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IDENTIFICATION OF HAZARDOUS DRUGS AND PROCESS IN A UNIVERSITY HOSPITAL

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BACKGROUND AND IMPORTANCE:

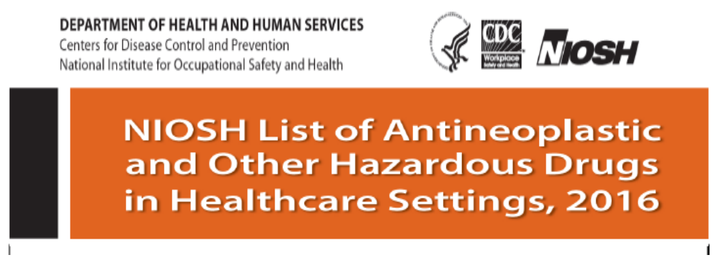
Occupational exposure to hazardous drugs (HD) can cause damage to health in exposed healthcare professionals, so protective measures must be taken.

AIM AND OBJECTIVES:

To identify HD included in the Pharmacotherapeutic Guide (GFT) of our hospital and dangerous situations to subsequently develop a safe work procedure for workers.

METHODOLOGY:

Systematic review of publications in the last 10 years in humans in the database:
PubMed using as MESH terms: hazardous drugs, safe handling, occupational exposure, and combining related descriptors.
Inclusion criteria: list of medications from the GFT of our hospital.
Comparator: list established by the NIOSH year 2016.



RESULTS:

The main variable studied was the identification of MP: 274 drugs with active ingredients classified as HD were detected in our GFT. In addition, despite not being in the NIOSH listings, HD was considered acenocoumarol, due to its similarity to warfarin (List3 NIOSH). Therefore, 275 medications were finally counted. Of those 275 drugs correspond to 151 active substances; depending on its danger; 92 active ingredients included in List1 (antineoplastic medicine), 26 in List2 (non-antineoplastic drugs that meet at least one hazard criteria), 26 in List3 (drugs that pose a risk to the reproductive process that may affect men / women who are actively trying to conceive, and pregnant women / breastfeeding period, but that do not pose a risk to the rest of the staff) and 7 according to the medication's data sheet. The second variable studied is the identification of processes that cause risks for the safety of workers in contact with HD, being four processes: reception, transport and distribution, preparation, and treatment of waste, which in the absence of specific preventive measures cause risks for the safety and health of workers.

TABLE 1. NIOSH HAZARDOUS DRUG CATEGORIES

GROUP 1	GROUP 2	GROUP 3
Antineoplastic drugs—many may also pose reproductive risk in susceptible populations[1] (AHFS classification 10:00)	Nonantineoplastic drugs that meet 1 or more of NIOSH criteria for a hazardous drug—some may also pose reproductive risk in susceptible populations[1]	Drugs that primarily pose reproductive risk to men and women trying to conceive and women who are pregnant or breast-feeding—some may be present in breast milk[1]

AHFS indicates American Hospital Formulary Service; NIOSH, National Institute for Occupational Safety and Health.

TABLE 3. CATEGORY D AND X DRUGS

CATEGORY D
There is positive evidence of human fetal risk based on adverse reaction data from investigational or marketing experience or studies in humans, but potential benefits from use of the drug in pregnant women may be acceptable despite its potential risks.
CATEGORY X
Studies in animals or humans have demonstrated fetal abnormalities or there is positive evidence of fetal risk based on adverse reaction reports from investigational or marketing experience, or both, and the risk of the use of the drug in pregnant woman clearly outweighs any possible benefit.

CONCLUSION: The identification of HD is a key aspect to avoid occupational risks and ensure the safety of the healthcare professional. Recent research identifies dangerous situations and establishes an association between occupational contamination and levels of exposure to antineoplastic drugs, with the training and information of the health worker in HD matters being a crucial aspect.

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