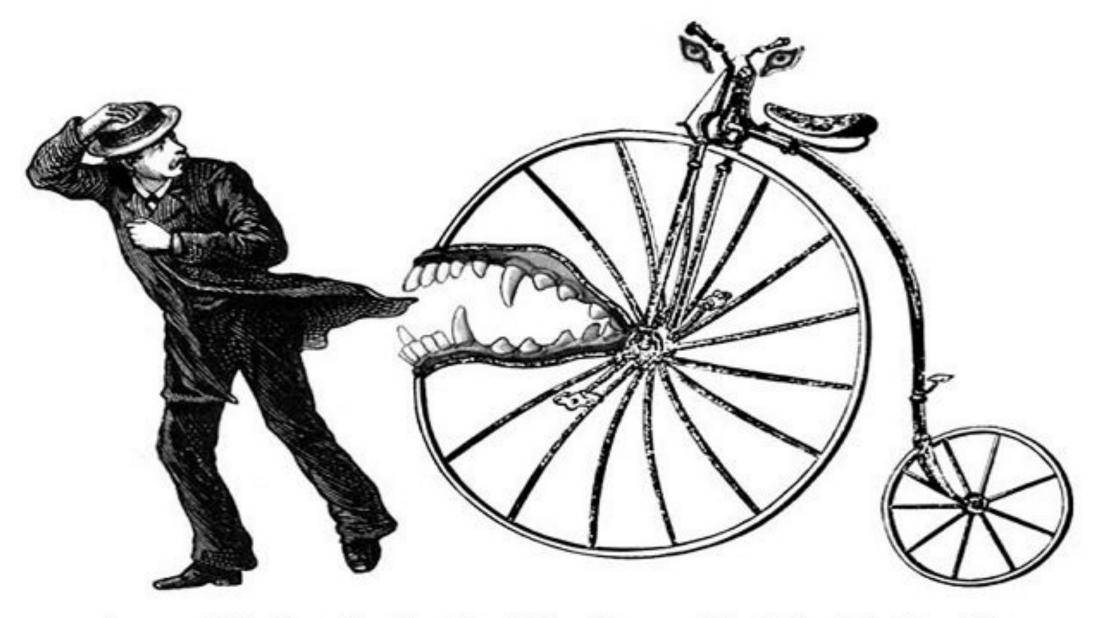
- Pain is a common symptom in patients with IBD. This can be directly related to disease process (e.g. active stenosis or fistula) or can be a result of treatment (e.g. surgery)
- Pain is associated with reduced sleep quality and lower quality of life and is also very draining to deal with and so contribute to fatigue.
- Sleep disturbance is common in IBD and can be disease related (pain, medication, diarrhoea at night) or lifestyle related (shift work, young children, poor sleeping habits) and undoubtedly contributes to fatigue.

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# Psychological Factors

- Psychological comorbidity is common in patients with IBD
- Depression is associated with fatigue
- Anxiety is also associated with increased fatigue
- Sleep disturbance is common in all psychological disorders which will contribute to fatigue





