IDA The ORPHAN

(but NOT in BARNSLEY!)

Dr.Atcha. Dr.Kapur. Stacey Ward (Dr.Cutting)

IDA questions – pen and paper

- How Common is IDA in premenopausal women ?
- How Common is IDA in nursing/residential care homes?
- To Diagnose anaemia you need to have low HB and low ferritin? T/F
- My confidence with <mark>DIAGNOSIS</mark> of IDA- /10
- My confidence with WHERE TO REFER my IDA patients /10
- My confidence with IRON REPLACEMENT THERAPY /10

Management of IDA – different groups?

- Young women
- Young men
- Elderly
- Special conditions
 - CKD
 - CHF
 - IBD
 - GI surgery
- What is NAID?

The Barnsley IDA Pathway

The need



2019 – Aug 2021

ENJOY 😳

British Society of Gastroenterology guidelines for the Management of Iron deficiency Anaemia in Adults BMJ- Gut Sept 2021

> Highly affective care of IDA patients 4 components what do you think they were ?

BMJ / GUT article Oct 2021 Highly affective care of IDA patients 4 components

- 1. Confirmation of IDA
- 2. Timely access to appropriate investigations
- 3. Ensure appropriate IRT
- 4. Strong clinical leadership

in BARNSLEY !!! We fulfil all 4 criteria

BMJ / GUT article Oct 2021 Highly affective care of IDA patients 4 components

1. Confirmation of IDA

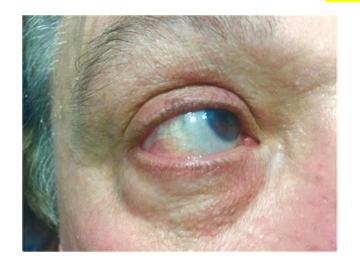
- 2. Timely access to appropriate investigations
- 3. Ensure appropriate IRT
- 4. Strong clinical leadership

IDA - Hx - Examination - Inv

- FHx- GI
- NSAIDS
- <mark>PPI</mark>
- Chronic conditions
- Donate blood
- Bleeding/bruising
- Restless leg syndrome
- Pagophagia ?



IDA - Hx - Examination – Inv











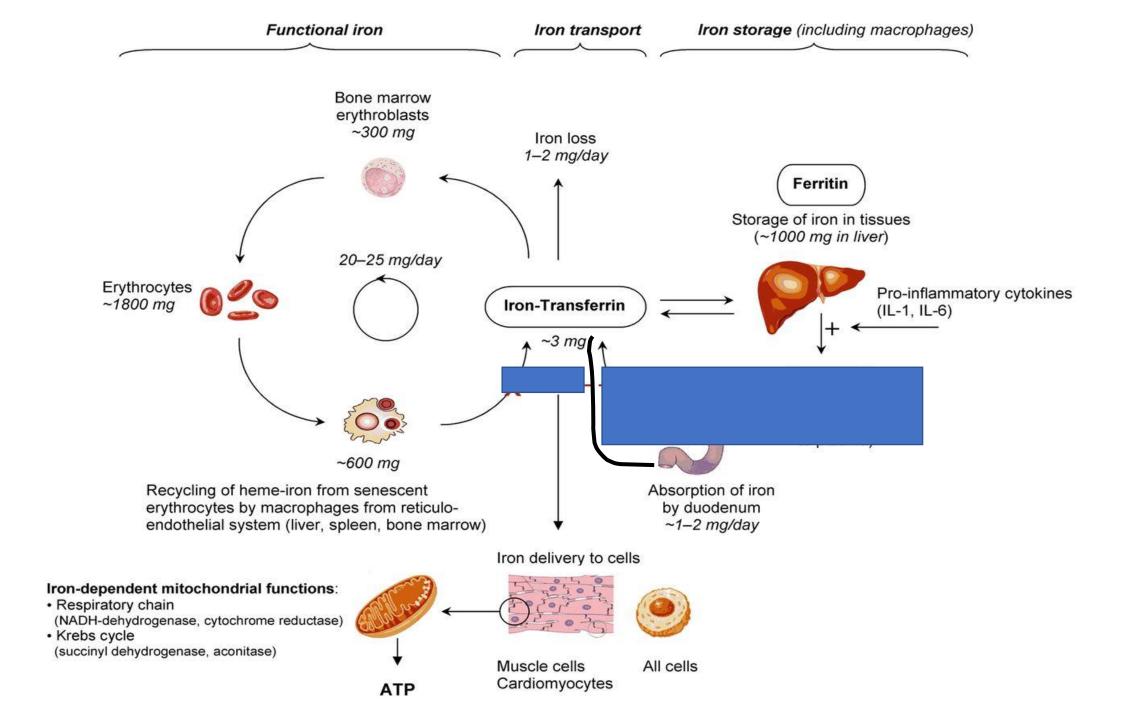


IDA - Hx - Examination - Inv

- Angular stomatitis
- Glossitis
- Koilonychia
- Blue sclera
- Telangiectasia !

IDA - Hx - Examination - Inv

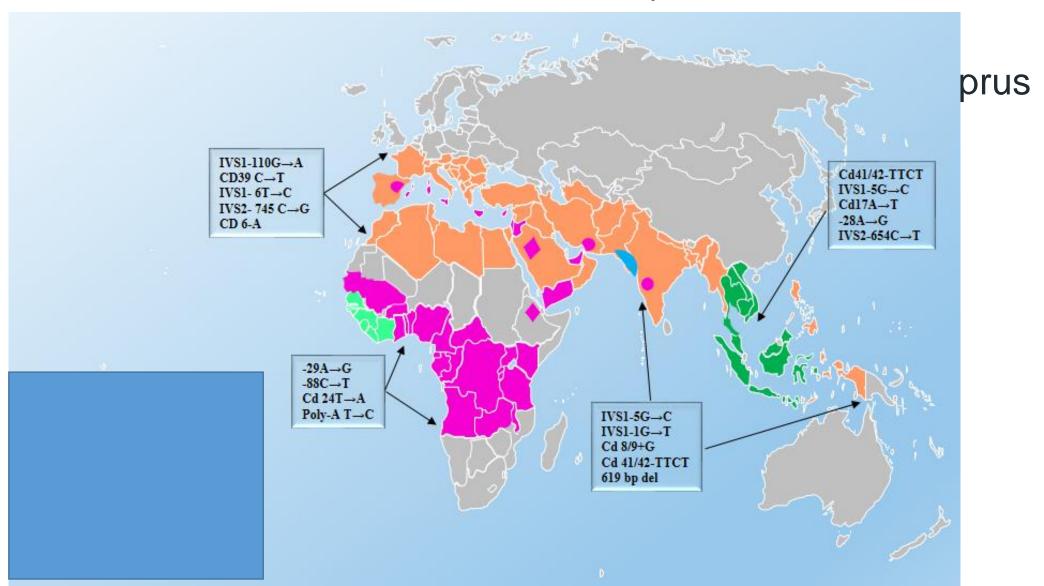
- FBC Hb < 130 < 120 <110 (g/L)
- and what else to diagnose IDA?
- Ferritin
- Transferrin saturation
- CRP
- As GPs nothing else really



IDA confirmation?

