Polypharmacy and older people in care homes – implications for oral health

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Polypharmacy

- Definition:
  - When a patient take 5 or more medicines
- Polypharmacy not necessarily a bad thing
  - Inappropriate polypharmacy vs.
  - Appropriate polypharmacy

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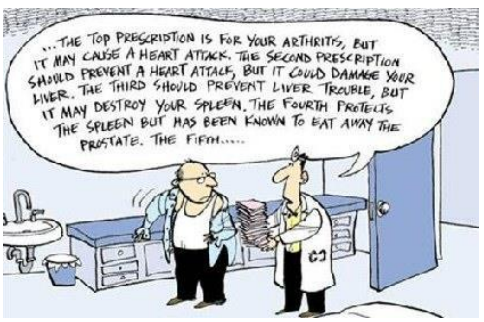

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Polypharmacy - a prescribing challenge

- Care home patients in England take an average of 8 medicines
  - 69% of these patients have had one or more prescribing error
- Increases the risk of
  - drug interactions
  - adverse reactions
- May affect compliance.
- Additional over-the-counter medicines increase the potential to cause harm

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Medication Without Harm: WHO's Third Global Patient Safety Challenge

- Goal - to reduce the level of severe, avoidable harm related to medications by 50% over 5 years, globally
- Three priority target areas:
  - high-risk situations
  - **Polypharmacy**
  - transitions of care
- Four domains:
  - health care professionals' behaviour
  - systems and practices of medication
  - medicines
  - patients and the public.

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Elderly patients – prescribing medicines

- The most important effect of age is **reduced renal clearance.**
- Many elderly patients *excrete drugs slowly*, and are *highly susceptible to nephrotoxic drugs*.
- Acute illness can lead to rapid reduction in renal clearance, especially if accompanied by dehydration.
- The hepatic metabolism of lipid soluble drugs is reduced in elderly patients because there is a reduction in liver volume. This is important for drugs with a narrow therapeutic window.

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Managing medicines in care homes

NICE Social care guideline [SC1] March 2014

- Prescribe using clear instructions on how a medicine should be used including;
  - how long the resident is expected to need the medicine
  - how long the medicine will take to work and what it has been prescribed for (if important)
  - Avoid using 'as directed'
- Record prescribing in the practice patient record and resident care record
- Provide any extra details the resident and/or care home staff may need about how the medicine should be taken
- When prescribing variable dose and 'when required' medicine(s) note in the resident's care record the instructions for:
  - when and how to take or use the medicine
  - the effect they expect the medicine to have
  - include dosage instructions on the prescription so that this can be included on the medicine's label
  - liaise with care home staff to see how often the resident has had the medicine and how well it has worked.
- Care home staff (registered nurses and social care practitioners working in care homes) should update records of medicines administration to contain accurate information about any changes to medicines

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GP prescribing of dental items


NHS PrescQIPP

Medicines for dental conditions on FP10 (DROP-List)

Recommendations

Background

Rationale for discontinuing prescribing medicines for dental conditions on FP10


NHS Pan Mersey Area Prescribing Committee

Guidance for Dental Prescribing in Primary Care

Pan Mersey APC agrees a policy to support rational recommendations for treatment of dental conditions. It is the recommendation of Pan Mersey APC that:

Background:

BNF changes

Online via MedicinesComplete

- https://www.medicinescomplete.com/mc/
- Free access to all NHS employees
  - Automatically via N3
  - Register for access
  - Open Athens

BNF App

Amoxicillin dose change from *BNF 68 (September 2014)*

- **Dose** by mouth
  - Adult, 500 mg every 8 hours, dose doubled in severe infection;
  - Child 1 month–1 year 125 mg 3 times daily; increased if necessary up to 30 mg/kg 3 times daily
  - Child 1–5 years 250 mg 3 times daily; increased if necessary up to 30 mg/kg 3 times daily
  - Child 5–12 years 500 mg 3 times daily; increased if necessary up to 30 mg/kg (max. 1 g) 3 times daily
  - Child 12–18 years 500 mg 3 times daily; in severe infection 1 g 3 times daily

[BNF 65 – dose for adults and children over 5 years, 250mg every 8 hours, dose doubled in severe infections

BNF 66 – adult dose increased, BNF 68 paediatric doses increased]

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Metronidazole dose change

- **FGDP** - Antimicrobial Prescribing For General Dental Practitioners (28/6/16)
- **BNF 72** – *online* (Dec/Jan 2016/17)
  - **Adult**
    - 400 mg every 8 hours for 3–7 days.
  - **Child 1–2 years**
    - 50 mg every 8 hours for 3–7 days.
  - **Child 3–6 years**
    - 100 mg every 12 hours for 3–7 days.
  - **Child 7–9 years**
    - 100 mg every 8 hours for 3–7 days.
  - **Child 10–17 years**
    - 200–250 mg every 8 hours for 3–7 days.

