LOTHIAN PRESCRIBING BULLETIN

Supporting prescribing excellence - informing colleagues in primary and secondary care

In this issue …

Issue No. 100

November 2019

Decimating illness – our top 10

The editorial team are very excited to be producing the 100th issue of the LPB, and have been thinking of articles related to *100*. We came up with lots of ideas, one of the topics was how the use of drugs has changed over the last 100 years. That then got us thinking about the top 10 most amazing drugs in the last 100 years. There is no science behind this list, and you may well have a different opinion, but here is the editorial team's list of 10. Where would medicine be without these drugs?

chlorpromazine	First discovered in 1950. It was the first official antipsychotic drug and led to a turning point in psychiatry.
contraceptive pill	Steroid hormones were first synthesised in the 1930s. There was no commercial interest in developing them until the 1960s. It was 1961 when Enoch Powell, the then Minister of Health, announced that they could be prescribed on the NHS for a subsidised price of 2 shillings per month.
furosemide	It was 1964 before furosemide was available. It is on the WHO List of Essential Medicines, which lists the most effective and safe medicines needed in a health system.
HIV medication	Zidovudine was the first medication for HIV treatment in 1986. By 1996 the combination of three drugs was common clinical practice.
insulin	Insulin was discovered in 1922. Prior to this diabetes was known as 'sugar sickness' and patients were managed by a near starvation diet.
penicillins	Alexander Fleming first discovered penicillin on 28 September 1928. It wasn't until the 1940s that it went into mass production.
proton pump inhibitors	The first PPI was omeprazole and it was first produced in 1979. It wasn't until 1988 that it was marketed in the UK under the brand name Losec.
salbutamol	It was discovered in 1966 and launched as a medicine in 1969. It was considered to be a banned stimulant at the 1972 Munich Olympic games.
statins	The first compounds were identified in the 1970s, but it was the 1990s before they were in widespread use.
warfarin	Warfarin was first patented in 1941. It was approved for medical use in 1954.

Our favourite article titles (the editorial team loves a pun)

Issue No 98 – July 2019	Would I Li+ to you - the need to know about Lithium monitoring
Issue No 91 – May 2018	~~Standardised~~ Personalised sugar control strategy
Issue No 77 – January 2016	Taking medicines with food – are we making a meal of it?
Issue No 66 – March 2014	For urine formation – Three principles of UTI management
Issue No 55 – May 2012	Avoid a sticky situation – use lidocaine plaster properly
Issue No 53 – January 2012	Wake up to the melatonin issue
Issue No 52 – November 2011	Putting up resistance to antibiotic prescribing
Issue No 37 – Feb/Mar 2009	The unfortunate case of the toddler, the ointment and the ferrets
Issue No 21 - Jun/Jul 2006	Using eGFR - is the information filtering through?
Issue No 18 - Dec 2005/Jan 2006	Mistletoe just for Kiss-mas?

Two warnings from MHRA

One – GLP-1 receptor agonists

Increased risk of diabetic ketoacidosis (DKA) with glucagon-like peptide-1 (GLP-1) receptor agonists.[1]

An EU review concluded that cases of serious and life-threatening DKA occurred on rapid reduction or discontinuation of insulin when a GLP-1 receptor agonist was commenced. Semaglutide was not subject to the review, however, the theoretical risk of DKA cannot be excluded.

GLP-1 receptor agonists such as exenatide, liraglutide and dulaglutide act by stimulating insulin secretion from the pancreas in a glucose-dependent manner as well as slowing gastric emptying and suppressing glucagon secretion. When a GLP-1 is commenced the insulin dose should be reduced in a stepwise manner along with blood glucose self-monitoring.

Nausea and vomiting are known side effects of GLP-1 receptor agonists but they are also symptoms of DKA. The presence of these symptoms, especially within the first two weeks of initiating treatment, should be taken seriously. Patients should be advised about the signs and symptoms of DKA and the need to seek urgent medical attention.