- Hb < 130 < 120 <110 (g/L)
- Ferritin < 15 < 30 (ug/L)
- Transferrin < 20%
- Low MCV (falling)
- Low MCH (falling)
- Why? Low/ falling

Low MCV if certain ethnicity !



IDA confirmation- what if

Anaemia of chronic inflammation with IRON deficiency

- Low Hb
- Ferritin 30-100
- AND CRP>5
- transferrin < 20 %

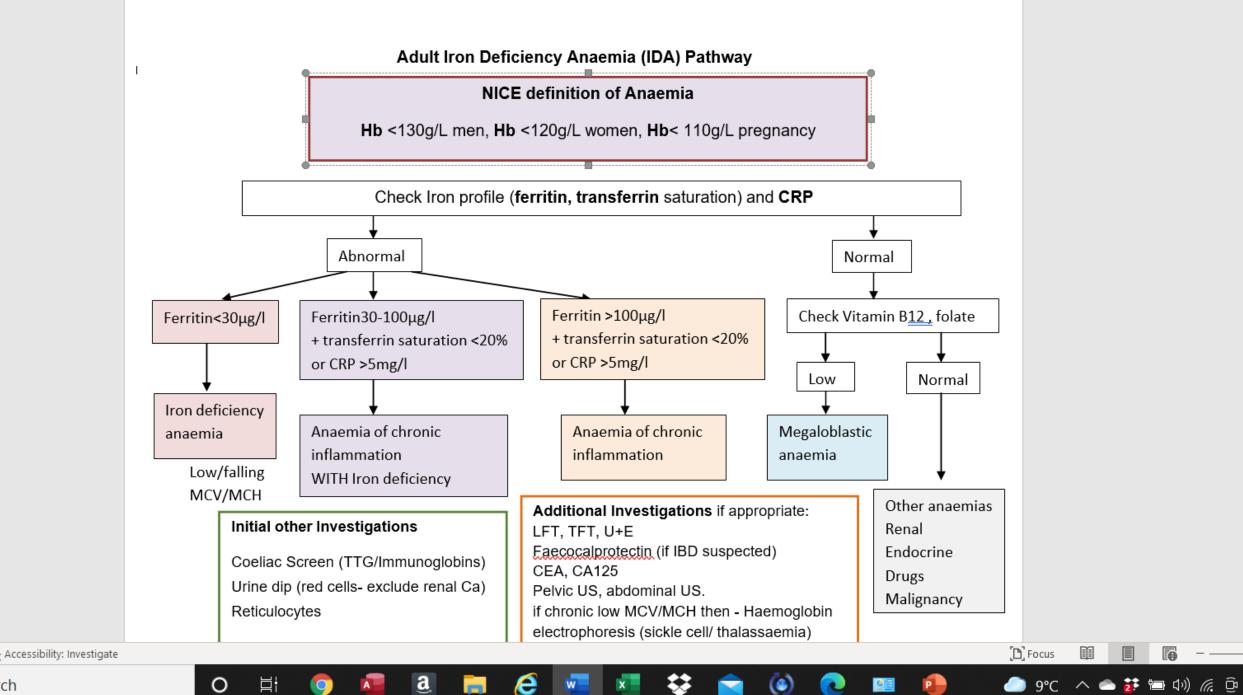
Anaemia of chronic inflammation

- Low Hb
- Ferritin >100
- AND CRP>5
- transferrin < 20 %

Ferritin> 150- unlikely to be Iron Deficient !!!

Other initial investigations?

- 1. Hb Ferritin- transferrin CRP
- 2. Coeliac screen 1/20 IDA patients
- 3. Urine dipstick
- Q. How reliable is Coeliac serology?
- Coeliac TTG/ endo-myselial antibody 2% negative !!! (elderly)
- Urine dipstick microscopic haematuria exclude UTI
 - 3 dipsticks persistent blood refer Renal Cancer !!!



11/1

ch

Any questions on Diagnosis of IDA?

• Dr.Kapur

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Referrals- where to ?



- Open access Gastroscopy
- Open access Colonoscopy
- Upper GI surgery OPA
- Lower GI surgery OPA
- Gastro clinic OPA
- IDA clinic
- IDA clinic why gastroscopy AND Colonoscopy???
- 2ww Upper GI
- 2ww Lower GI

Frank blood loss – refer urgent admission

All patients with IDA who are Coeliac Screen positive - refer to OPA gastro clinic

Men/ postmenopausal women v Premenopausal women

GI symptoms v No GI symptoms

IDA patients should not be referred to open access (non-urgent) endoscopy clinic

(<u>unless</u> colonoscopy imminent) }



All patients with IDA who are **Coeliac Screen positive** - refer to OPA gastro clinic

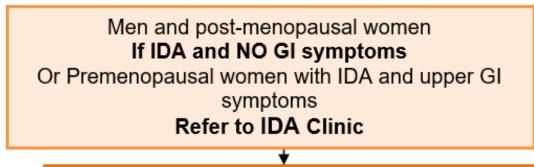
men and post-menopausal womenif IDA and GI symptoms – refer as below

2WW Upper GI- Surgeons if

Weight loss, abdominal pain, dyspepsia, altered bowel habit, reduced appetite, nausea/vomiting, Ehx upper GI cancer

2WW Lower GI surgeons if

abdominal pain, abdominal mass, altered bowel habit, painless rectal bleeding /FIT test +ve, raised faecal calprotectin, blood in stools, Fhx lower GI cancer



- All men and post-menopausal women will havegastroscopy/ D2 biopsies and colonoscopy then 3 months of oral iron
 - Premenopausal women will have TTG screen/gastroscopy and D2 biopsies

Then assessment for small bowel capsule

Then review by gastro consultant or haematology

IDA patients **should not** be referred to open access (non-urgent) endoscopy **clinic**

IDA clinic

If men / postmenopausal women with IDA and **NO** GI symptoms





Or premenopausal women with Upper GI symptoms

Q15.Why Dual endoscopy – gastroscopy and colonoscopy

- 1/3 IDA have potentially significant GI pathology
 - 1/3 of the 1/3 (1/9) have stomach/large bowel cancer
- Dual unrelated pathology !