NOTE: new doses are **NOT** in paper **BNF 72**

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BNF – nystatin dose update

- **From MARCH 2017**
  - Dose 1ml (100,000 units 4 times a day)
- **'Update to nystatin dose in BNF and BNF for Children'**
  - The nystatin dose for oral candidiasis in the BNF has historically reflected the posology recommendations in the Nystan® Summary of Product Characteristics (SPC). Following discussions with the MHRA the dose has been updated (live in digital versions of the BNF from March 2017) and now reflects current posology recommendations for generic nystatin products.

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Nystatin dose BNF 72 (September 2016)

- **Oral and perioral fungal infections**
- ADULT and CHILD over 2 years
  - 400 000–600 000 units 4 times daily (half dose in each side of the mouth);
- INFANT and CHILD 1 month–2 years,
  - 200 000 units 4 times daily (half dose in each side of the mouth)

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Nystatin dose – BNF 73 and online March 2017

- **Oral candidiasis**
- **Child**
  - 100 000 units 4 times a day usually for 7 days, and continued for 48 hours after lesions have resolved.
- **Adult**
  - 100 000 units 4 times a day usually for 7 days, and continued for 48 hours after lesions have resolved.

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Patient Specific Directions (PSDs)

- Written instructions, signed by a doctor, dentist, or non-medical prescriber for a medicine to be supplied and/or administered to a named patient after the prescriber has assessed the patient on an individual basis.
- Writing a PSD is a form of prescribing.

Patient Group Directions (PGDs)

- Written instructions for the supply or administration of medicines to groups of patients who may not be individually identified before presentation for treatment.
- Working under a PGD is NOT prescribing

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DCPs & Patient Group Directions (PGDs)

- When working under a PGD named hygienists and therapists are able to
  - Independently choose and administer medicines e.g. local anaesthetics
  - Issue named medicines directly to patients e.g. fluoride preparations including Duraphat toothpaste
- All PoM supplies must be labelled as dispensed medicines

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PGDs – when are they needed?

- In medicines legislation (The Human Medicines Regulation 2012, The Misuse of Drugs Regulations 2001) PGDs are required for:
  - the administration of all parenteral Prescription only Medicines (PoMs)
  - the administration of midazolam (a controlled drug)
  - the supply directly to patients of all PoM and Pharmacy (P) medicines
- Medicines legislation does not require PGDs for:
  - administration of non-parenteral PoMs
  - administration of P or General Sales List (GSL) medicines
  - supply of GSL meds directly to a patient.

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Direct Access

- PGDs can be used by dental therapists and dental hygienists treating patients via Direct Access
- DCPs do not have prescribing rights and can only use medicines if they have been prescribed by a dentist OR they are working under a PGD.
- In a Direct Access service
  - DCPs MUST use PGDs to administer LAs and midazolam if required in an emergency
  - DCPs MUST use PGDs to issue PoM and Pharmacy Medicines e.g. Difflam mouthwash, chlorhexidine gel, Duraphat
  - Administration of non-parenteral PoMs and Pharmacy Medicines does not require a PDG BUT use of protocols is strongly recommended
- DCPs CANNOT independently order medicines (PoM and P), only dentists may order medicines

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Duraphat toothpaste

Prescription only Medicine

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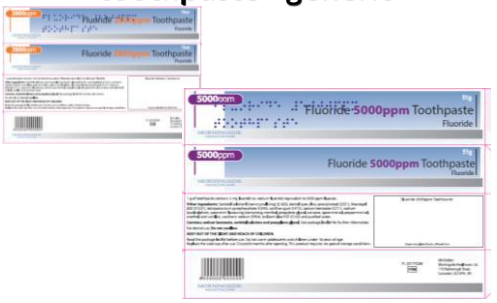
High strength sodium fluoride toothpaste - generic



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Prescribing high strength fluoride toothpaste

- DPF
  - *Sodium Fluoride Toothpaste 0.619%*
  - *Sodium Fluoride Toothpaste 1.1%*
    - Pharmacist may issue Duraphat OR generic
  - *Sodium Fluoride Toothpaste 1.1% (Duraphat)*
    - Pharmacist must issue Duraphat
- Colgate 'stamp'
  - 'Colgate Duraphat 5000ppm'
    - Pharmacist must issue Duraphat

