Health and Social Care Board

Medicines Safety Matters

Newsletter for Prescribers & Community Pharmacists

Vol. 4 Issue 3 Nov 2014

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Confusion between two exenatide preparations

Exenatide subcutaneous injection (s/c) is indicated for type 2 diabetes. For several years there was only one preparation of s/c exenatide available i.e. **Byetta®** which is administered twice daily, but since 2012, there has been an additional formulation **Bydureon®** which is administered once weekly.

In a recent incident, a pharmacist received a prescription for exenatide m/r 2mg s/c once a week. The pharmacist incorrectly dispensed Byetta® when it should have been Bydureon®. Fortunately the error was spotted by the diabetes specialist nurse before the preparation was administered. This incident highlights the potential for confusion between the preparations.

Contributory factors:

- Exenatide s/c injection was prescribed by generic name
- The pharmacist was not familiar with the two preparations of exenatide s/c injection
- The prescription was scanned using a 2D barcode scanner whose drug dictionary is not based on the DM&D drug dictionary i.e. the scanner suggests a 'best match' based on searching the text of the barcode rather than an exact match based on DM+D. The scanner incorrectly 'suggested' the Byetta® preparation for the label.

Note also that both brand names are similar, starting with the same letters 'By'

Learning from the incident:

- Be aware that there are two preparations of exenatide s/c - Byetta® and Bydureon®
- Consider prescribing exenatide by brand name in order to reduce potential confusion when being dispensed
- When generating labels using a 2D barcode scanner, pharmacists should always double check that the label and product dispensed match the item on the prescription and that the directions are appropriate
- When dispensing exenatide s/c injection, check with the patient that it is the product they are expecting.

Exenatide s/c Preparations	Presentation	Usual dose	Frequency
Byetta® 	5microgram per dose prefilled pen 10 microgram per dose prefilled pen	5 -10 micrograms	Twice daily
Bydureon® 	2mg m/r powder for reconstitution	2mg	Once per week

Pump up the volume

Ebixa® Oral Solution (memantine) 5mg/pump (10mg/ml) is indicated for dementia in Alzheimer's disease. A prescription was issued for a resident in a nursing home for Ebixa® Oral Solution with the incorrect instructions to take 5ml at night for a week, then 10ml for a week, then 15ml for a week, then 20ml thereafter. The dose in millilitres should have stated milligrams and as a result, the patient was prescribed **10 times** the intended dose.
The pharmacist did not identify the overdose and the medicine was labelled as per prescription.
The nurse in the home administered 3 incorrect doses of 5ml (by removing the pump from the bottle) before the error was spotted. Fortunately the patient did not come to harm as a result of the error.

In 2010, the MHRA advised of similar incidents, with one patient admitted to hospital and two patients experiencing somnolence due to dosing errors with the Ebixa® pump.
http://www.mhra.gov.uk/Safetyinformation/DrugSafetyUpdate/CON099862

Ebixa® 5mg/pump oral solution

Presentation

- Pump device
- Solution strength is 10mg memantine/ml
- Each pump contains 0.5ml or 5mg memantine

Dosing

- Taken at night
- Usually titrated to reduce adverse effects:
  5mg (1 pump) for the 1st week
  10mg (2 pumps) for the 2nd week
  15mg (3 pumps) for the 3rd week
  20mg (4 pumps) thereafter
- The usual dose of memantine is 20mg at night (4 pumps).

Advice for health care professionals:

- Be aware of the potential for confusion in dosage units with memantine oral solution
- Ensure that dose instructions specify the number of mg and the corresponding number of pumps required
- Pharmacists should counsel patients or carers on how to administer the required dose. Highlight that when the product is first opened for use, the pump should be primed by pushing the pump head down completely five times in succession and any liquid produced discarded. This will ensure that the volume of the first dose administered is accurate.

Reminder of suicide risk with SSRIs

Learning from a local SAI highlighted the need to be vigilant for increased suicidal thoughts when patients are started on a SSRI. In this case the SSRI was sertraline.

Advice for health care staff:

Closely supervise patients and in particular those at high risk during SSRI therapy, especially in early treatment and following dose changes.
Patients (and carers of patients) should be alerted about the need to monitor for any clinical worsening, suicidal behaviour or thoughts and unusual changes in behaviour and to seek medical advice immediately if these symptoms present. (see SPC)

CPD - Learning from patient safety incidents

BMJ Learning have added a new online module on 'Learning from patient safety incidents' to their portfolio. The module is accredited with 1 hour of CPD/CME.
http://learning.bmj.com/learning/module-intro/.html?moduleId=10050076

Potentially catastrophic methotrexate drug interaction

Methotrexate & Trimethoprim

A patient was admitted to a local hospital recently with pancytopenia which was thought to be due to co-prescription of oral methotrexate and trimethoprim 200mg.

Trimethoprim increases the anti-folate effect of methotrexate. The interaction has the potential to cause catastrophic patient harm even with short courses or low doses of trimethoprim.