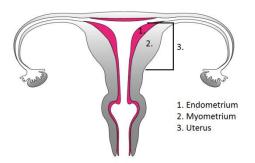
IDA clinic - plus

- If endoscopy negative / recurrent IDA / or inadequate response to IRT
- Small bowel capsule inv mucosal lesions
- Vascular lesions- angioectasia
- CT /MRI ???
- Review with Gastro consultant/ haematology consultant
- Stacey input

Cases- how would you manage them ?

Case Lynn 45 yr old

- SOB on climbing stairs
- Heavy periods
- Hb 7 Ferritin 10 transferrin <20%
- Q. How would you manage Lynn ?
- Referred to AMU pulse 110
- Oral iron and tranexamic acid
- US pelvis
- Gynae

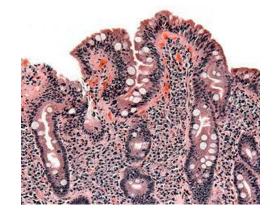


Case – 60 yr old Arnold

- Restless legs syndrome
- Clopidogrel
- No GI symptoms
- Hb 10.8, ferritin 10 Transferrin <20%
- Q. How would you manage Arnold ?
- Coeliac serology / urine dipstick negative
- ? IDA clinic

36yr old Samantha

- IBS type symptoms
- TATT, 2 kids
- Hb 11 ferritin 20 transferrin < 20%
- Q. How would you manage Samantha?
- Coeliac screen anti endomyselial antibody positive -
- OPA Gastro clinic



Gary 36 yr old

- Loin pain, fever, dysuria
- Urine dipstick wcc, blood
- MSU and antibiotics
- MSU negative
- 3/12 later same
- Urine dipstick WCC, blood
- MSU negative
- 3/12 later same
- Urine dipstick wcc, blood
- MSU negative
- FBC , U+E,
- Hb 11 Ferritin 28 Refer 2ww Urology
- Renal Cancer 2 weeks nephrectomy



50 yr old Masood

- Dyspepsia 6/12 ,weight loss 2.5 stones in 3 months
- Hb low, ferritin, transferrin low
- Q. How would you manage Masood ?
- 2ww upper GI
- Oesophageal Cancer
- Died within 6/12

57yr old Simon

- 6/52 diarrhoea day and night
- Poor appetite ,weight loss
- Hb 9.0
- Ferritin high
- CRP high

Q. How would you manage Simon?

- 2ww lower GI
- IBD Ulcerative Colitis come back to this later ..

Any questions on Referral of IDA?

• Dr.Kapur

BMJ / GUT article Oct 2021 Highly affective care of IDA patients 4 components

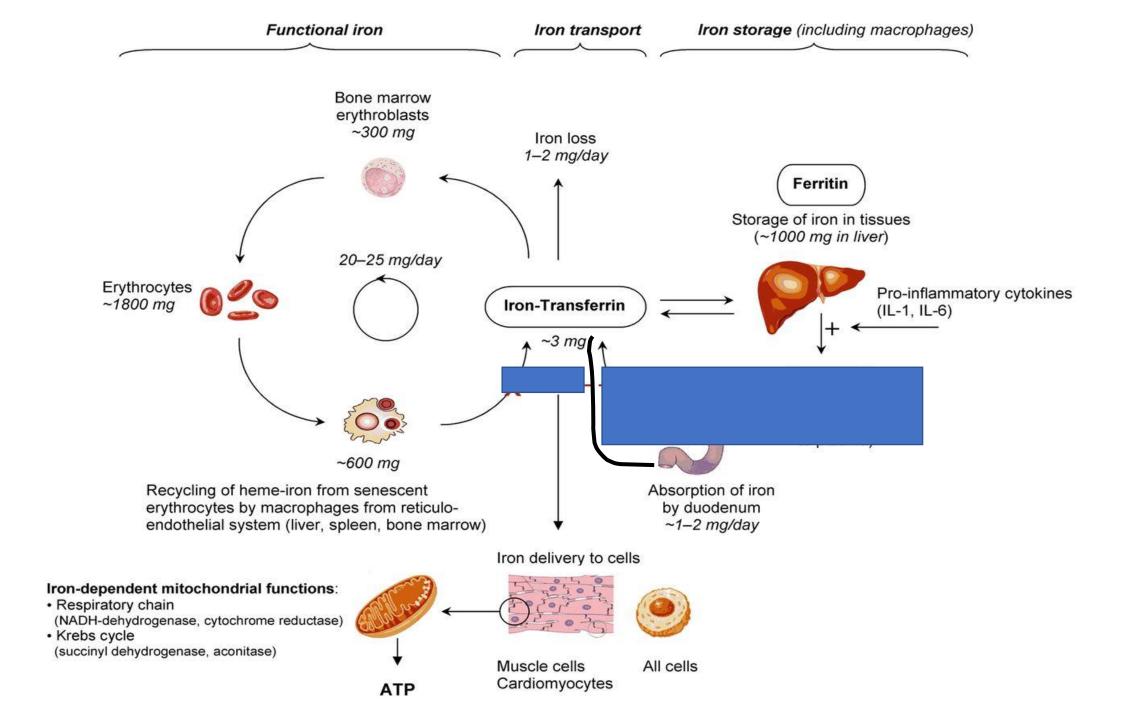
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3. Ensure appropriate IRT

4. Strong clinical leadership

Iron replacement Therapy IRT – aims *

- Restore normal circulating Hb
- Replenish normal body Iron stores
- Improve quality of life
- Improve physiological function



IRT - Iron replacement therapy- 8 questions

(paper please)

O1 <mark>Ferrous fumarate (Galfer) and Ferrous sulphate (rarely Sytron) only IRT available for adult IDA in Barnsley primary care ?</mark> T/F

Q2. Diagnostic trial of Oral Iron for premenopausal women only? T/F

Q3. Daily recommended oral elemental iron

(50-100 mg) / (100-200 mg)?

