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UNIVERSITY OF RUHUNA – FACULTY OF ALLIED HEALTH SCIENCES
DEPARTMENT OF PHARMACY
SECOND BPHARM PART II EXAMINATION – DECEMEBR 2018/JANUARY 2019
PH 2214 PHARMACEUTICS III (SEQ)

TIME: THREE HOURS

INSTRUCTIONS

- There are six (**06**) questions in Parts A and B of the SEQ paper.
- Answer **each** part in separate booklet provided.
- No paper should be removed from the examination hall.
- Do not use any correction fluid.
- Use illustrations where necessary.

Part A

01.

1.1. Briefly explain the primary healthcare system in Sri Lanka. (***30 marks***)

1.2. Explain the role of pharmacist in the healthcare system in Sri Lanka. (***50 marks***)

1.3. Briefly describe the importance of the use of essential drug list in hospitals. (***20 marks***)

02.

2.1. Briefly describe **four** advantages that would be gained by adhering to the National Medicinal Drug Policy of Sri Lanka. (***40 marks***)

2.2. Define the term "rational drug use". (***10 marks***)

2.3. Briefly describe **three** patient related effects due to irrational use of drugs. (***30 marks***)

2.4. Write **four** prescribing indicators used to measure the rational drug use. (***20 marks***)

03.

3.1. Define the term "dispensing". (***10 marks***)

3.2. List **five** attributes that a pharmacist should possess to dispense medications to patients. (***20 marks***)

3.3. Briefly describe **four** advantages of "course-of-therapy-prepackaging". (***20 marks***)

3.4. Briefly explain **four** contributing factors for medication errors. (***30 marks***)

3.5 Define the following terms.

3.5.1. Prescription. (***10 marks***)

3.5.2. Medication order. (***10 marks***)

04.

4.1. State **two** differences between costs benefit analysis and cost effective analysis. (***20 marks***)

4.2. An AIDS prevention program tracks new cases of HIV infection before and after the implementation of a needle exchange program. The study was able to reduce the incidence of HIV infection in their service area by 6%, or 12 cases. The total cost associated for the intervention was $ 500,000. Another published study indicates that the average lifetime medical cost of treating HIV and AIDS was $119,000. Calculate the benefit: cost ratio of the AIDS prevention program. (***30 marks***)

Part B

4.3. Describe the importance of literature review in Pharmacy practice. (***50 marks***)

05.

5.1. *Scientific method* is considered as the most appropriate method to gain knowledge in the field of pharmacy practice. **List** the basic steps involved in *Scientific method.* (***40 marks***)

5.2. Describe **one** basic pharmaceutical sciences research design and **one** pharmacy practice research design with an example for each. (***60 marks***)

06. An abstract appeared in a journal is given below. Read the abstract and answer the questions.

Comparison of serious adverse events between the original and a generic docetaxel in breast cancer patients.

BACKGROUND: Generic formulations are not necessarily identical to the original in terms of efficacy and adverse events. Generic docetaxel has been available in Canada since 2011.

OBJECTIVE: To compare the occurrence of grade III to IV adverse events between original docetaxel and a generic formulation in breast cancer patients.

METHODS: A consecutive series of 400 patients were assessed retrospectively: 200 who received the original docetaxel and 200 who received a generic formulation. Patients who received both formulations or received their chemotherapy outside our center were excluded. The primary outcome was the occurrence of grade III to IV adverse events related to docetaxel (febrile neutropenia, hand and foot syndrome, intestinal perforation, thrombotic event, and death).

RESULTS: Three hundred-sixty-four patients were available for analysis (182/group). The use of a granulocyte colony-stimulating factor (G-CSF) was more frequent in the generic group (44.5% vs 28.8%), as well as treatment discontinuation (26.4% vs 14.8%). The occurrence of grade III to IV febrile neutropenia, hand and foot syndrome, intestinal perforation, thrombotic event, and docetaxel-related deaths were similar between the 2 formulations. However, grade IV febrile neutropenia was more frequent with the generic formulation (78.8% vs 56.3%). Limitations were the retrospective nature of the study and the variety of chemotherapy regimens.

CONCLUSION: Adverse events occurrence was similar between the 2 formulations. However, febrile neutropenia was more serious with generic docetaxel, despite increased G-CSF use. Results suggest that the studied generic formulation may be safe, but more caution during treatments might be warranted, especially concerning febrile neutropenia events.

6.1. State the aim of this epidemiological research. (***30 marks***)

6.2. Briefly explain the research design used in this study. (***30 marks***)

6.3. Briefly explain the conclusions drawn by the investigators. (***40 marks***)

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