

## MODULE 3 – LESSON NOTES

YEAR 2 – ONLINE – MAY 20 2011

### Karen's Case – a short exercise in problem-based learning

This is the final lesson for year 2 coursework. After completing the activities, including the online test you can leave your 'libretto' in the ex-scre for your credits. With your libretto you should leave your portfolio. See the Portfolio content check-list at the end of this lesson.

#### Learning Outcomes

- To read real clinical case description and identify the presenting problem
- To activate background knowledge of Microbiology to facilitate understanding and to find a solution to the problem
- To use resources in English (e.g. an online clinical manual, research evidence) to take notes in English and to examine clinical solutions
- To build knowledge of academic and scientific vocabulary
- To read a clinical study focusing and understand the structure of a clinical research paper
- To write a summary of the clinical case based on readings from the resources.

#### Medical Information Skills

- To use BIDS & ANCP at La Sapienza to retrieve full text medical evidence
- To practise MEDLINE searches using different strategies
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#### Study Resources

A list of online and text resources is on the next page. These integrate with the topics you are studying in Microbiology.

#### STUDY RESOURCES for this lesson

Consult at least 1 resource from each category below to complete the tasks in this module

##### 1. Online manual

**Merck Online Manual** of Therapy and Diagnosis: available at:  
[http://www.merckmanuals.com/professional/sec14.html?WT.z\\_section=Infectious%20Diseases2](http://www.merckmanuals.com/professional/sec14.html?WT.z_section=Infectious%20Diseases2)  
(accessed May 2011)

Access: Online

##### 2. Microbiology Textbooks

Murray et al "Microbiology" and La Placa "Principi di Microbiologia"

##### 3. Clinical Readings:

- Olesen, B (2005) Etiology of Diarrhea in Young Children in Denmark: a Case-Control Study  
*Journal Of Clinical Microbiology* August 3636-3641

Access: MEDLINE full text

- Huang DB et al (2005) Problem pathogens: extra-intestinal complications of Salmonella enterica serotype Typhi infection *The Lancet Infectious Diseases* Vol. 5 pp341- 345

Access: Biblioteca Digitale della Sapienza – full text)

- Thiem V D (2004) Detection of Shigella by a PCR Assay targeting the ipaH Gene, *Journal Of Clinical Microbiology* May, 2031-2035

Access: MEDLINE full text

- Chan S et al (2003) Acute bacterial gastroenteritis: a study of adult patients with positive stool cultures treated in the Emergency department. *Emergency Medicine Journal* 20; 335-338

Access: MEDLINE full text

- Ekdahl K et al (2005) Risk of Travel Associated Typhoid and Paratyphoid in Various Regions

CLINICAL CASE DESCRIPTION

**Task 3.1: Karen’s Case :** Read the case description to identify the clinical problem.

Karen, a 25-year old Italian medical student was admitted to hospital because of persistent fever. A resident in Rome, she spent 6 months in Bangkok, Thailand from 25<sup>th</sup> April 05<sup>th</sup> – May 01 2010 working in a hospital on a SISMI study scholarship. After returning to Rome 2 weeks ago she went to the island of Procida on holiday with her boyfriend, Marco. They stayed with Marco’s parents.

Knowing that Karen loves seafood, Marco’s mother bought oysters and fish at the local markets for dinner. Karen was delighted. She had eaten lots of seafood in Bangkok and had learned a few Thai recipes, but was craving for some good traditional Italian cooking. Unfortunately, however, after eating the oysters in Procida she developed a temperature of 38.2°C with a mild headache and a non productive cough. Marco’s mother thought Karen had picked up an infection of some sort and gave her Amoxicillin for 2-days to reduce her temperature. However, this had no effect on Karen’s fever. Karen thought she might have flu. But in bed she thought back to the last time she ate oysters in Thailand 2 weeks ago. She remembered she had had crampy abdominal pain the day after. Was it a coincidence? But those symptoms had lasted only 24 hours and she had felt better afterwards.

Returning to Rome after 2 days in Procida Karen’s temperature rose to 40°C. She began to take acetaminophen and Ibuprofen, but these did not relieve her fever. On May 14<sup>th</sup> she went to the Emergency Department at the Policlinico Umberto I. Her temperature was measured at 37.4 and the findings on physical examination and chest radiography were normal. A blood specimen was drawn for culture. Karen went home. The next day the blood culture revealed gram-negative rods, and Karen was contacted at home. She was admitted to hospital on May 16<sup>th</sup> for treatment

*IDENTIFYING THE CLINICAL PROBLEM*

**Task 3.2** Brainstorm the problem. Write your answers to the following questions

a. What is the main problem in this case?

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b. What further information do you need? (eg. What questions would you ask the patient at this point?)

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c. What are the risk factors in this case?

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d. Are there any laboratory tests you would like to perform at this point?

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## MEDICAL INFORMATION SKILLS

Problems with terminology?

Remember that you can use the **MeSH data base** on Medline to find the meanings of words, especially medical terminology. Just type the word in the MeSH search window and you will get a definition and or a synonym. It's really useful!

### *Medical Information Skills*

Is there any terminology in Karen's case description you don't understand? The MeSH function on PubMed is a **medical glossary** of terms. It is helpful to find quick definitions for the pharmacologic action, for example, of words like 'amoxicillina' and 'acetaminophen'.

Here is the link: <http://www.ncbi.nlm.nih.gov/mesh?term=acetaminophen>

If you have problems with the MeSH function do the MeSH data base video tutorials. These are available at: <http://www.nlm.nih.gov/bsd/viewlet/mesh/searching/mesh1.html>

Can you arrive at a Differential Diagnoses? This is a chance to use your knowledge of Microbiology, and the 'study resources' to do some clinical reasoning! Start by consulting the Merck online resources on the resources page

### TASK 3.2 Reading & Note-taking

Using the clinical resources (e.g. Merck manual or Microbiology texts) complete the table on the next page in English by taking notes on the 'problem pathogens'. This will enable you to focus on the most probable causes.