Clinical Case Studies

University of Peradeniya
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Objectives

- Why we do case studies?
- How do we do case studies?
- Learn how to present a case study

Why present a case study?

- Educational for others and self
  - Problem focused, case-based learning
  - Increases knowledge
- Improves communication skills and confidence
- Practical clinical
  - Everyday cases, not theoretical rarities
- Facilitates constructive peer discussion
  - what was or was not done, why it was done, what other people may have done, key messages
- Enables sharing of learning experiences
  - knowledge, skills and behaviors

Why present a case study?

- **Highlights**
  - Pharmacists contribution
  - Use of clinical data
  - Therapeutic options
  - Drug related problems
  - Monitoring requirements
  - Follow-up
  - Training needs
- **Improves**
  - Pharmaceutical care
  - Patient outcomes

Presenting Clinical Material

Golden Rules

- **Always** maintain patient confidentiality – code of ethics as a health care practitioner e.g. Mrs OW or Mrs W NOT Mrs Omali Weerasuriya
- Be concise and inclusive but present only relevant material.
- Relevant should include negative or nil findings e.g. allergies, where appropriate ie NKDA
- Present material in a logical and structured manner
- Provide detail where appropriate e.g. smoking habits

Format for presentation

- Must be about a patient YOU interviewed
- Must have an outcome
- Focus: problem identification, prioritisation and resolution
- 6 Slides maximum – 10 minutes

1. The patient (Setting the scene)
2. Medicines
3. Problem list
4. Action taken + why
5. Outcomes
6. Key learning points for all pharmacists

Problem list-examples

- Drug related admission?
- Missing medication
- Incorrect/inappropriate prescribing
- Adverse drug events (actual or potential)
- Interactions
- Adherence issues
- Administration issues
- Supply issues

Mr BC

- 65 yr old male

- PMH:
- IHD(previous MI)
- AF
- Hypertension,
- Hypercholestraemia

- PC - epistaxis, bruising

Medicines

On admission

- Warfarin - 2.5 -4.5 mg daily (AF) Longterm
- Digoxin 250mcg daily (AF)
- Atorvastatin 10mg daily (IHD)
- Imdur 60mg daily (IHD)
- Metoprolol 50mg BD (HT,IHD)
- Perindopril 10mg daily (HT, IHD)
- Metronidazole 400mg tds for 5 days for giardia infection

In ward

- Warfarin withheld
- Digoxin 250mcg daily vs
- Atorvastatin 10mg daily
- Imdur 60mg daily
- Metoprolol 50mg BD
- Perindopril 10mg daily

Problems

- Cause of epistaxis and bruising
  - On admission INR 8.2
  - Previous INR 2-3 and stable
- Cause of increased INR
  - Only new medication is metronidazole
  - Can increase INR by inhibiting warfarin metabolism via CYP2C9
- What to do with warfarin dose?
- Is course of metronidazole for giardia completed

Action

- Discussion with doctors
  - Withhold warfarin
  - Give Vitamin K 5mg IV plus Fresh Frozen Plasma (10mL/kg i.e. pt is 70kg so 700mL)
  - Warfarin to be restarted when INR approaches 3
- Total duration for course of metronidazole for giardia is 5 days
  - Course is complete
  - Patient informed of drug interaction and counselled about drug interactions with warfarin
  - Product information printed and highlighted

Outcome

- INR trended down over 2 days in hospital
- Bleeding ceased
- No further symptoms from giardia infection
- Local doctor to restart warfarin in community setting
- Daily INR tests until stable
- Local doctor requested to record interaction in patients notes

Key Messages

- Always ask patients about completed course of antibiotics and other medications including complimentary and Ayurvedic medicines
- Record when antibiotics were started and duration of course
- Always consider drug interactions when patient is on warfarin
- Be aware of how to treat elevated INRs and how to stratify risk

Mr JD

- 78 year old nursing home patient.