Two - febuxostat

Increased risk of death in patients taking febuxostat who have pre-existing cardiovascular disease.[2]

A recent large North American study (CARES) of patients with pre-existing major cardiovascular disease on treatment for gout showed an increased risk of cardiovascular deaths and all-cause mortality in the group taking febuxostat. Healthcare professionals are being advised to avoid febuxostat in patients with major cardiovascular disease. The summary of product characteristics and patient information leaflet are being updated.

The results of the European phase 4 FAST study evaluating the cardiovascular safety of febuxostat are due in 2020.

Febuxostat is an inhibitor of xanthine oxidase and reduces the formation of uric acid. It is indicated for the treatment of conditions with hyperuricaemia.

References
1. Drug Safety Update vol 12, issue 11: June 2019: 2
2. Drug Safety Update vol 12, issue 12: July 2019: 1

Please remember to report any suspected adverse reaction for these medications via the Yellow Card Scheme

Trim those drug interactions

Trimethoprim is recommended empirically to treat lower urinary tract infections. **Co-trimoxazole** contains trimethoprim and sulfamethoxazole. Co-trimoxazole is the choice for intravenous to oral step down for intra-abdominal infections, acute cholecystitis and ascending cholangitis, as well as an empirical choice for Gram negative cover (E. coli) in some situations. Additionally this choice is associated with less risk of *Clostridioides* difficile (formerly *Clostridium* difficile) infection in adults.

Before you prescribe trimethoprim or co-trimoxazole — THINK:

- **Renal function**

	eGFR 15-30mL/minutes/m^3	eGFR < 15mL/minutes/m^3
trimethoprim[1]	Reduce to half of standard dose after 3 days	Prescribe half of standard dose
co-trimoxazole[1]	Prescribe half of standard dose	Avoid

- **Ensure adequate hydration**
- **Caution when prescribing.** Check any interactions. Some of the more common ones you may see are**:**
  - Avoid co-prescribing with **methotrexate** as increases the risk of toxicity. If co-trimoxazole/trimethoprim are the only option, then monitor for signs of toxicity such as liver dysfunction, thrombocytopenia, agranulocytosis and myelosuppression. Advise patients to report sore throat, bleeding, bruising or mouth ulcers.
  - Trimethoprim and co-trimoxazole can increase **digoxin** and **phenytoin** levels. If co-prescribing is necessary monitor levels of **digoxin** and **phenytoin** and look for signs of toxicity.
  - The risk of high potassium is greater if the patient is on **ACE inhibitors**, **angiotensin receptors blockers** or **potassium sparing diuretics**. For a short course (ie. three to five days' duration) monitor renal function. If a more prolonged course is necessary then an alternative should be sought.
  - Co-trimoxazole increases INR with **warfarin** - monitor INR closely.

Consult Summary of Product Characteristics (SPC) for full list of interactions and cautions: www.medicines.org.uk

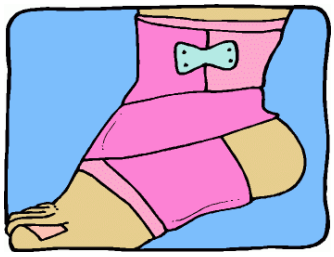
Reference
1. www.medicinescomplete.com

With special thanks to Esperanza Palenzuela, Carol Philip and Lesley Macher

Mepore® - no more

The Medicines Management Team recently received a query on Mepore® dressings. They are not in the LJF and it was unclear what would be an appropriate formulary equivalent.

All wounds require a dressing which promotes a moist wound healing environment, reduces the risk of infection and stays in place for up to seven days to improve cost-effectiveness.



Mepore® dressings have a perforated backing and are 'basic wound contact dressings.' They do not meet the criteria for a dressing which maintains a moist environment and provide a barrier to infection.