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Dose amendments in elderly patients

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Prescribing in the elderly - topical fluoride

- **Duraphat 50 mg/ml Dental Suspension**
- **Duraphat 5000 ppm Fluoride Toothpaste**
  - **Elderly**
    - No dose adjustment is necessary
  - **Renal impairment**
    - No dose adjustment is necessary

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Prescribing in the elderly - Amoxicillin

- **Elderly**
  - No dose adjustment is considered necessary.
- **Renal impairment**

GRF (ml/min)	Adults and children ≥ 40 kg	Children < 40 kg #
greater than 30	no adjustment necessary	no adjustment necessary
10 to 30	maximum 500 mg twice daily	15 mg/kg given twice daily (maximum 500 mg twice daily)
less than10	maximum 500 mg/day	15 mg/kg given as a single daily dose (maximum 500 mg)
# In the majority of cases, parenteral therapy is preferred.		

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Prescribing in the elderly - Metronidazole

- **Elderly**
  - No dose adjustment is considered necessary
- **Renal impairment**
  - No dose adjustment is considered necessary

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Prescribing in the elderly - Erythromycin

- **Elderly**
  - No dose adjustment is considered necessary
- **Renal impairment**
  - No dose adjustment is considered necessary

Prescribing in the elderly - Clarithromycin

- **Elderly**
  - As for adults.
- **Renal impairment**
  - Dosage adjustments are not usually required except in patients with severe renal impairment (creatinine clearance < 30 ml/min)
  - If adjustment is necessary, the total daily dosage should be reduced by half, e.g. 250 mg once daily or 250 mg twice daily in more severe infections. Treatment should not be continued beyond 14 days in these patients

Prescribing in the elderly - local anaesthetics

- **Lidocaine (Lignospan Special)**
  - No specific dosage adjustment suggested for elderly patients
  - Tolerance to elevated blood levels varies with the status of the patient, debilitated, elderly patients, acutely ill patients, and children should be given reduced doses commensurate with their age and physical condition
- **Lidocaine (Xylocaine)**
  - Children and elderly or debilitated patients require smaller doses.

Prescribing in the elderly - local anaesthetics

- **Lidocaine (Xylestesin)**
- Elderly population
  - Increased plasma levels can occur in older patients due to diminished metabolic processes and reduced distribution volume. Risk is increased after repeated administration. Reduce doses, taking into consideration any cardiac or liver disease.
- Renal impairment
  - Lidocaine and its metabolites are mainly eliminated in urine. Lower doses of lidocaine may be required in patients with severe renal dysfunction due to prolonged effects and systemic accumulation.

Prescribing in the elderly - local anaesthetics

- Articaine (Septanest 1:100,000)
  - No dosing restrictions listed in the prescribing information for elderly patients or those with renal impairment

Pain and analgesics

Pain and analgesics

- Most mild to moderate dental pain and inflammation is effectively relieved by NSAIDs (BNF Chapter 4, section 6)
- NSAIDs prescribable for NHS patients
  - Ibuprofen
  - Diclofenac
  - Aspirin
- Paracetamol has analgesic and antipyretic action but no anti-inflammatory effect
- [Dihydrocodeine – the only opioid analgesic on the DPF list.]

NSAIDs in elderly patients – BNF advice

- Bleeding associated with aspirin and other NSAIDs is more common in the elderly who are more likely to have a fatal or serious outcome.
- NSAIDs are a special hazard in patients with cardiac disease or renal impairment which put older patients at particular risk.
- Owing to the increased susceptibility of the elderly to the side-effects of NSAIDs recommendations are:
  - a low-dose NSAID (e.g. ibuprofen up to 1.2 g daily) may be given
  - for pain relief when either drug is inadequate, paracetamol in a full dose plus a low-dose NSAID may be given
  - if necessary, the NSAID dose can be increased or an opioid analgesic given with paracetamol
- Prophylaxis of NSAID-induced peptic ulcers may be required if continued NSAID treatment is necessary

Ibuprofen

- Dose
  - GSL/ P packs
    - 200mg - 400mg up to three times daily.
    - Maximum 1200mg daily
  - PoM
    - 1200mg – 1800mg daily in 3-4 divided doses
    - Maximum 2400mg daily for acute conditions
- Take with or after food
- N.B. available as a P medicine with codeine or paracetamol
  - ibuprofen 200mg + codeine 12.8mg
  - Ibuprofen 200mg + paracetamol 500mg