Past medical history:

- • Depression (wife died 3 months ago)
- • Hypertension
- • Osteoporosis

Presenting complaint

- Increasing confusion over past week

Medications

On admission

- Citalopram 20mg m
- Perindopril 5mg m
- Hydrochlorothiazide 12.5mg m
- Calcium 600mg m
- Vitamin D 25 microgram d

In ward

- Same

Problems

- Increasing confusion
- ?cause
  - Medication?
  - Infection e.g.UTI
  - Head injury e.g.concussion
  - Pain
  - Low BSL
  - EtOH abuse

Action

- Urine microscopy clear – no signs of infection, no pain reported, no EtOH intake
- No had injury reported from nursing home
- Checked electrolytes, BSLs, TG, proteins-only abnormality as low Na

	12 weeks ago	2 days ago	Reference range
Sodium	135mmol/L	**124mmol/L**	135-145mmol/L
Potassium	4.5mmol/L	4.6mmol/L	3.5-4.5mmol/L
Urea	3.5mmol/L	3.3mmol/L	3.8-9.6mmol/L
Creatinine	59µmol/L	50µmol/L	45-150µmol/L

- Identified 3 medicines to cause **hyponatremia**
  - Citalopram (started 2 weeks previously)
  - Hydrochlorothiazide (longterm)
  - Enalapril (longterm)
- Discuss with Doctor –High probability of hyponatremia caused by citalopram
- Cease citalopram and fluid restrict
- Consider other anti-depressant e.g. mirtazepine

Outcome

- Citalopram ceased on ward
- Na trended upwards to normal before discharge
- Confusion improved
- Patient was normotensive on perindopril and hydrochlorothiazide
- Community psychiatric follow-up for antidepressant treatment
- Adverse Drug Reaction (ADR) to citalopram recorded in patients file
- Patient informed of cause of confusion
- Local doctor and community pharmacy advised of ADR

Key Messages

- Most SSRIs can cause hyponatremia
  - Counsel patients on possible side effects when starting a new medicine
  - Encourage patients to report any adverse drug reactions
  - Strongest with citalopram
  - Treatment options may include duloxetine, venlafaxine and mirtazapine
- UTIs in older patients can cause confusion
- Other causes of hyponatremia
- Treatment of hyponatremia
- Importance of recording ADRS and ensuring all stakeholders are informed

Presentation Top Tips

- Avoid reading
- Use clear speech
- Use your voice to advantage
- Time appropriately
- Engage group with eye contact

Things Not To Do

- Don’t be glued to your notes
- Don’t skip all over the place
- Don’t use poor or outdated references
- Don’t go over time
- Don’t allow one person to monopolise questions
- Don’t talk to the screen
- Don’t give it all away
- Don’t assume everything will go according to plan
- Don’t overcrowd your slide !

VIP

- Clinical case study presentations will be marked
- **Formative case study presentation**
  - Each student presents individually
  - Each student prepares the case of a patient they have interviewed
  - Preparation on Thursday 8/8/19 in the morning
  - Presentation on Friday 9/8/19in the morning
  - Feedback will be provided
- **Summative Case study presentation (MUST BE DIFFERENT CASE)**
  - Each student presents individually
  - Each student prepares the case of a patient they have interviewed
  - Preparation on Tuesday 13/8/19 in the morning
  - Case preparation in computer laboratory Wednesday 14/8/19
  - Presentation on Friday 9/8/19in the morning
  - This mark will be used

Ward Based Case Presentations – Marking Guide UP Pharmacy 2019

Name:

CASE:

INFORMATION OBTAINED FROM WARD BASED VISIT						
Patient Details: Outlined who the patient is and described important demographic details	0	1	2	3	4	5
Presenting Complaint: Outlined why the patient presented to hospital	0	1	2	3	4	5
History of Presenting Complaint	0	1	2	3	4	5
Past Medical History (including allergies to food/drugs)	0	1	2	3	4	5
Medication History on admission: Outlined a list of all medications patient was taking prior to admission, including CAMs etc	0	1	2	3	4	5
IDENTIFICATION OF MEDICATION RELATED PROBLEMS/PHARMACEUTICAL CARE PLAN FOR THE PATIENT						
Key medication related issues identified and prioritised (eg. Appropriateness of Drug Treatment, Appropriateness of Dose)	0	3	6	9	12	15
Treatment recommendations (eg. Pharmacist Interventions to Improve drug treatment)	0	4	8	12	16	20
Follow-up / Monitoring Parameters: student has identified drugs with NTI and also clinical signs and symptoms which should be monitored.	0	1	2	3	4	5
COMMUNICATION AND PRESENTATION SKILLS						
Oral Presentation Style (communication, volume, explanation)	0	3	6	9	12	15
Visual Teaching aids (eg. PPT)	0	1	2	3	4	5
Ability to answer and discuss questions	0	1	2	3	4	5
Value of the case presentation to the learning of the audience	0	1	2	3	4	5
Overall professional contribution to patient Care	0	1	2	3	4	5

CASE PRESENTATION ASSESSMENT SHEET

Areas performed well
Suggestions for development
Other feedback