Tegaderm® Plus Pad fits this criteria. It has a central slim pad and a film backing. These vapour-permeable adhesive film dressings are used for clean wounds such as postoperative wounds or low exuding and relatively shallow wounds.

Tegaderm® Plus Pad ensures the wound is kept moist and the film backing provides a barrier to potential infection as well as making it shower proof. It can remain in place for several days making it more cost-effective.

(Other options are currently being evaluated to increase the range of sizes and cost-effectiveness for smaller wounds.)

Please see LJF Wound Section (e) Vapour-permeable films and membranes for full information.

With special thanks to Ruth Ropper, Lead Nurse Tissue Viability and Claire Stoddart, Prescribing Support Pharmacy Technician

Straight to the point - reducing vaccines wastage

Did you know that last year NHS Lothian had a significant wastage of vaccines in the primary care setting due to cold chain breaks? Around half the cold chain breaks were classed as preventable. For example, leaving the fridge door open, leaving deliveries out of the fridge, not investigating out-of-range temperatures promptly and overstocking the fridge. Here are three examples of vaccines and their cost:

Bexsero – Meningococcal Group B vaccine
A box of 10 costs **£750***

Prevenar 13 Pneumococcal Conjugate vaccine
A box of 10 costs **£491***

Zostavax Live Zoster vaccine
A single vaccine costs **£99.96***

*All prices quoted are taken from the current British National Formulary

To avoid overstocking:

- Make smaller more frequent orders to minimise stock holding.
- Hold no more than two weeks' stock at any time. Note that this may be reduced to one week during flu season when stock holding is at capacity.
- If you have more than one fridge available, consider spreading the storage of high cost items between them so if one fails then the risk and cost of potential wastage is reduced.

Further information about vaccine storage can be found on the NHS Lothian cold chain page.

With special thanks to Mandy Canning, Specialist Pharmacist Technician, Royal Edinburgh Hospital

LPB... the facts... did you know?

The original prescribing bulletin 'the purple sheet' as it was referred to, which began in 1992, evolved into LPB with the first issue in March 2003.

The 100th edition of the purple prescribing bulletin was in November 2001 and was celebrated by designing a new layout, whilst retaining recognisable features such as the Rx logo but in this 100th edition of the LPB we are removing the Rx logo!

There have been 100 issues in 16 years

The first issue had 4 pages 1832 words and 4 articles...

Dr Sara Hornibrook won a Hewlett-Packard iPAQ Pocket PC in a competition run in March 2004!

2012 saw the first LJF Calendar introduced

There have been 15 articles on Prescribing Indicators

There are currently 11 members on the editorial team. For the first issue there were 9 members

...the 99th issue had 4 pages 2074 words and 7 articles

There have been 3 meetings for every issue

Including supplements there have been over 670 LPB articles written

Since 2003 the editorial team has seen 2 pharmacologists, 4 consultants, 6 GPs, 9 administrators and 28 pharmacists

Paper-light? ...prior to the LJF website, there were well over 3500 paper copies of LPBs printed each issue, this is now reduced to just over 1000

Reminder about shingles vaccine 2019/20

The shingles vaccination programme was introduced in Scotland in 2013. Each year since then has involved the routine vaccination of people aged 70 years old and catch up for those aged 71-79 years old previously unvaccinated. Patients aged 80 and over are not eligible.
Please remember the shingles vaccine contains a live attenuated virus and is contraindicated in some patients (e.g. immunosuppressed).

Reminder about adult flu vaccine 2019/20

Routine vaccination is for all 65+ year olds and those aged 18-65 years in the 'at risk' category. All eligible adults should be offered the cell based Quadrivalent Inactivated Vaccine (QIVc) (Flucelvax Tetra®). As cell based QIVc is not grown in eggs it is suitable for patients with an egg allergy.
The egg based Quadrivalent Inactivated Vaccine (QIVe) is being used for routine vaccination of healthcare workers. The QIVc vaccine can be offered to healthcare workers with an egg allergy.

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