

PHARMACOLOGY



MISCELLANY



An Eclectic Selection of Drug-Related Snippets

- **Metoclopramide** can cause methaemoglobinæmia in adults, not just babies.
- There's a dose-dependent risk of AF with **omega-3-acid ethyl ester** medication - stop them if patient develops AF.
- However these are **not** the same as natural fish oil (triglyceride) **omega-3 dietary supplements**.
- In acute attacks of **gout**, **colchicine** can be carried on for six days at 500 micrograms BD (it's better tolerated taken BD), and some say that avoiding dairy produce whilst taking it reduces diarrhoea. Meanwhile, for **gout prophylaxis**, **Febuxostat** can be used if allopurinol is ineffective or not tolerated, but it does carry a black box warning for CV risks: avoid in patients with IHD or CCF.
- **Candesartan** can be used off-licence for migraine prophylaxis. It's taken BD, starting at 2mg BD and creeping up to 8mg BD with dose increase steps of 2mg /2 weeks.
- **Aspirin** (for CV indications) now gets continued in patients with upper GI bleeds (recent UK guidelines)
- **Loop diuretics** can cause thiamine deficiency; **ranolazine** can cause hyponatraemia; don't mix **trimethoprim** and **methotrexate**; **tramadol** increases the anticoagulant effect of **warfarin** (and reduces the seizure threshold); and don't use **laxido** with **starch-based thickeners**.
- **Ketamine nebs** at 0.75mg/kg is as effective as 0.3mg/kg IV for pain relief in a 150-patient double blinded RCT. Needs breath-activated nebs.though!
- Moderate steroid doses of 60mg prednisolone for 5/7 (followed by a 5/7 taper) are non-inferior to traditional very high-dose steroids in **idiopathic sudden sensorineural hearing loss**.
- The **fluoroquinolone side effects** tale of woe continues: not only can they cause neurocognitive side effects centrally (e.g. confusion, depression and even encephalopathy causing psychosis) but also peripheral neuropathies, serotonin syndrome & many more!
- **Leflunamide** - an immunosuppressant used in rheumatology - has a **very long-lasting active metabolite**. A washout procedure (using colestyramine or activated charcoal) is required if severe side effects occur, before conception, or if switching DMARDs.
- **Carbocysteine** (loved in some parts of the UK, loathed in others) dose is meant to be titrated down when the patient is well - and stopped if it doesn't help. There's also a once-daily option - **NACSYS®** to reduce tablet burden.
- **Immune Checkpoint Inhibitors** carry a risk of **pneumonitis**, especially in lung cancer treatment. Typically patients may develop fever, a (dry) cough, SOB and chest pain many months into treatment: don't assume it's a chest infection or C19! ICIs can do all sorts of other autoimmune mischief, too.



An Emporium of Links for Further Reading

Sensorineural hearing loss and steroid dose

To read about the research on steroid dose choice: <https://www.jwatch.org/na56977/2024/01/16/steroid-dosing-idiopathic-sudden-sensorineural-hearing>

For an older but cracking overview of the topic: <https://www.ncbi.nlm.nih.gov/books/NBK565860/>

Metoclopramide and methaemoglobinæmia

This 270-subject study in a Turkish ED is fascinating – one wonders how many of these we are missing (but presumably it very rarely matters clinically) - <https://turkjemergmed.com/abstract/263> and link to full text from there.

Omega 3- acid ethyl esters and AF:

The official UK warning: <https://www.gov.uk/drug-safety-update/omega-3-acid-ethyl-ester-medicines-omacor-slash-teromeg-1000mg-capsules-dose-dependent-increased-risk-of-atrial-fibrillation-in-patients-with-established-cardiovascular-diseases-or-cardiovascular-risk-factors>

And an explanation of why natural fish-oil Omega-3 supplements are different: <https://omegamount.com/what-are-omega-3-ethyl-esters/#:~:text=To%20start%20here%20is%20one,synthesized%20from%20the%20triglyceride%20form.>

Fluoroquinolones side effects:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10957204/>

Gout

<https://handbook.ggcmedicines.org.uk/guidelines/musculoskeletal-and-joint-disease/management-of-gout/>

Migraine and candesartan

<https://www.torbayandsouthdevon.nhs.uk/uploads/25790.pdf>

Aspirin and GI bleeds

<https://www.bsg.org.uk/getattachment/156155c8-338f-48e6-9c35-904415f706fa/figastro-2019-101395.pdf?lang=en-US>

Loop diuretics and thiamine deficiency:

[https://www.amjmed.com/article/S0002-9343\(16\)30171-1/pdf#:~:text=Loop%20diuretics%20commonly%20are%20used,patients%20with%20systolic%20heart%20failure.](https://www.amjmed.com/article/S0002-9343(16)30171-1/pdf#:~:text=Loop%20diuretics%20commonly%20are%20used,patients%20with%20systolic%20heart%20failure.)

But isn't likely common: <https://www.sciencedirect.com/science/article/abs/pii/S0261561416000686>

Ranolazine:

<https://www.ncbi.nlm.nih.gov/books/NBK507828/>

Ketamine nebs:

<https://www.stemlynsblog.org/jc-is-nebulised-ketamine-an-option-in-the-ed/> about this original paper: <https://www.sciencedirect.com/science/article/abs/pii/S0196064424001719>

Leflunamide:

https://www.google.com/url?sa=t&source=web&rct=j&copi=89978449&url=https://www.england.nhs.uk/wp-content/uploads/2022/07/B1621_xiii_leflunomide-for-patients-within-adult-services.docx&ved=2ahUKEwiujq_5vq6IAxUwSUEAHTRsANCQFnoECA8QAQ&usg=AOvVaw0-LcOURU4W4aUjiuMtOA43

also <https://medsafe.govt.nz/profs/PUArticles/LeflunomideJune2011.htm>

Carbocysteine and mucolytic meds

<https://nwlmcs.org/files/documents/PT%202024%20Carbocisteine%20and%20its%20use%20as%20a%20mucolytic.pdf>

<https://www.ncbi.nlm.nih.gov/books/NBK559163/>

Immune Checkpoint Inhibitors

Fabulous Canadian resource: <https://www.cancercareontario.ca/sites/ccocancercare/files/guidelines/full/ImmuneCheckpointInhibitor.pdf>

And an overview with an EM perspective from the EMJ (open access) - <https://emj.bmj.com/content/36/6/369>