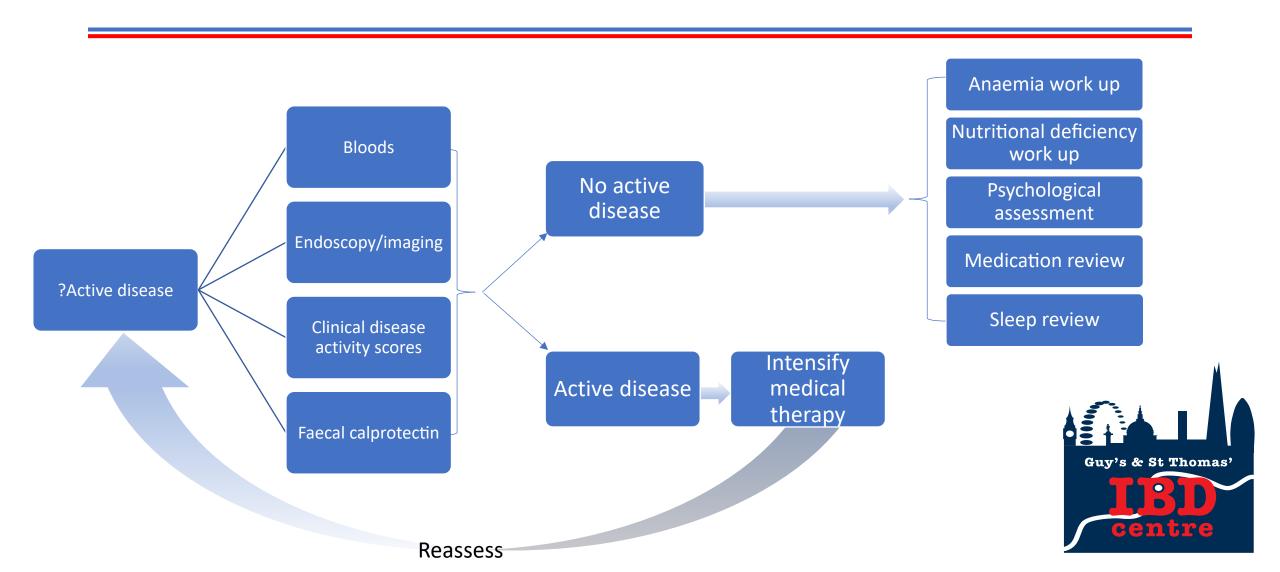
A VICIOUS CYCLE

# Case Study – Sophie

- 34 year old female
- School teacher
- Diagnosed with ileocolonic Crohn's disease 5 years ago
- Initially treated with multiple courses of steroids and then eventually started on azathioprine 3 years ago and flare free since.
- Presents with 6 months history of severe fatigue.
- No recent bloods or investigations



# Algorithm for assessing and managing fatigue



# Sophie's disease reassessment

- CRP normal
- Fcal 150
- Ileocolonoscopy SESCD 2. Minimal disease activity in ileum
- MRI small bowel no active disease detected



#### Blood work up

- FBC Hb 123 MCV 78
- Iron studies: ferritin 5, Tsat 12%
- Vitamin B12 normal
- Vitamin D − 34
- Bone profile normal
- TFTs normal
- TGN 350 with no evidence of hypermethylation



#### Medication assessment

- Tolerated azathioprine well
- No signs of toxicity on bloods. Not hypermethylating
- Also on OCP but has taken same pill since teenage years with no issues.
- No sedative or opiate drugs
- Minimal alcohol intake
- Self confessed coffee snob but restricts herself to one cup every morning

# Psychological and sleep assessment

- Generally positive, no anxiety or depression
- Quality of life now significantly reduced due to fatigue but trys to keep going but finding it increasingly hard to finish her school marking in evening due to poor concentration.
- Sleep disrupted intermittently but finds it difficult to sleep admits to poor sleep hygiene routine in evenings and not getting her "8 hours a night"
- No money worries.
- Happily married

# Management of Sophie's Fatigue

- Correction of iron deficiency did not tolerate 2 oral preparation.
   Should we give her IV iron?? After all she is not anaemic
- Low vitamin D identified so started on vitamin D replacement
- Not much in the way of active disease so IBD medication not altered.
- Referred to online resources for sleep improvement including strict sleep hygiene techniques
- Signposted access to psychology if things are not improving with above

#### Conclusions

- Fatigue is common and often severe in patients with IBD
- Fatigue can be a sign of active disease and should prompt consideration of formal disease reassessment.
- Causes of fatigue are multifactorial and require a careful broad assessment and multidisciplinary management



#### References

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#### 15th National IBD Nurse Forum 2021

# THE EVOLUTION OF THE IBD NURSING ROLE