Q4. bd/tds – which regime is most effective?

Q5. Iron tablets are best taken daily ? T/F

Q6. Iron MR tablets are better tolerated and should be tried if necessary ? T/F

Q7. Empty stomach or with food if side effects of oral Iron? T/F

Q8. Iron tabs are best be taken with orange juice as Vitamin C helps with Iron absorption? T/F

Q9. Oral Iron tablet should be given for 3/12 in total ? T/F

Q10. The Rate of non compliance for IRT is about 25%? T/F

Research on dosing of IRT

- 60 mg od v 60 mg bd
- 200mg alternate day v 100mg od
- 15 mg v 50- 150mg
- How can Iron OD/alternate days be as effective as same dose BD/TDS / daily ?

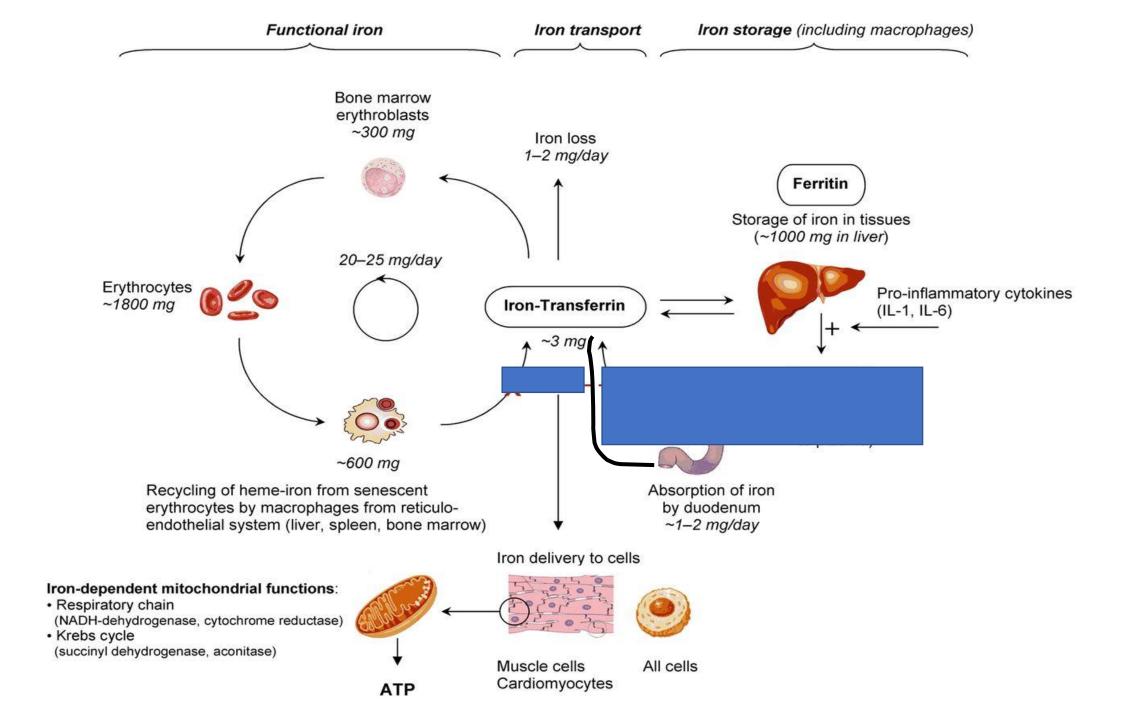


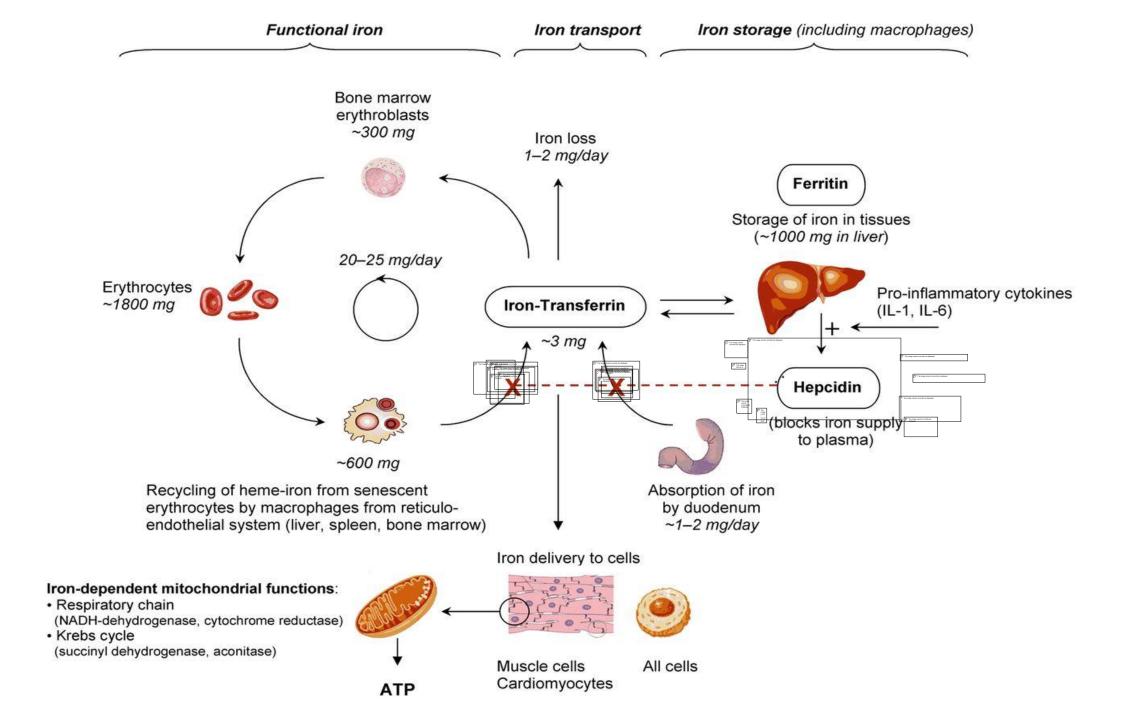


HEPCIDIN!!!