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Diclofenac

- Dose
  - PoM
    - 75mg – 150mg daily in 2 or 3 divided doses
    - Maximum 150mg daily
- Take with or after food

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Diclofenac June 2013

- Diclofenac is now contraindicated in patients with established:
  - ischaemic heart disease
  - peripheral arterial disease
  - cerebrovascular disease
  - congestive heart failure (New York Heart Association [NYHA] classification II–IV)
- Diclofenac treatment should only be initiated after careful consideration for patients with significant risk factors for cardiovascular events (eg, hypertension, hyperlipidaemia, diabetes mellitus, smoking)

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Assessing/reducing risk

- Consider the cardiovascular risk (IHD, HF, PAD) of diclofenac and ibuprofen at does >1200mg daily
- Consider GI risks - age, gender, smoking, drinking, *H.pylori,* history GI ulcer/bleeding
- For patients needing a NSAID and on an SSRI or aspirin or who have other risk factors for GI adverse effects consider:
  - Using a NSAID with a lower risk i.e. ibuprofen vs. diclofenac
  - Co-prescription of a Proton Pump Inhibitor (PPI) e.g. omeprazole, lansoprazole.

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Paracetamol

- Dose – GSL/ P/ PoM
  - 500mg – 1000mg every 4-6 hours,
  - Maximum 4000mg (8 tablets) in 24 hours
  - Care is advised in the administration of paracetamol to patients with renal or hepatic impairment.
  - In the elderly the rate and extent of paracetamol absorption is normal but plasma half-life is longer and paracetamol clearance is lower than in young adults.

N.B. available (GSL/P) in combination preparations with ibuprofen, dihydrocodeine (7.46mg), codeine (12.5mg), aspirin

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Combining Paracetamol + ibuprofen

- If both are required should they be
  - Given separately and alternately?
  - Given at the same time?
- E.g.
  - ibuprofen 600mg/paracetamol 1000mg – alternating every 2 hours
  - Ibuprofen 600mg + paracetamol 1000mg together every 4 to 6 hours

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2015

- When paracetamol or ibuprofen alone are not effective, both paracetamol and ibuprofen **can be given alternately** (i.e. ibuprofen can be taken first and then paracetamol 2 hours later, to the maximum daily doses).

2013

- When paracetamol or ibuprofen alone are not effective, both drugs can be taken. To minimise confusion, it is **recommended that doses** of ibuprofen and paracetamol **are taken together** to the maximum daily doses (note if the number of doses per day differs, it will be necessary to have one dose of one of the drugs alone).

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Paracetamol overdose secondary to dental pain: a case series

British Dental Journal, published online: 25 September 2015

- 'Dental pain is the single most common cause of acute medical admission secondary to unintentional paracetamol overdose'

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Dihydrocodeine

- Dose
  - P – only as Co-dydramol - dihydrocodeine 7.46 mg + paracetamol 500 mg
    - 1- 2 tablets every 4 -6 hours
    - Maximum 8 tablets in 24 hours
  - PoM
    - 30mg every 4-6 hours (or at the discretion of the prescriber)
    - Maximum recommended 180mg
- Elderly
  - Dosage should be reduced
- Moderate to severe renal impairment
  - Dosage should be reduced
  - [NB PoM co-dydramol can be 10/500, 20/500 or 30/500]

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Management of severe dental pain?

- Ensure full doses of paracetamol plus ibuprofen/diclofenac are being taken
- Add dihydrocodeine to paracetamol plus NSAID – the combination is effective for some people

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Adverse Drug Reactions

Yellow Card
Making medicines safer

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What is an Adverse Drug Reaction (ADR)?

"an unwanted or harmful reaction that arises from using medicinal products within or outside* the terms of the marketing authorisation or from occupational exposure. The reaction may be a known side effect of the drug or it may be new and previously unrecognised"

*off-label use, overdose, misuse, abuse and medication errors.

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Who is most at risk from ADRs?

