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An overview of Albanian Pharmacovigilance System and its harmonization with the European Pharmacovigilance Legislation

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Introduction

World Health Organization (WHO) has defined adverse drug reactions (ADRs) as "A response which is noxious and unintended, and which occurs at doses normally used in humans for the prophylaxis, diagnosis, or therapy of disease, or for the modification of physiological function".[1]

Reporting the real-time health concerns by filling the adverse drug reactions reporting form does not only help in detecting ADRs, but also in reducing the real time health problems related to therapy, such as disruptions of the therapy, reduction of costs, and can help in reducing morbidity. However, there are many challenges in monitoring ADRs.

The aim of the pharmacovigilance (PV) system is to increase the safety of medicines, and to improve the public health. In Albania the pharmacovigilance office is established at the Albanian National Agency of Drug Control and Medical Devices (AKBPM). Only in the recent years the pharmacovigilance sector has undergone some changes. The aim of this paper is to assess the current Albanian legislative framework on pharmacovigilance, defining its problems, and future challenges, which can contribute in harmonizing it with the European pharmacovigilance legislation.

Methodology

The current Albanian Pharmaceutical legislation on pharmacovigilance was compared to the Directive 2012/26/EU of the European Parliament and of the Council amending the Directive 2001/83/EC in regard to pharmacovigilance,[2] and to the Regulation EU No 520/2012 of 19 June 2012 on the performance of pharmacovigilance activities.[3] In addition, a literature search was conducted in Pubmed and Scopus databases using as keywords "Adverse drug reactions" and "Albania" for all studies carried out in Albania reporting the adverse drug reactions among health professionals and patients. Only few studies were found, and all of them reported the limited knowledge and reporting of ADRs among health professionals and patients.[4,5,6] The official website of the AKPBM was also searched for potential data on either reported ADRs in the country in the last years, or confirmed ADRs. No data were found in regard. Only the ADR reporting form for both patients, and health care professionals were found in the AKBPM official website.

Pharmacovigilance legal framework

In Albania the pharmaceutical legislation 105/2014 "For Medicinal Products and Pharmaceutical Service", chapter XI, article 57 defines the Pharmacovigilance sector in Albania.[7] The only changes made to law no. 105/2014, occurred on December 2022. The article 57 point 1, states that the pharmacovigilance sector, a structure of the Albanian National Agency of Drug Control and Medical Devices, operates on the basis of a regulation of the system of pharmacovigilance in the Republic of Albania and is responsible for gathering information on the occurrence of drug risks to patients, or to public health. This information, in particular, refers to adverse effects in human beings, as a result of the use of drugs in accordance with the indications described in the marketing authorization or not, as well as a result of inappropriate exposure to medicines. Adverse effects are reported via the Adverse Effect Reporting Forms for Patients and Health Professionals".

In addition, the recent changes made to the law, established for the first time in Albania (December 2022) the time limits of reporting ADRs.[8] Specifically, it was reported that: "Unexpected adverse effects must be reported within 24 hours from day zero, serious ADRs within 15 days from day zero, and adverse effects within 90 days from day zero". The person qualified for pharmacovigilance must be a resident of the Republic of Albania, must have completed the studies in the field of medicine, pharmacy, or dentistry, and be specialized or have completed certified training for pharmacovigilance. It is responsible for the establishment and maintenance of the pharmacovigilance system.

Adverse event reporting system in Albania

Healthcare professionals (pharmacist, doctors, dentists, nurses, physiotherapist, clinicians), and patients can report the suspected ADRs to AKBPM by sending the information (ADRs reporting form) electronically, or handle it physically to AKBPM. Patient reports are a valuable resource in exploring the information in signal detection. Fig. 1 shows the ADR reporting form for patients, and Fig. 2 shows the ADR reporting form for healthcare professionals.

DESCRIBE WHAT HAPPENED

Describe the event in your own words, any symptoms or adverse effects you suspect were caused by the time you took the medicine, and what has happened since then.
Other specific details about each medicine and relevant dates can be entered below, but please include enough information here to connect to the Reactions/Effects/Symptoms section, below.

***Description**

_____
_____
_____

Reactions/ Symptoms
Describe the reactions in your own words. Click the "Add another reaction/symptom/effect" button for each reaction/symptom/effect you will describe.

***Reaction/ Symptom** _____
*Start date: _____
Fill in as complete as possible

End date _____
Fill in as complete as possible

Duration

Outcome of reaction
- ☐ Was recovered
- ☐ Is recovering
- ☐ There is no improvement
- ☐ Is recovering, with complications, or permanent damage
- ☐ Fatal
- ☐ Unknown

Did the reaction lead to any of the following effects?
- ☐ Death
- ☐ Life threatening
- ☐ Disabling/incapacitating
- ☐ Caused /prolonged hospitalization
- ☐ Congenital anomaly/birth defect
- ☐ Other medically important condition

Figure 1. ADR reporting form for patients. (Continue)
(*) Obbligatory fields

MEDICINES

Enter the name and details for each medicine you were taking before the adverse effect occurred. Click on "Add another medicine" for each new medicine you want to add. Please also describe any herbal preparations, recreational drugs, or other alternative medicines you were taking.