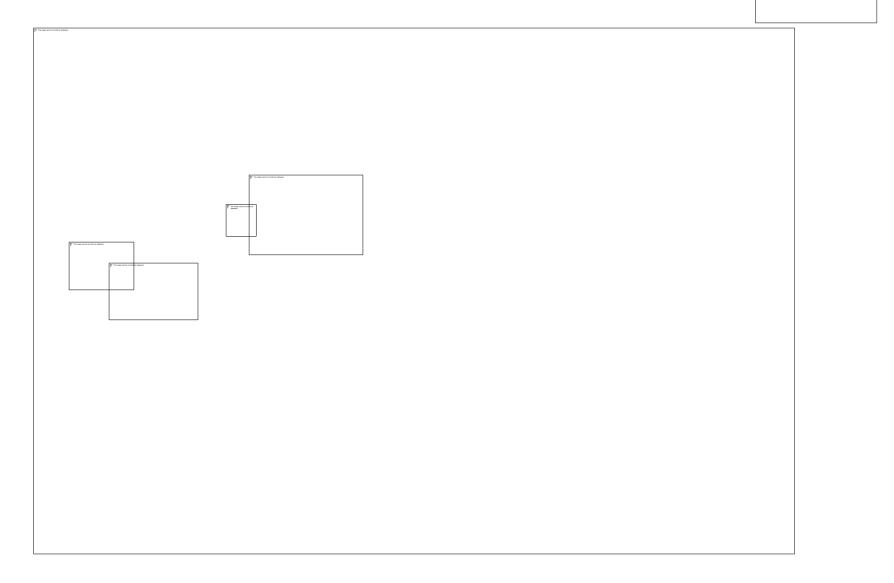
What is it ?

What does it do?

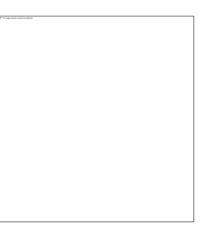




HEPCIDIN ! 24 hrs



Isn't that super interesting?



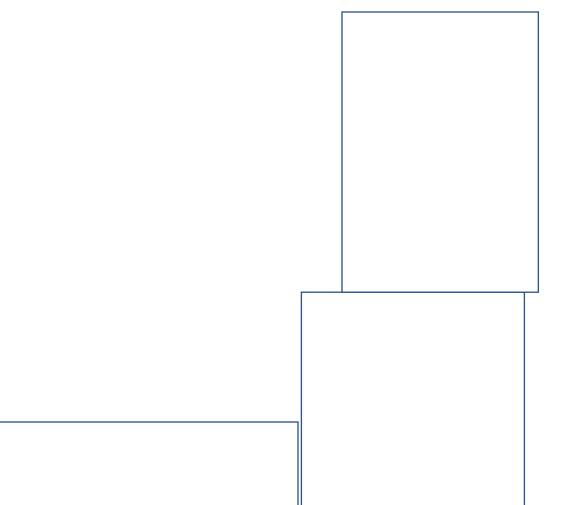
When to check Hb response ?

- 2 weeks ideally
- 4 weeks practically
- Expectation ?
- How long would you continue IRT?
- normal Hb + 3 MONTHS
- IRT 2-4 weeks with a 10-20g/L rise in Hb is sensitive for diagnosis of IDA !!!

Failure to respond

- Non- compliance !!! What %?
- Malabsorption
- Systemic disease
- Bone marrow pathology
- Haemolysis
- Continued bleeding
- Concurrent deficiency of vit B12 and folate

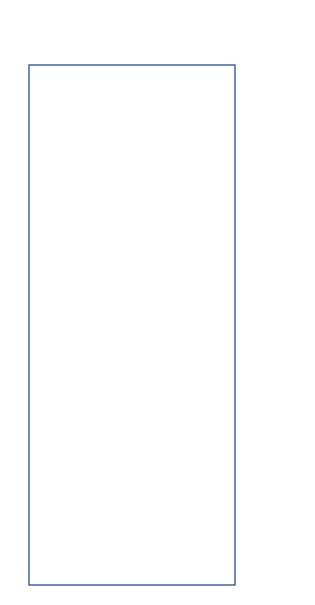


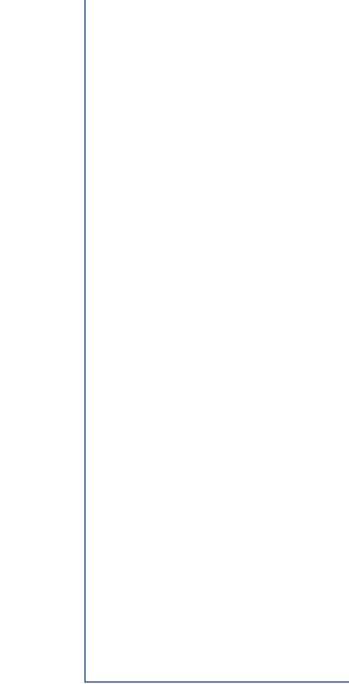




Ferric maltol (Feraccru) 2nd line

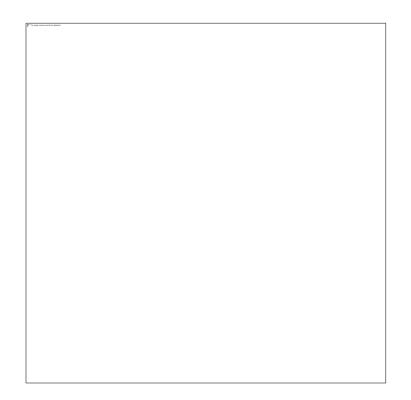
- Low iron content
- Slow loading
- Inc compliance
- Dosage 30 mg bd (Dr.Snook)
- Response 6 weeks
- 3 months max to see if Hb improves
- APC / LMC approved