- The elderly
- Co-existing diseases
- Children
- Females
- Atopic individuals
- Polypharmacy
  - 50% of patients on 5 drugs or more

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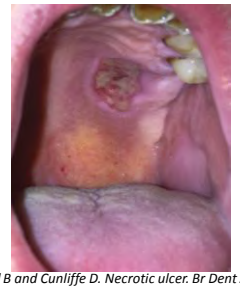
Electronic cigarette



Cant A, Collard B and Cunliffe D. Necrotic ulcer. Br Dent J 2017; 222: 226

Yellow Card Making medicines safer

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Electronic cigarette – necrotic ulcer

- Painful area appeared after inhaling strongly on his e-cigarette
- Intra-oral burns caused by e-cigarettes should be considered a differential diagnosis in non-healing oral ulceration

Consumers and HCPs should report side effects and safety concerns with e-cigarettes or refill containers to the MHRA through the Yellow Card Scheme

Yellow Card Making medicines safer

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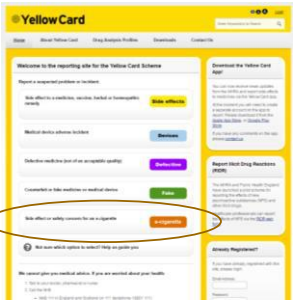
Reporting e-cigarettes ADRs via the Yellow Card web portal

http://yellowcard.mhra.gov.uk/



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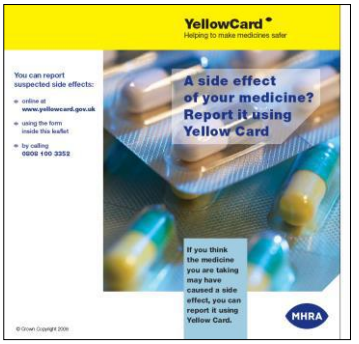
Patient reporting



Elderly patients – taking medicines

- Elderly patients may have difficulty swallowing tablets
  - tablets left in the mouth may cause ulceration (e.g. bisphosphonates)
- Tablets or capsules should be taken with enough fluid and in an upright position to avoid the possibility of oesophageal ulceration

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BDJ November 10th (2017; 223: 633-638)

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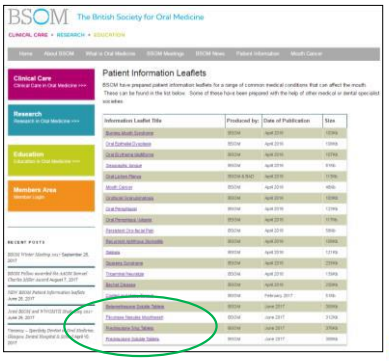
British Society for Oral Medicine



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BSOM Betamethasone soluble tablets as a mouthwash PIL

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Drug Interactions

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Drug Interactions

- Identifying potential drug interactions between drugs prescribed in dental practice and the patient's current medication is increasingly important as patients get older, retain their teeth longer and take an increasing number of long-term medications.

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What is a drug interaction?

- A drug interaction occurs when
  - The effects of one drug are changed by the presence of another drug (or food, drink or other agent)
- Drug interactions can involve a variety of mechanisms

Drug interactions

- Many drugs will interact in the body
- Clinical significance depends on
  - The therapeutic range – wider range – fewer problems
  - The enzymes involved in activation/metabolism – the more involved, the less likely that changes involving one enzyme will be significant
  - Genetic polymorphisms and population variability – some individuals are susceptible due to their genetic make up
- Many listed interactions are theoretical extrapolations

Mail Online

Village lollipop lady, 80, died after being given mouth gel by her dentist because she was already taking blood-thinning drug warfarin

Mirror

Death of 'precious' lollipop lady sparks warning over dangers of mixing blood thinner and mouth gel

An inquest heard Patricia Thomas, 80, suffered a brain haemorrhage after her dentist gave her an everyday mouth gel

Patricia Thomas, collapsed after the 15-day course of the mouth gel - after her dentist failed to flag up she was already prescribed the blood-thinning drug warfarin by her GP

March 2016

Patient Safety Notice

PSN 002 / May 2016

Risk of patient harm from an interaction between miconazole and coumarin anticoagulants

To: General practitioners, dentists, non-medical prescribers, nurses and pharmacists.

For information: All NHS Wales Chief Executives, Medical Directors, Directors of Nursing, Chief Pharmacists, Medication Safety Officers, Patient Safety Teams, Medical, Nursing and Pharmacy Directors in independent hospitals, residential and nursing care homes.

Coroner's Report

A Regulation 28 Report was issued by HM Coroner to Welsh Government on 7 March 2016 regarding the death of a patient from intracerebral haemorrhage (stroke). In the particular incident, the patient was regularly prescribed warfarin for treatment of atrial fibrillation and was concomitantly prescribed miconazole oral gel for the treatment of oral thrush by a dentist. On admission to hospital the patient was found to have a significantly raised International Normalised Ratio (INR) and subsequently died from an intracerebral haemorrhage. The coroner considered that the combined use of warfarin and miconazole may have been a contributory factor in the death of this patient.