*** Medicine name** _____
Full name of medicine (as on package)

☐ It is likely to cause the adverse effect/reaction/symptom
Do not click here if you do not think the medicine caused the reaction/symptom/adverse effect

The manufacturer of the drug _____
Company name (as on package)

Batch Number _____

Dosage _____
How much you take? For example: "2 tablets 50 mg, 3 times a day"

Route of administration
Commonly used
- ☐ Oral
- ☐ Intramuscular (injection in the muscle)
- ☐ Intravenous (injection in the veins)

Others
- ☐ Inhalation (Respiratory)
- ☐ Subcutaneous injection (under the skin)
- ☐ Intramuscular (injection in the muscle)
- ☐ Intravenous (injection in the veins)
- ☐ Cutaneous (in the skin)
- ☐ Nasal
- ☐ Not known
- ☐ Oftalmic (in the eye)
- ☐ Oral
- ☐ Rectal
- ☐ Others
- ☐ Vaginal

Start date: _____
Fill in as complete as possible

End date _____
Please leave it blank if the medicine is still being taken

Duration _____

Reason for taking the medicine _____
Why did you take the medicine? (For example: diabetes, headache, etc.)

Action taken with medicine
- ☐ Discontinuation of medication
- ☐ The dose was reduced
- ☐ The dose was increased
- ☐ The dose was not changed
- ☐ Not known
- ☐ No action was taken

Figure 1. ADR reporting form for patients. (Continue)
(*) Obbligatory fields

ADDITIONAL INFORMATION

Please provide a short description of your medical history. This is important since some reactions/symptoms/effects only appear with a combination of previous or ongoing disease, special diets, recreational drugs, smoking habits, alcohol intake or allergies. You can also enter other comments that you feel are important.

Current and previous illnesses _____

Additional comments _____

USER OF THE MEDICINE

*Initials _____
*Gender: F ____ M ____ DO NOT KNOW
☐ Pregnant
☐ Lactating

Weight (kg): _____

*Date of birth (DD/MM/YEAR) _____
Complete date of birth or age must be entered

*Age at the time of occurrence of adverse effect/reaction/symptom_____

Country where the reaction/symptom/adverse effect started_____
This is important if the environment was the cause of the reaction/symptom/adverse effect

CONTACT DETAILS

*E-mail_____
Telephone _____

Figure 1. ADR reporting form for patients.
(*) Obbligatory fields

USER OF THE MEDICINE

*Initials _____
*Gender: F ____ M ____ DO NOT KNOW
☐ Pregnant
☐ Lactating

Weight (kg): _____

*Date of birth (DD/MM/YEAR) _____
Complete date of birth or age must be entered

*Age at the time of occurrence of adverse effect/reaction/symptom _____

Country where the reaction/symptom/adverse effect started _____
This is important if the environment was the cause of the reaction/symptom/adverse effect

DESCRIBE WHAT HAPPENED

Describe the event in your own words, any symptoms or adverse effects you suspect were caused by your medicine, and what happened since then.
Other specific details about each medicine and relevant dates can entered below, but please include enough information here to connect to the to the Reactions/Effects/Symptoms section, below.

***Description**

_____
_____
_____

Reactions/Symptoms
Describe the side effects in your own words. Click the "Add another reaction/symptom/effect" button for each reaction/symptom/effect you will describe.

***Reaction/Symptom** _____
*Start date: _____
Fill in as complete as possible

Termination/ end date _____
Write as many details as possible

Duration

Outcome reaction
- ☐ Was recovered
- ☐ Is recovering
- ☐ There is no improvement
- ☐ Is recovering, with complications, or permanent damage
- ☐ Fatal
- ☐ Unknown

Did the reaction cause lead to any of the following?
- ☐ Death
- ☐ Life threatening
- ☐ Caused significant or permanent incapacity (disability, or lack of capacity)
- ☐ Caused/prolonged hospitalization
- ☐ Congenital anomaly/birth defect
- ☐ Other medically important condition

Figure 2. ADR Reporting form for Healthcare Professionals. (Continue)
(We have evidenced in red all the part that differ from the ADRs patients reporting form)
(*) Obbligatory fields

MEDICINES

Enter the name and details of each medicine you were taking before the reaction occurred. Click on "Add another medicine" for each new medicine you want to add. Please also describe any herbal preparations, recreational drugs or other alternative medicines you were taking.