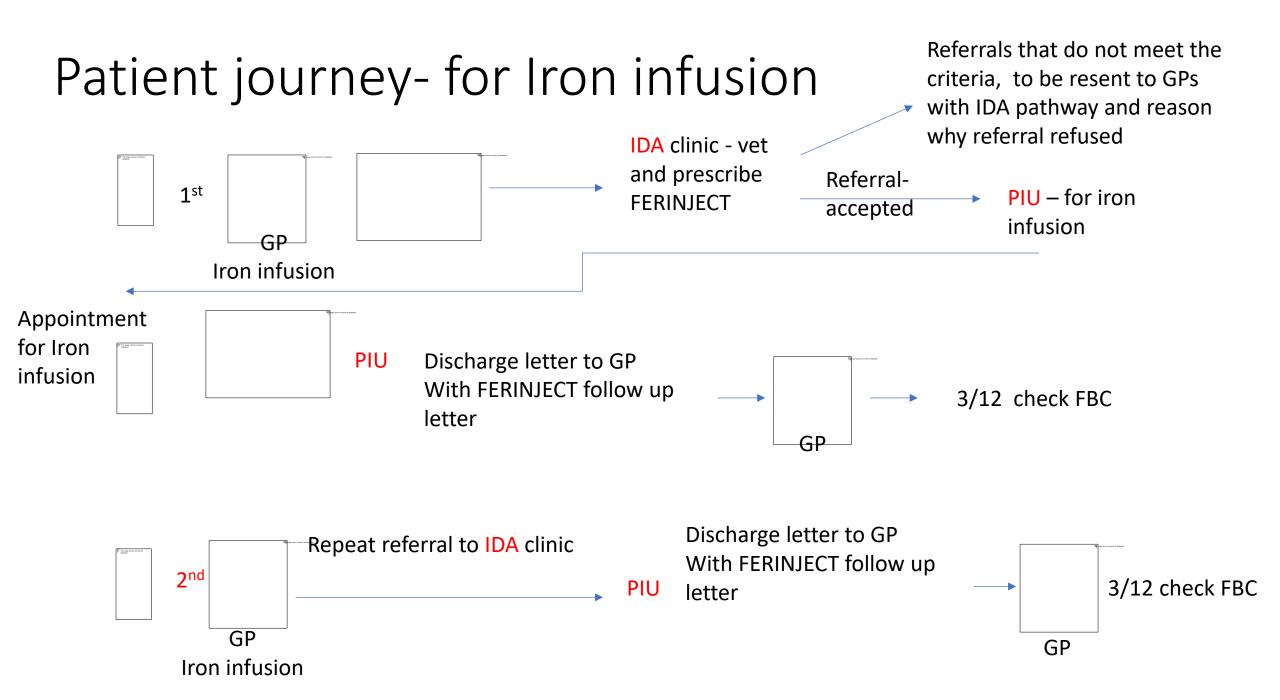




3rd line - IV Iron

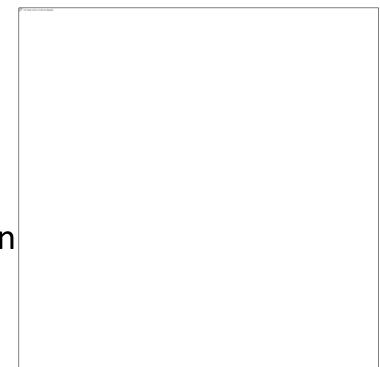
- If oral Fe ineffective/ not tolerated / CI
- Ferinject





Ferinject

- How its given
- What effect it has
- Side effects Ana/hyper/common/ rare
- IRT NOT TO TAKE FOR 5 days post infusion
- What follow up needed
- Hypophosphatemia ! = osteomalacia
- Questions- Hospital meds Mx tel number 01226 432857



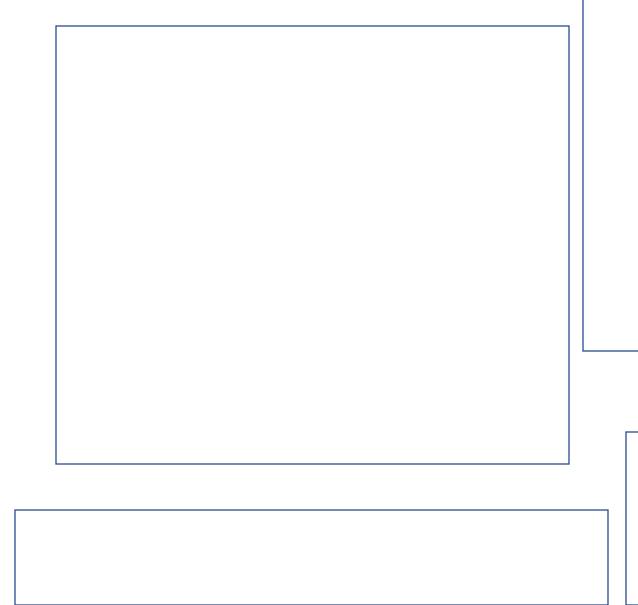
Patient & GP Ferinject leaflets

PIL- Ferinject

- What is Ferinject
- Why do we give it?
- When do we give it?
- Are there any risks?
- When should Ferinject not be given?
- How is the infusion given?
- Follow up?

Follow up

- Hb normalises with IRT (3 months extra IRT- post Hb normalisation)
- Majority of patents will have unexplained IDA
 - -ve BDE
 - No evidence of CD
 - No other symptoms
 - Complete sustained haematological response to IRT
- Periodic FBC measurement 3/12ly , then 6-12 mthly for 2-3 yrs
- NOT FERRITIN
- HOWEVER IDA recurs in minority 12-25%
- IF chronic unexplained diarrhoea/ wgt loss/ persistent elevated inflammatory markers / persistent- recurrent IDA rerefer



IRT - Iron replacement therapy- 10 questions

Q1. Ferrous fumarate (Galfer) and Ferrous sulphate (rarely Sytron) only IRT available for adult IDA in Barnsley primary care ? T/F

Q2. Diagnostic trial of Oral Iron for premenopausal women only? T/F

Q3. Daily recommended oral elemental iron

<mark>(50-100 mg) / (</mark>100-200 mg)?

Q4. bd/tds – which regime is most effective? Nil

Q5. Iron tablets are best taken daily ? T/F / ??