The coroner is concerned that:

- There appears to be a lack of knowledge of the interaction of warfarin and miconazole amongst health professionals; and/or
- It is not clear which sources of information health professionals should use to check possible interactions.

The purpose of this notice is to ensure that health professionals who prescribe and supply medicines in Wales are aware of the potential for interactions to occur between miconazole, including topical preparations, and coumarin anticoagulants (warfarin, acenocoumarol, phenindione); and to highlight readily accessible sources of information regarding drug-drug interactions.

Actions

Who: All hospitals and community services (general practices, dental practices, pharmacies, community nurses) where miconazole containing products are prescribed, dispensed, supplied or administered.

When: As soon as possible but no later than June 10 2016.

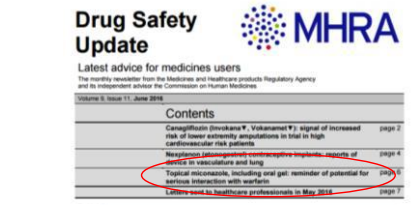
1. Circulate this notice to all medical, dental, nursing, pharmacy and non-medical prescribing staff.
2. Identify the co-prescribing of miconazole containing products and coumarin anticoagulants (as or could occur in your organisation.
3. Consider if immediate actions needs to be taken locally and ensure that an action plan is put in place, if required, to minimise the risks of these incidents occurring.
4. Before prescribing any miconazole containing products, prescribers must check the patient's medical and drug history (using electronic records and/or questioning the patient/relatives), in particular the current use of coumarin anticoagulants.
5. Before dispensing or selling miconazole containing products, pharmacy staff must check the patient's medical and drug history (using electronic records and/or questioning the patient/relatives), in particular the current use of coumarin anticoagulants.

Queries should be sent to: ImprovingPatientSafety@Wales.GSI.Gov.UK
www.patientsafety.wales.nhs.uk

Warfarin + antifungals

- Miconazole and fluconazole inhibit metabolism of warfarin in the liver (via CYP2C9)
- An established and clinically important interaction
- Monitor the INR

June 2016


Drug Safety Update

MHRA

Latest advice for medicines users

The monthly newsletter from the Medicines and Healthcare products Regulatory Agency and its independent advisor the Commission on Human Medicines

Volume 9: Issue 11: June 2016

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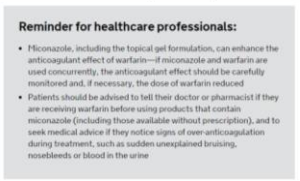
Canagliflozin (Invokana®, Vokanamet®): signal of increased risk of lower extremity amputations in trial in high cardiovascular risk patients — page 2

Nexplanon (etonogestrel) contraceptive implants: reports of device in vasculature and lung — page 4

Topical miconazole, including oral gel: reminder of potential for serious interaction with warfarin — page 6

Letters sent to healthcare professionals in May 2016 — page 7


Reminder for healthcare professionals:

- Miconazole, including the topical gel formulation, can enhance the anticoagulant effect of warfarin—if miconazole and warfarin are used concurrently, the anticoagulant effect should be carefully monitored and, if necessary, the dose of warfarin reduced
- Patients should be advised to tell their doctor or pharmacist if they are receiving warfarin before using products that contain miconazole (including those available without prescription), and to seek medical advice if they notice signs of over-anticoagulation during treatment, such as sudden unexplained bruising, nosebleeds or blood in the urine

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September 2017


Drug Safety Update

MHRA

Latest advice for medicines users

The monthly newsletter from the Medicines and Healthcare products Regulatory Agency and its independent advisor the Commission on Human Medicines

Volume: 11 Issue: 2 September 2017

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Loperamide (Imodium): reports of serious cardiac adverse reactions with high doses of loperamide associated with abuse or misuse — page 4

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Medical Device Alerts issued in August 2017 — page 6

The Medicines and Healthcare products Regulatory Agency (MHRA) is the government agency responsible for ensuring that medicines and medical devices work, and are acceptably safe.

The Commission on Human Medicines (CHM) is responsible for advising ministers about the safety, quality, and efficacy of medicines. The Commission is supported in its work by Expert Advisory Groups that cover various therapeutic areas of medicine.

NICE accredited

MHRA is accredited by NICE to provide Drug Safety Updates. Further information can be found on the

This month, we have updated advice on minimising risk of bleeding events with miconazole oral gel in patients taking warfarin (page 2).

