



Antibiotics Consumption in the Eastern Region of Libya 2012-2013

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Abstract

This study is to assess the trend of antimicrobial consumption in the Eastern region of Libya during 2012 – 2013 .



Introduction

A drug classification system represents assortment

Like:

- ✓ Drug Utilization Research (DUR) is defined by WHO as "The marketing, distribution, prescription and use of drugs in society .
- ✓ The Defined Daily Dose (DDD) can be used as a unit for measurement of drugs consumption .





Introduction

- ✓ (NCPI) National Company of Pharmaceutical Industry responsible for all drug manufacture and imports in Libya
- ✓ (MSO Medical Supply Organization responsible for purchasing and distribution of drugs to public hospitals and clinics



METHODS AND MATERIALS

- ❑ SOURCES OF INFORMATION
- ❑ DATA COLLECTIONS AND CALCULATIONS



SOURCES OF INFORMATION

1) Main store of the General Secretariat of Health in Benghazi

Data from the store included tenders' requirements, imported quantities, consumed, expired, stock and drug inven 2012 & 2013, addition to quantities of drugs issued periodically to each health Facility .



SOURCES OF INFORMATION

2) Medical Supply Organization (MSO)

MSO is the only body responsible for the drug supply to public health institutions in the Eastern province.



DATA COLLECTIONS AND CALCULATIONS

1) Drug Import to the Eastern region of Libya

Total amounts of drugs imported and consumed annually during the two years of the study were obtained by adding up the figures from stores of the NCPI and stores of MSO



DATA COLLECTIONS AND CALCULATIONS

2) Drug consumption in the Eastern region of Libya :

The amounts of drugs consumed in all Eastern region of Libya were obtained from the records of the Secretariat of Health stores and from the stores of the NCPI



DATA COLLECTIONS AND CALCULATIONS

Equation : Annual drugs sales = (drug remaining from previous year + drug imported the study year) - (drug remaining from the study year + drug expired the study year).



DATA COLLECTIONS AND CALCULATIONS

Calculation of consumption of antibiotics as DDD/1000 inhabitant /day is calculated from the following formula:

Amount of drug imported or consumed in a year (in mg)/ $DDD(mg) \times 365 \text{ days} \times \text{number of inhabitants} \times 100$





RESULT

The antibiotics decreased dramatically in 2013 compared to the 2013 (Table 1). The total consumption of antibiotics was dramatically decreased in 2012-2013 compared to 1991-1993 (Table 2).





RESULT

The Penicillins, sulfonamides and tetracyclines total antibiotics consumed during 1991-1993 in Eastern region of Libya are (Table 3).

Meanwhile the penicillins, tetracyclines and amphenicols was total antibiotics consumed during 2012-2013 inthe Eastern region of Libya (Table 3).





RESULT

The (Ampicillin) of all penicillins consumed during 1991-1993, but its use was reduced during 2012-2013 (Table 4). Amoxicillin and amoxicillin/clavulanic acid combination respectively of all penicillins consumed during 1991-1993, but their use was increased during 2012-2013 In addition, ampicillin of during 2012-2013 compared to 1991-1993 (Table 4).



RESULT

Noting that fusidic acid represented 38.25% of all antibiotics used during 2012-2013 and hence



DISCUSSION

Importance of Surveillance of antimicrobial consumption is undeniable. It is used to improve the quality of antimicrobial usage. The higher the per capita antibiotic consumption is, the higher the resistance is. It is global problem, and DUS has been emphasizing it.





DISCUSSION

Studies made between 1980-2013, and covered Eastern region of Libya, have shown no changes in the prescribing and consumption pattern of the antibiotics, despite the changes in the population.





DISCUSSION

Anatomical Therapeutic Chemical Classification System (ATC) Defined Daily Dose (DDD) methodology is still recommended by WHO experts to achieve comparative data for drug consumption between different countries.



Total consumption of antibiotics, in the Eastern region of Libya, during 2012-2013 was far lower in comparison with that of 1991-1993 .





DISCUSSION

Current study has shown decrease in ampicillin consumption and



increased Augmentin consumption.

It approves that microbial resistance towards ampicillin was significantly shown previously in Libya .





DISCUSSION

1) It is an ecological study – where data are collected on a population rather on an individual level.

Therefore, the relationship between the observed levels of consumption and resistance should be interpreted with some caution





DISCUSSION

2) Data did not differentiate the consumptions in private and public sectors.



3) in 2011, many drugs entered the Eastern region of Libya as donations. Distribution process was not clear. As a result, the total antimicrobial utilization in the Eastern region of Libya may be higher than that reported here.





DISCUSSION

The most effective approach for improving antimicrobial use is probably through the combination of many interventions, which should be supported by government and the official authorities. moreover ‘additional restriction policy and rational antibiotic guidance are required.





CONCLUSION

Medical Supply Organization MSO, since 2011 (post 17th February 2011 revolution), lost its control on importing medicines due to receiving many drugs as donations from different international sources without acceptable level of coordination.

This has reflected on drug purchasing policy of MSO during 2013.



CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.





REFERENCE

Bukhatwa, S., Khalifa, A. and Elfakhri, M.,
2017. Antibiotics consumption in the Eastern
Region Of Libya 2012-2013. *Libyan
International Medical University Journal*,
2(1), p.55.





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Thank you!