Q6. Iron MR tablets are better tolerated and should be tried if necessary ? T/F

Q7. Take IRT on an empty stomach or with food if side effects of oral Iron? T/F (70%)

Q8. Iron tabs are best be taken with orange juice as Vitamin C helps with Iron absorption ? T/F

Q9. Oral Iron tablet should be given for 3/12 in total ? T/F

Q10. The Rate of non compliance for IRT is about 25%? T/<mark>F</mark>

Different groups – any difference in Tx?

- NAID
- Young women
- Young men
- Elderly
- Special conditions
 - CKD
 - CHF
 - IBD
 - GI surgery

Special cases

- Mrs EG 31 TATT
- Hb 129
- Ferritin 12
- Is she anaemic?
- Would you treat her with Iron tablets ?

Norm	
Normal Hb	
Normal Ferritin	

Norm	IDA
Normal Hb	Low Hb
Normal Ferritin	Low ferritin

Non Anaemic Iron Deficiency/ isolated hypoferritinaemia

Norm	NAID	IDA
Normal Hb	Normal Hb	Low Hb
Normal Ferritin	Low ferritin	Low ferritin

Non Anaemic Iron Deficiency/ isolated hypoferritinaemia

Norm	NAID	IDA
Normal Hb	Normal Hb	Low Hb
Normal Ferritin	Low ferritin	Low ferritin
	>50% premenopausal !!! Men / postmenopausal women	

Non Anaemic Iron Deficiency/ isolated hypoferritinaemia

Norm	NAID	IDA
Normal Hb	Normal Hb	Low Hb
Normal Ferritin	Low ferritin	Low ferritin
	>50% premenopausal !!! Men / postmenopausal women	
	IRT – if symptomatic fatigue, mental quality of life / subjective cognitive function	

Special cases – young women

- Case
- Miss EM 18 yr old ... Tired Hb low, ferritin low , transferrin low
- What next?
- Coeliac screen ve
- Oral Iron 1 st line nausea
- 2nd line constipation /abdo pain
- Try alternate day doesn't help
- Rx Ferric maltol (Ferracru)
- Monitor FBC monthly -- once normal continue 3 months of IRT
- Check FBC 3/12 ly for a year

Special cases – young women and IDA ?

- Common- 1/10 HEALTHY YOUNG menstruating women
- GI pathology uncommon
- CD tests
- IDA clinic Endoscopy if
 - Non menstruating
 - RED flags / GI symptoms
 - FHx- two 1st degree relatives/ one 1st degree relative <50
 - Recurrent/ persistent IDA

Special case- young men

- Uncommon
- Treat it seriously
- GI pathology yield high
- Coeliac/ malabsorption



Special cases- the Elderly and IDA

- How does Anaemia effect the elderly ?
 - Physical performance
 - Cognitive function
 - Fraility
- How common is Anaemia in the elderly?
- > 50 % of nursing home residents !
- > 20% of 85 yr olds
- > 50% have Vit B12 / folic acid deficiency



Why IDA so common in the elderly?

- Chronic Disease eg CKD/CHF ferritin v transferrin
 - But still exclude another cause if possible
- Poor diet
- Decreased iron absorption
- Occult blood loss
- Medication eg aspirin and mucosal lesions



Special cases- the Elderly and IDA

- GI pathology yield higher
- CD serology sensitivity is low
- GI malignancy high
- DUAL pathology common
- Thus dual endoscopy and D2 biopsy
- Risks v benefits of inv
- Colonoscopy v CT colonography v colon capsule

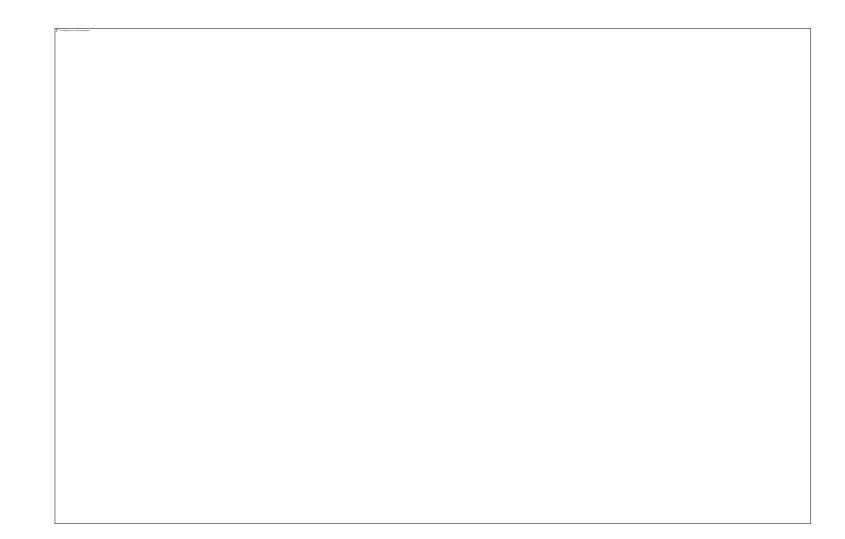


Colon Capsule Endoscopy

By Stacey Ward

What Is Colon Capsule Endoscopy?

- Colon capsule endoscopy (CCE) is a non-invasive technique for diagnostic imaging of the colon.
- $\boldsymbol{\cdot}$ It does not require air inflation or sedation
- $\boldsymbol{\cdot}$ allows minimally invasive and painless colonic evaluation



Indications when to consider colon capsule endoscopy

- When patient refuses colonoscopy and CTC.
- Patient not fit for colonoscopy (cardio/ respiratory medications).
- CTC is contraindicated or inconclusive.
- Low index of suspicion for cancers / polyps.
- Follow up of treatment for IBD.
- Abdominal pain if thought to be appropriate.

(Colon capsule is not a replacement of colonoscopy. Colonoscopy remains the gold standard investigation of the large bowel.)

COLON CAPSULE VERSUS CT COLONOGRAPHY

 In cases of incomplete colonoscopy, several radiological methods have been traditionally used, but more recent research has shown capsule endoscopy to be fairly accurate and of good exclusion value provided the prep is adequate and transit complete.

COLON CAPSULE VERSUS CT COLONOGRAPHY

100 Patients with incomplete colonoscopy underwent CTC and CCE.

- CCE detected 24.5% of patients with polyps >6mm
- CTC detected 12.2% of patients with polyps>6mm

This indicating a significant increase in sensitivity for lesions >6mm. There is a miss rate with CCE dependant on prep and transit and hence choosing the appropriate patient is important

Colon Capsule Endoscopy at BDGH.