Over-the-counter miconazole oral gel from pharmacies is contraindicated in patients taking warfarin. If you plan to prescribe miconazole oral gel in a patient on warfarin, ensure that you monitor and titrate the anticoagulant effect carefully.

In the second article, we highlight serious cardiac adverse reactions in people who have taken large or very large doses of loperamide (page 4). As for all medicines, pharmacists should remind patients not to take more than the recommended dose on the label.

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Azole antifungals + 'statins'

- **Simvastatin + miconazole**
  CONTRAINDICATED
- No reports of interaction
- Combinations with other statins not contraindicated but warnings apply
- **Atorvastatin** should only be used with fluconazole/miconazole if the benefits outweigh the risks
- Pravastatin does NOT interact

[See UKMi Q&A - Can miconazole oral gel be used by patients taking a statin? for further detail]

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New Oral Anticoagulant interactions

	Dabigatran	Rivaroxaban	Apixaban	Edoxaban
Lidocaine	☑	☑	☑	☑
Amoxicillin	☑	☑	☑	☑
Metronidazole	☑	☑	☑	☑
Erythromycin	☑	?	☑	☒/? [a]
Clarithromycin	? [b]	?	☑	☒[a]/?
Azithromycin	☑	☑	☑	?
Miconazole	☑	☑	☑	☑

☑ No interaction

? Minor interaction not considered clinically relevant

☒ Clinically relevant interaction – avoid the combination

[a] – do not use erythromycin if edoxaban dose is 60mg, reduce dose to 30mg if erythromycin essential

[b] - close monitoring especially in patients with mild to moderate renal impairment

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Resources for checking interactions

BNF interactions

- In October 2017 new interactions content for the BNF was launched.
- The following changes were introduced:
  - Increased coverage and a greater focus on the clinical relevance of the interactions
  - A consistent style and terminology across all BNF Publications
  - A new grading system for both severity of the interaction and the evidence to support it

BNF – new interactions text

- Importance of an interaction/level of severity
  - **SEVERE** – the result may be a life-threatening event or have a permanent detrimental effect.
  - **MODERATE** – the result could cause considerable distress or partially incapacitate a patient; they are unlikely to be life-threatening or result in long-term effects.
  - **MILD** – the result is unlikely to cause concern or incapacitate the majority of patients.
  - **UNKNOWN** – used for those interactions that are predicted, but there is insufficient evidence to hazard a guess at the outcome.

BNF – new interactions text

- Evidence base for the interaction:
  - **STUDY** – for interactions where the information is based on a formal study including those for other drugs with the same mechanism (e.g. known inducers, inhibitors, or substrates of cytochrome P450 isoenzymes or P-glycoprotein).
  - **ANECDOTAL** – interactions based on either a single case report or a limited number of case reports.
  - **THEORETICAL** – interactions that are predicted based on sound theoretical considerations. The information may have been derived from *in vitro* studies or based on the way other members in the same class act.

BNF online – interactions search

Interactions search results for miconazole simvastatin

Full Text | Drugs | Treatment summaries | Medicines | Interactions | All publications

There is 1 *interaction document*.

Too many results or like to see more?
Try picking a narrower or broader term here.
- miconazole
- simvastatin

miconazole + simvastatin	Miconazole is predicted to increase the exposure to simvastatin. Manufacturer advises avoid. severity: Severe evidence: Theoretical

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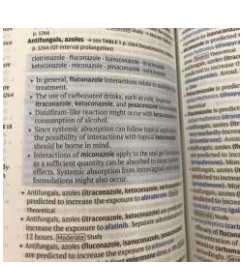
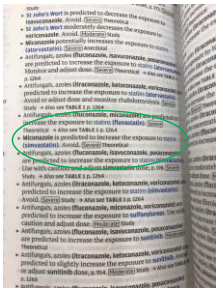
BNF 74 book





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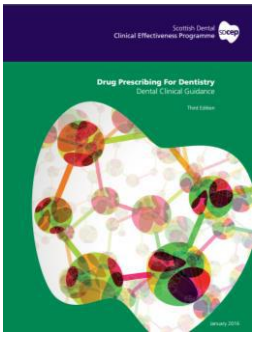
SDCEP



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Medicines Q&As

NHS | UKMi

Q&A 152.4

What is the clinical significance of potential drug interactions with local anaesthetic preparations used in primary care dentistry?

