Content from /en/blog/galdesyremalabsorption/

Bile acid malabsorption (BAM): the overlooked cause of chronic diarrhoea

Bile acid malabsorption (BAM) is a common but heavily under-diagnosed cause of chronic diarrhoea. It is present in **up to 30 %** of patients otherwise labelled with diarrhoea-predominant irritable bowel syndrome (IBS-D) [1]. BAM occurs when bile acids from the gallbladder are not properly reabsorbed in the distal ileum and instead enter the colon, where they stimulate water and electrolyte secretion → watery diarrhoea.

Three types

Type	Cause	Share
Type 1	Ileal disease: Crohn's, ileal resection, radiation	~30 %

Type	Cause	Share
Type 2	**Primary** - defective FGF19 feedback	~50 %
Type 3	Secondary: cholecystectomy, SIBO, coeliac, chronic pancreatitis	~20 %

Symptoms

- **Watery, yellow-green diarrhoea** - often 5-10 times daily
- **Urgent need to defecate** and fear of incontinence
- **Nocturnal diarrhoea** - atypical for IBS, suspicious for BAM or IBD
- **Cramps, bloating, flatulence**
- **Weight loss** and fat-soluble vitamin deficiencies in severe disease
- Often **worse after fatty meals**

Key clinical pointer: Up to **50 % of patients** after cholecystectomy develop chronic diarrhoea - a large proportion have BAM.

Diagnosis

1. **SeHCAT scan** - gold standard. Measures retention of a radiolabelled bile acid analogue after 7 days. <15 % retention = BAM, <5 % = severe BAM [2].
2. **Serum C4 (7α-hydroxy-4-cholesten-3-one)** - indirect marker of bile acid synthesis; raised in BAM.
3. **Faecal bile acids** (48-hour collection) - alternative if SeHCAT unavailable.
4. **Empirical treatment trial** with bile acid binders - both diagnostic and therapeutic in patients with high clinical suspicion.

Treatment

Bile acid binders (first-line):

- **Cholestyramine** 4-16 g daily - cheap, but unpleasant taste and drug interactions.

- **Colesevelam** 1,875-3,750 mg daily - better tolerated.
- **Colestipol** - alternative.

Take at least **4 hours apart** from other medication (also binds vitamins, levothyroxine, warfarin).

Dietary advice:

- Reduce fat to <40 g/day in acute phase
- Avoid alcohol
- Supplement fat-soluble vitamins (A, D, E, K) in severe disease

Treat underlying cause (type 1 and 3) - IBD control, SIBO eradication, coeliac diet.

Why is it missed?

- SeHCAT is not universally available
- Symptoms mimic IBS-D
- Many patients are diagnosed only after 5+ years
- Empirical treatment trials are often skipped in primary care [3]

Treatment at Kirurgen.dk

We investigate chronic diarrhoea with colonoscopy, gastroscopy, coeliac screening and faecal calprotectin - and refer for SeHCAT when BAM is suspected. See also: Chronic diarrhoea, IBS, SIBO, Microscopic colitis.

References

1. Wedlake L, A'Hern R, Russell D, et al. *Systematic review: the prevalence of idiopathic bile acid malabsorption as diagnosed by SeHCAT scanning in patients with diarrhoea-predominant irritable bowel syndrome.* Aliment Pharmacol Ther 2009;30(7):707-17.
2. Vijayvargiya P, Camilleri M, Shin A, Saenger A. *Methods for diagnosis of bile acid malabsorption in clinical practice.* Clin Gastroenterol Hepatol 2013;11(10):1232-9.

3. BSG guidelines on the management of functional bowel disorders. *Gut* 2021;70:1214-40.