- Currently performing up to 2 colon capsule endoscopy procedures per week. (Increased from approx. 20 per year since Covid 19)
- Patient are dated within 2 weeks of referrals.
- Colon Capsule Endoscopy procedures are reviewed and reported within 2 week of the patient having the procedure.
- Dedicated specialist nurse to council patient prior to procedures providing information and support.
- Support patient's through their procedure.

Proposed New Pathway

When to consider colon capsule endoscopy:

- Colonoscopy cancelled due to uncontrolled Blood pressure.
- Colonoscopy cancelled due to Tachycardia/ Bradycardia/ cardiac issues. (Capsule to be done if deemed appropriate and safe by the clinician.)
- Colonoscopy abandoned procedure due to difficult colon / patient pain.
- Colonoscopy abandoned due to poor prep and colonoscopy not available within 24hours. (Patient to remains fasted and further prep given).
- Patients refusing colonoscopy that don't require biopsies (This may help reduce demands on GA list)

Benefits

- Improve existing patient pathway.
- Reduce the number of patients having to be rebooked for colonoscopy.
- Help reduce endoscopy waiting times.
- Prevent patient's having to isolate again prior to procedure. Often taking time off work.
- Prevent patient having to retake bowel prep.

Special cases- the Elderly and IDA

Some no cause identified - then what?

- Oral iron long term
- if oral iron not tolerated then parentral iron

Special cases- CKD and IDA

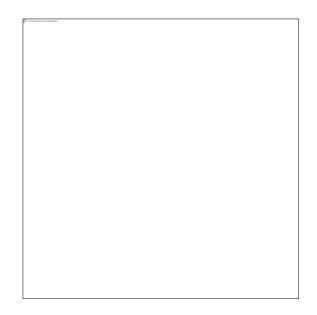
- COMPLEX!!!!!
- Anaemia risk if what GFR value?
- GFR< 60ml
- GFR < 30 mls!!!
- Functional AND
- Blood loss from dialysis/ phlebotomy
- Leave to nephrologist ③



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Special cases- CHF and IDA

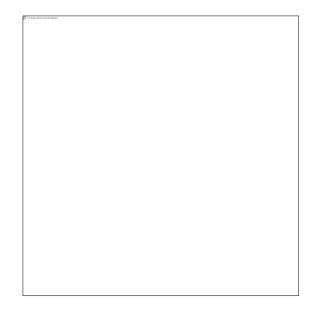
- 40-70% anaemic poor function/ poor QOL/ poor prognosis
- Multifactorial why?
- Malabsorption
- Malnutrition
- GI blood loss
- Chronic inflammation
- Liver inc hepcidin release



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Special cases- CHF and IDA

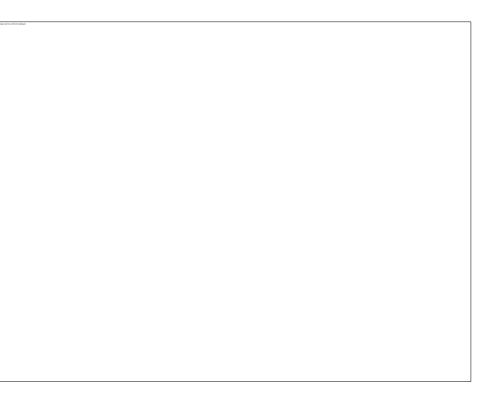
- IRT in CHF ? How?
- Avoid oral IRT in CHF- why?
 - Poor absorption secondary to gut oedema
 - Inc side effects
- Consider IV IRT sooner rather than later



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Special cases- IBD and IDA

- How many IBD patients IDA?
- 1/3 patients
- Many vit B12 and folate deficient as well
- Marrow suppression- chronic disease
- GI blood loss
- Decreased Iron absorption
 - bowel inflammation
 - systemic inflammation
 - small bowel involvement
 - small bowel surgery



Special cases-IBD and IDA

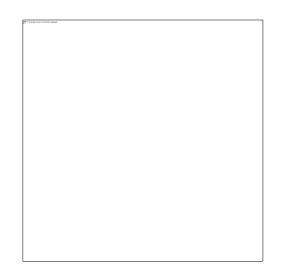
- THINK carefully about IRT
- Oral Iron no more than 100 mg elemental iron / day
- Recheck 3/12 ly even if inflammatory markers normal



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Special cases- GI surgery and IDA

- IDA develop over 10 yrs in some patients
- Partial gastrectomy can predispose to gastric cancer later in life
 - So don't blame IDA on surgery alone

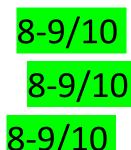


Where to find this extremely useful Barnsley IDA guidelines ?

BEST website

IDA questions/Answers

- How Common is IDA in premenopausal women ? 1/10
- How Common is IDA in nursing/residential care homes? > 50%
- To Diagnose anaemia you need to have low HB and low ferritin?
 T/F/??
- My confidence with DIAGNOSIS of IDA-
- My confidence with WHERE TO REFER my IDA patients
- My confidence with IRON REPLACEMENT THERAPY



Management of IDA – different groups?

- Young women \vee
- Young men \vee
- Elderly v
- Special conditions
 - CKD √
 - CHF $\sqrt{}$
 - IBD √
 - GI surgery V
- What is NAID? $\boldsymbol{\mathsf{V}}$

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- 1. Confirmation of IDA
- 2. Timely access to appropriate investigations
- 3. Ensure appropriate IRT

4. Strong Clinical Leadership

Barnsley IDA pathway 2019-2021

- Dr.Kapur Gastro Consultant *
- Dr.Cuttings Haematology Consultant
- Dr.Chan Haematology Consultant
- Dr.Ghani
- Michelle *
- Stacey IDA clinic *
- Katherine Meds Mx *
- Ruth Meds Mx
- Chris Lawson- meds Mx
- Gillian- Hospital Mx
- Vickey- PIU
- Katherine- GI service manager
- GPs- Dr.Chilikuri, Dr.Birinder, Dr. Ahmed
- + more

IDA is NOT and Orphan in Barnsley