Prepared by UK Medicines Information (UKMi) pharmacists for NHS healthcare professionals
Before using this Q&A, read the disclaimer at www.sps.nhs.uk/articles/about-ukmi-medicines-qas/
Date prepared: August 2015

Summary

- A number of drug interactions that may potentially occur with local anaesthetic preparations are listed in the British National Formulary (BNF) and Summaries of Product Characteristics (SmPC). Many are theoretical or are associated with higher doses of local anaesthetic preparations than those used for dental procedures in primary care.
- Reports of serious interactions between medicines and local anaesthetic preparations occurring in dental practice are exceedingly rare.
- Practitioners can minimise the risk of interactions by using an aspirating syringe, which reduces the likelihood of local anaesthetic being administered directly into a blood vessel.
- Adhering to dosage recommendations in the product literature will also minimise risk.
- This Q&A **does not** cover use of local anaesthetics in patients with medical conditions that may contraindicate or require caution in their use.

Background

The amide local anaesthetics most commonly used for dental procedures in primary care are lidocaine, prilocaine, articaine and mepivacaine. The majority of local anaesthetic dental cartridges also contain a vasoconstrictor; either adrenaline (epinephrine) or felypressin.

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Scottish Dental Clinical Effectiveness Programme (SDCEP)






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SDCEP guidance

- Scottish Dental Clinical Effectiveness Programme (www.scottishdental.org/cep)
- Oral Health Management of Patients at Risk of Medication-related Osteonecrosis of the Jaw
- Published March 2017

Yellow Card Making medicines safer

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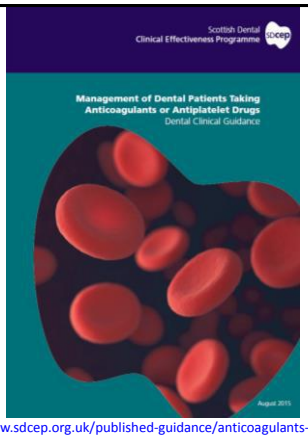

SDCEP

Management of Dental Patients Taking Anticoagulants or Antiplatelet Drugs

www.sdcep.org.uk/published-guidance/anticoagulants-and-antiplatelets/

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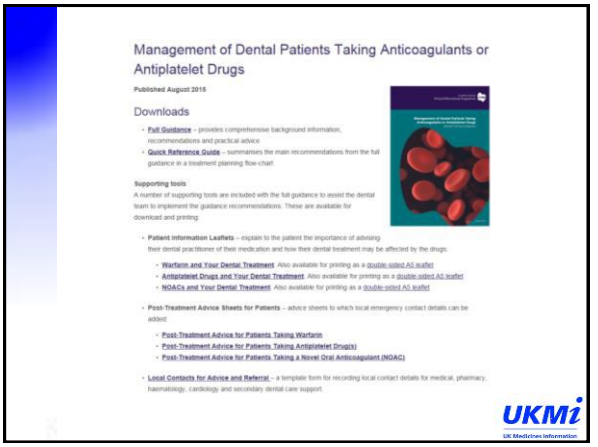

Management of Dental Patients Taking Anticoagulants or Antiplatelet Drugs

Published August 2015

Downloads

- **Full Guidance** – provides comprehensive background information, recommendations and practical advice
- **Quick Reference Guide** – summarises the main recommendations from the full guidance in a treatment planning flow-chart

Supporting tools

A number of supporting tools are included with the full guidance to assist the dental team to implement the guidance recommendations. These are available for download and printing:

- **Patient Information Leaflets** – explain to the patient the importance of advising their dental practitioner of their medication and how their dental treatment may be affected by the drugs:
  - **Warfarin and Your Dental Treatment**. Also available for printing as a double-sided A5 leaflet
  - **Antiplatelet Drugs and Your Dental Treatment**. Also available for printing as a double-sided A5 leaflet
  - **NOACs and Your Dental Treatment**. Also available for printing as a double-sided A5 leaflet
- **Post-Treatment Advice Sheets for Patients** – advice sheets to which local emergency contact details can be added:
  - **Post-Treatment Advice for Patients Taking Warfarin**
  - **Post-Treatment Advice for Patients Taking Antiplatelet Drug(s)**
  - **Post-Treatment Advice for Patients Taking a Novel Oral Anticoagulant (NOAC)**
- **Local Contacts for Advice and Referral** – a template form for recording local contact details for medical, pharmacy, haematology, cardiology and secondary dental care support.

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NWMIC

- Contact us:
  - Telephone: 0151 794 8206
  - Email: nwmedinfo@nhs.net
- Online resources:
  - https://www.sps.nhs.uk/articles/uk-dental-medicines-advice-service-ukdmas/