Community acquired pneumonia Case presentation

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Objectives

- To highlight challenges with laboratory diagnostics in resource limited hospitals and the use of antibiotics in those settings

History

- A 33 year old previously healthy woman presented to the outpatient clinic in a mission hospital
- C/O:
  - Acute lower abdominal pain that developed overnight
  - Cough X 3/7
  - Chest pain X 3/7
- Review of systems: no other complain
- PM/SHx:
  - Her period was over due by 10 days, no other positive finding on history

Examination

- Examined by the house surgeon
  - Good general condition no pallor Jaundice cyanosis dehydration
  - Slight tenderness on the lower abdomen
  - All the other systems appeared to be normal

Discussion questions

- Is this information enough to help make a working diagnosis?
- What other information would be interesting to know?

Action plan

- Diagnosis: R/O acute appendicitis and/or ectopic gestation
- Plan:
  - Admitted for observation and investigations

Investigations

- Blood count: normal
- ESR: 52mm per hour (N- 0-29 mm/hr)
- C-reactive protein (CRP) : 160 (0-10mg/dl)
- Pregnancy test: negative
- Abdominal X-rays did not reveal any significant findings
- Stool gross examination and microscopy were unremarkable

Management

- The abdominal pain decreased in severity by day 3 and subsided by day 4.
- On the 4th day after admission
  - Patient developed fever
  - Frequent coughing and breathlessness
  - Chest examination by percussion and auscultation raised suspicion of consolidation
  - Chest X ray confirmed bilateral consolidation worse on left upper side.
- A diagnosis of moderately severe pneumonia was made

Management

- Clinician unsure if this is community acquired pneumonia(CAP) or hospital acquired pneumonia(HAP)
- Though patient gave H/O cough prior to admission, no clinical features were recorded during admission.
- Patient started on Levofloxacin and advised to stay in hospital, but declined due to financial issues
- Patients discharged on Levofloxacin 750mg O.D for 7days
- Ask to return for review after 3 days

Follow-up-1

- The patient was seen on the 4th day after discharge in consultant clinic
- Showed dramatic improvement in her clinical condition.
  - Cough was much less with minimum chest discomfort and shortness of breath.
- She was advised to continue levofloxacin for 3 more days.

Follow-up-2

- On the 25th day after discharge, she reported back to the hospital with
  - moderate fever and
  - severe respiratory distress necessitating admission to High Dependence Unit (HDU) for supportive management
- The patient requested to be transferred to a public hospital because she could not afford the expenses at the mission hospital

Follow-up-3

- The patient was later transferred to a public hospital where she was admitted
- Diagnosis of severe pneumonia sustained but now classified as HAP
- The following investigation were done at the public hospital
  - Sputum for AFB and microscopy:
    - No pathogens in the sputum
    - ZN smear was reported negative for AFB
  - No other tests were done
- Patient was treated with imipenem and azithromycin and discharged after 5 days

Follow-up-4

- Patient returned to the mission hospital after 10 days with:
  - high fever
    - cough and severe dyspnea
- She was reviewed by the consultant and found to have a
  - High fever (temperature 39.5^{0}C)
  - Tachypnoea (RR 36 per min)
  - Hypoxic (SpO2 83% on room air)
  - Tachycardia (Pulse rate 123 per minute)
  - There were coarse crackles on the left side of the chest

Follow-up-5

- She could not afford another hospital admission
- It was decided a fiber-optic bronchoscopy with lavage be done as an outpatient procedure

- On bronchoscopy
  - Airway inspection was normal
  - Only lavage was possible because she de-saturated markedly during the procedure
  - The Xpert MTB/Rif assay on the broncho-alveolar lavage fluid was positive for MTB but negative for rifampicin resistance

Follow-up-6

- She was re-admitted to the hospital post bronchoscopy primarily to receive oxygen and to start anti TB regimen
- By the 3rd day of admission, she was feeling better and was able to maintain SPO2s of greater than 90% off oxygen although she still had intermittent high fever

Follow-up-7

- Patient was discharged after 10 days to continue anti TB treatment and attend TB clinic after one month of follow up
- Final diagnosis:
  - Pulmonary TB presenting as severe community acquired pneumonia
  - Patient made complete recovery after standard anti- TB was instituted

Key lessons

- The patient when 1st seen by the house officer
  - The doctor did not explore the cough and chest discomfort, which led him to miss key findings on the chest
  - Chest X-rays was not requested
  - Levofloxacin is fluoroquinolone and should not be used as 1st line antibiotic without culture results

Key lessons

- Tuberculosis can present as CAP and HCAP in TB hyper-endemic African and Asian countries
- Proper history and examination is key to help in diagnosis
- All efforts should be made to rule out or confirm a diagnosis of TB while antibiotic treatment is instituted for pneumonia

Key lessons

- In the Coastal Cities of Kilifi and Mombasa in Kenya, TB was the cause of CAP in about 10% of cases in the year 2000 (1)
- The use of newer quinolones such as moxifloxacin in the management of CAP and HCAP in such settings should be done with extreme caution keeping in mind that there is a risk of masking active TB and an increased risk of FQ resistance in MTB (2)

1.Scott JA, Hall AJ, Muyodi C, Lowe B, Ross M, Chohan B, et al. Aetiology, outcome, and risk factors for mortality among adults with acute pneumonia in Kenya. Lancet. 2000 Apr 8;355(9211):1225-30. PubMed PMID: 10770305.

2. Singh A. Fluoroquinolones should not be the first-line antibiotics to treat community-acquired pneumonia in areas of tuberculosis endemicity. Clinical infectious diseases : an official publication of the Infectious Diseases Society of America. 2007 Jul 1;45(1):133; author reply 4-5. PubMed PMID: 17554716.

World Health Organization

Ref. EHT/SAV/Alert 5 2015 18 November 2015

Medical Product Alert N° 5/2015

Falsified Emergency Contraceptive circulating in East Africa

This Medical Product Alert relates to the confirmed circulation of falsified versions of Postinor-2 (Levonorgestrel) in East Africa.

Postinor-2 is a widely used emergency contraceptive that should contain 0.75mg of levonorgestrel. The genuine product is manufactured by Gedeon Richter.

In August 2015, the Uganda National Drug Authority notified WHO of the seizure of falsified Postinor-2 discovered in Kampala, Uganda. All packs reported bear the same batch number and expiry/manufacturing dates.

The details of the product are as follows:

Product Name	Postinor-2
Batch Number	T38012
Manufacturing Date	08 2013
Expiry Date	08 2018

There is a non-useable white "scratch area" on the reverse side of the pack, (see photograph below). The packaging is in English, French and Spanish languages.

The batch number and manufacturing/expiry dates relate to a genuine batch of Postinor-2. Laboratory analysis has shown that the product contains same active pharmaceutical ingredient. Furthermore, the manufacturers of genuine Postinor-2 have confirmed the packaging is falsified.

If you are in possession of the same batch of Postinor-2 shown in the below photograph and with a non-useable white "scratch area" on the reverse side of the pack please do not use, contact a Pharmacist or a Doctor as soon as possible for advice and report the incident to your National Medicines Regulatory Authority.

If you think you have taken this product, please seek medical advice immediately.

If you have any information concerning the supply of this product please contact rapidalert@who.int

WHO Surveillance and Monitoring – Rapid Alert

Substandard, Spurious, Falsely labelled, Falsified and Counterfeit (SSFFC) Medical Products

All WHO Drug Alerts are available at the following link:
http://www.who.int/medicines/publications/drugalerts/en/

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