Bone marrow suppression can occur quickly leading to:

- Life threatening infection as the body cannot produce leukocytes in response to bacterial and viral infiltration
- Anaemia due to a lack of red blood cells
- Spontaneous severe bleeding due to a deficiency of platelets

For further information please refer to the BNF, SPC and the Northern Ireland Shared Care Guideline for oral and injectable methotrexate.
http://www.ipnsm.hscni.net/index.html
How to order Methotrexate Monitoring & Dose Record Booklet:
http://www.medicinesgovernance.hscni.net/

Action for healthcare professionals:

- Trimethoprim **must NOT** be prescribed with methotrexate, even a short course or a low dose has the potential to cause adverse outcomes
- Double check to make sure methotrexate is not prescribed by another source e.g. hospital, private healthcare and if it is, add it to the patient's electronic practice records to ensure that ECR displays an accurate picture of the patients medicines
- Check that the interaction is flagged as a serious interaction on your computer system
- The interaction warning must not be ignored
- Pharmacists must not dispense these drugs in combination and must always query the co-prescription of methotrexate and trimethoprim directly with the prescriber
- Be aware that co-trimoxazole (Septrin®) contains trimethoprim
- Make sure that all patients on methotrexate have a methotrexate drug monitoring & dose record booklet.

Further mix ups reported with Foley catheters

A Foley catheter is an indwelling urinary catheter that is retained by inflating an integral balloon at the tip of the catheter when it has been placed inside the bladder.

There are two sizes of Foley catheter balloon:

- **10ml balloon** - commonly used in primary care
- **30ml balloon** - rarely used in primary care - it is primarily used after urological surgery to help prevent bleeding in the bladder.

Risks associated with use of the larger 30ml balloon size include:

- Irritation in the bladder
- Pressure on the pelvic floor and bladder neck
- Infection - sitting higher in the bladder, they cause a residual pool of urine which can lead to increased risk of infection.

Further mix ups have been reported where pharmacists have supplied Foley catheters with a 30ml balloon instead of the intended 10ml balloon

Advice for community pharmacists:

- Query any prescription for a 30ml balloon catheter with the prescriber to ensure that it is the intended product.
- Take care when ordering catheters from wholesalers
- Review current stocks of to ensure that any 30ml balloon catheters are not mixed with 10ml size
- Take care to check product details when dispensing catheters.

Case Study

Have a look at the following incident. Can you identify contributory factors leading to the error?

A patient had changed GP practice one month prior to being admitted to hospital.
Only a few of their usual repeat prescriptions had been issued by the new GP practice.
ECR (Electronic Care Record) was used to establish the patients medication history in hospital.
The incomplete ECR medicines list was prescribed in hospital and at discharge.

After discharge:
The GP practice was closed half day on the day of discharge.

The hospital letter was faxed to the community pharmacist and a monitored dosage system (MDS) was prepared and issued to the patient based on the amended medicines list.

The GP spotted the errors in the discharge letter when it was received in the GP practice the next day.

The pharmacist was notified & they recalled the incorrect MDS and dispensed a new MDS to the patient.

1. ECR Medicines list

What happens to the medicines list on ECR when a patient changes GP practice?

Answer:
The ECR medicines list starts over again when a patient changes GP.
The list is a record of repeat and acute prescriptions issued in the previous 6 months from the clinical system at the patient's **current** GP practice. It does NOT show medicines issued by other GP practices during the 6 month period.

This incident further highlights the need to use a second source of information in addition to ECR to verify the medication history and where possible, always check with the patient.

2. Supply of discharge medicines from hospital

Do patients who use a MDS receive a supply of medicines on discharge from hospital?

Answer: MDS supply varies between Trusts. Some hospitals will provide them for patients who used them prior to admission. Difficulties arise when there is a change to medicines during a hospital stay & a new MDS needs to be arranged with primary care. Legally, the community pharmacist cannot dispense any new medicines until the GP prescribes them, however this may result in a delay in the patient receiving their medicines. The hospital may give a short supply of medicines to cover while these arrangements are made. GP practices will usually have a doctor available to deal with urgent queries on their early closing day.

3. Dispensing from hospital discharge letters

Can community pharmacists dispense medicines from a hospital discharge letter?

Answer:
No. A hospital letter is not a legal prescription in primary care.

4. Changes to MDS Medicines

The GP practice and the pharmacy should hold a record of patients who are receiving medications dispensed into MDS and local arrangements must encourage communication between both when the medication regimen is changed.

Discussions regarding changes must be directly between the prescriber and the pharmacist, not via third parties.

A record of changes made should be kept in the pharmacy and surgery.

If there appears to be a change in the medication i.e. a medicine formerly on repeat is not on the new prescription, the MDS should not be dispensed until the reason for the absence or change is clarified with the prescriber[1].

[1] http://www.medicinesgovernance.hscni.net/primary-care/medicines-safety-alerts/

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