*** Medicine name** _____
Full name of medicine (as on package)

☐ It is likely to cause the adverse effect/reaction/symptom
Do not click here if you do not believe this medicine caused the reaction/symptom/adverse effect

The manufacturer of the drug _____
Company name (as on package)

Batch Number _____

Dosage _____
How much did you take? For example: "2 tablets 50 mg, 3 times a day"

Route of administration
Commonly used
- ☐ Oral
- ☐ Intramuscular (injection in the muscle)
- ☐ Intravenous (injection in the veins)

Others
- ☐ Inhalation (Respiratory)
- ☐ Subcutaneous injection (under the skin)
- ☐ Intramuscular (injection in the muscle)
- ☐ Intravenous (injection in the veins)
- ☐ Cutaneous (in the skin)
- ☐ Nasal
- ☐ Not known
- ☐ Oftalmic (in the eye)
- ☐ Oral
- ☐ Rectal
- ☐ Others
- ☐ Vaginal

Start date: _____
Fill in as complete as possible

End date _____
Please leave it blank if the medicine is still being taken

Duration _____

Reason for taking the medicine _____
Why did you take the medicine? (For example: diabetes, headache, etc.)

Action taken with medicine
- ☐ Discontinuation of medication
- ☐ The dose was reduced
- ☐ The dose was increased
- ☐ The dose was not changed
- ☐ Not known
- ☐ No action was taken

Figure 2. ADR Reporting form for Healthcare Professionals. (Continue)
(We have evidenced in red all the part that differ from the ADRs patients reporting form)
(*) Obbligatory fields

ADDITIONAL INFORMATION

Please provide a short description of your medical history. This is important since some reactions/symptoms/effects only appear with a combination of previous or ongoing disease, special diets, recreational drugs, smoking habits, alcohol intake or allergies. You can also enter other comments that you feel are important.

Current and previous illnesses _____

Additional comments _____

CONTACT DETAILS

*Profession
- ☐ Doctor
- ☐ Pharmacist
- ☐ Other health professions

Given name _____
Family name _____
Health facility: _____
*E-mail_____
Telephone _____

Figure 2. ADR Reporting form for Healthcare Professionals.
(We have evidenced in red all the part that differ from the ADRs patients reporting form)
(*) Obbligatory fields

Current issues and future challenges

Albania is an associate member of WHO-Uppsala Monitoring Centre since 2011, and as a full member since 2020.[9]
Despite the recent legislative changes on pharmacovigilance, there are still many aspects on the pharmacovigilance system to be changed, and harmonized with the EU Pharmacovigilance Legislation starting from the ADR reporting form, for both patients and health care professionals.

Many details are still missing in the ADR reporting form of patients, and health care professionals, such as data on the respective trimester of pregnancy (1st, 2nd, 3d trimester), date of last menstruation of the patient. Information whether the suspected drug was taken in the past, and if it has caused the same reaction, should also be reported. Data on whether the adverse effect is a result of the incorrect use of drug (dose error, or wrong route of administration, or drug overuse) should be reported. Information whether other drugs were used to treat the reported adverse effect should also be included.

In case the ADR reporting form is not completed by the patient, but from other persons, such as parents, data on the reporter should be added (given name, family name, address, signature). In case the suspected drug is prescribed by a doctor, information on the doctor (given name, family name, telephone, email, address) should also be added in ADR patient reporting form. Patients should also be asked if the doctor was informed on the suspected ADR, and the situation should be further assessed if the patients allow the pharmacovigilance experts to get in touch with their physicians.

In the ADR reporting form of the health care professionals in the patient's detail section, the patient ethnic origin should also be included. It should also be indicated whether the adverse reaction derive as a result of interaction, abuse, professional exposure, overdose, misuse, therapeutic error. The concomitant use of other products, such as, food supplements is also a very important information that is missing. Patient's diagnosis should also be included. The section reporting the "given name and family name of the health professional" reporting the suspected ADR should be obligatory, other than optional.

The lack of a specific section in the AKBPM website to publish periodically all the confirmed ADRs, and to be reviewed by patients is also another issue of the Albanian pharmacovigilance system.

Conclusion

General public and health professionals in Albania are not aware on the way to report ADRs, and the importance of the real time report of ADRs for the public health. Few studies carried out in Albania assessing the ADR signalling among health professionals, or patients confirmed the lack of knowledge in regard.[4,5,6] Although activities are carried out by the AKBPM in different scientific events to inform health professionals on the pharmacovigilance system, specifically on ADRs, still more effort should be done. In Albania citizens should be massively informed through media, social media, and not only through scientific events on the importance and procedures of reporting the ADRs in real time manner.

However, creating a pharmacovigilance network, with pharmacovigilance representatives from each city in Albania will help in monitoring and collecting in time manner the suspected ADR reports.

In addition, ADRs of medical devices, phytotherapeutics, cosmetics, etc. should also be reported. Specific questionnaires should be developed in regard, and general public should be informed (patients and health care professionals) through public

media on the way of reporting ADRs even though they may not be serious, or frequent.

In conclusion, it is important to inform both patients, and health care professionals either on the lack of legal implications for the reporters, or on the privacy of patients' identity.

Abbreviations

ADR: Adverse drug reaction
EU: European Union
WHO: World Health Organization
PV: Pharmacovigilance
AKBPM: National Agency of Drug Control and Medical Devices

Declarations section

Ethics approval and consent to participate
Not applicable

Consent for publication

Not applicable

Availability of data and material

Not applicable

Competing interests

The authors have no conflict of interest to declare

Authors' contributions

M.H. prepared the manuscript, M.F. and B.Z. revised the manuscript.

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