

WRONG MEDICAL PROCEDURES FOLLOWED BY AN ACCIDENT THROUGH BLOOD EXPOSURE IN THE MEDICO-SANITARY PERSONNEL IN A CLINICAL EMERGENCY HOSPITAL

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Abstract: The sanitary personnel is inegally exposed to the risk of blood contamination, risk influenced by the particularity of the medical specialty, the experience and manuality obtained. Almost the majority of the medical personnel wears protection equipment. Although wearing the whole protection equipment would have been necessary in a high percentage of cases, because the wearing of two pairs of gloves doesn't reduce the frequency of the accidents through blood exposure, but divides with three the risk of blood contact or with a contaminated product

Cuvinte cheie: practici greșite, echipament de protecție, accident prin expunere la sânge

Rezumat: Personalul medico-sanitar este inegal expus riscului contaminării cu sânge, risc influențat de specificul specialității, experiența și manualitatea dobândită. Majoritatea personalului medicosanitar poartă echipamentul de protecție. Totuși portul întregului echipament de protecție ar fi fost necesar într-un procent mare de cazuri, deoarece portul a două perechi de mănuși nu scade frecvența accidentelor prin expunere la sânge dar divide cu 3 riscul de contact cu sângele sau cu un produs contaminat

INTRODUCTION

The medical personnel and the situations at risk: the medico sanitary personnel is unequal exposed to the risk of contamination, risk influenced by the specific of the activity, the experience and manuality obtained in executing the manoeuvres and procedures: respecting the ambientale adequated conditions in displaying specific activities.

Although the caring personnel in the medical department and the graduate nurse have a reduced rate of risk exposing than the one of the personnel with surgical profile (especially from the surgical block), they are exposed to the accidents through blood exposure due to the direct and unprotected contact with the majority of the cared persons. The high risk is represented in this situation by the prickings often profound and with sharp and void needles containing blood, needles used in the intravascular procedure.

Table no. 1 Comparison between the accidents through blood exposure in the medical and surgical departments

The accidents through blood exposure in the medical services	The accidents through blood exposure in the surgical services
Reduced risk exposures	Frequent risk exposures
Percutaneous accidents are less frequent	Percutaneous accidents are frequent
Prevalence of the infection's risk may be higher	Prevalence of the infection's risk may be smaller

Source: The Management Unit of Projecting the Global Fond, The management of the postexposure at biologic products accident, Health Minister 2005

The cumulated risk is bigger in the surgical departments. The accidents through blood exposure appear more often in gestures or manoeuvres incorrectly effectuated: the reccapping of a siringe needle or a scalpel blade that wasn't stored

in a special security container. The risk of an accident is increased through the use of many cutting/pricking objects and by the interventions on a small surface, as the case of the intraoperative or invasive gestures in reanimation. The graduate nurses are more often the victims of the accidents through blood exposure with high contaminated risk factors.

The risk factors in the pathogenic agents transmission through blood and other biologic liquids

We need to consider at risk the teguments and mucosas contact with blood, amniotic liquid, pericardial liquid, peritoneal liquid, pleural liquid, synovial liquid, cefalorahidian liquid, sperm, vaginal secretions, tissues and any other organic fluids visibly contaminated with blood.

Table no. 2 The transmitting risk regarding the type of biological liquid

Virus	Sure	Possible	Null
HBV	Blood or biological liquids that contain blood	Sperm, vaginale secretions, ascitis liquid, saliva	Urine, excrements
HCV	Blood	Sperm, vaginale secretions	Urine, excrements, tears and saliva
IHV	Blood or biological liquids that contain blood	Sperm, vaginale secretions, ascitis liquid and amniotic liquid, cefalorahidian liquid	Urine, excrements, tears and saliva

The Source: The Management Unit of the Global Fond Project, The Management of the accident postexposure to biological products, Minister of Health 2005

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OBJECTIVE OF THE STUDY

The objective of the study: to estimate the wrong practices followed by an accident through blood exposure and which is the level of the using of the protection equipment by the medico sanitary personnel. It has ben effectuated a study on a 4 years period between 2006 and 2009 regarding the accident through blood exposure in the medicosanitary personnel in a Clinical County Hospital,which analysed this type of accidents from several points of view:the apparition circumstances,the exposure nature, the accident's mechanisms,respecting the universal precautions, of the good practices and the wear of the protection equipment (gown,gloves,mască,face shield etc)

MATERIAL AND METHODS

The Material of study: was represented by a part of the medico-sanitary personnel from the Emergency Clinical Hospital of Sibiu selected in two lots: a lot to study the subjects from the departments with a high risk of accidents through blood exposure compared with the low risk departments of accidents through blood exposure, so a witness lot and a research lot.

Table no. 3. Study material

Study material: 968 subjects	
Research Lot 510 persons from departments with a high risk of accidents through blood exposure(surgical departments, ATI, hemodialysis)	Witness Lot 458 persons from departments with a low risk of accidents through blood exposure (medical departments)

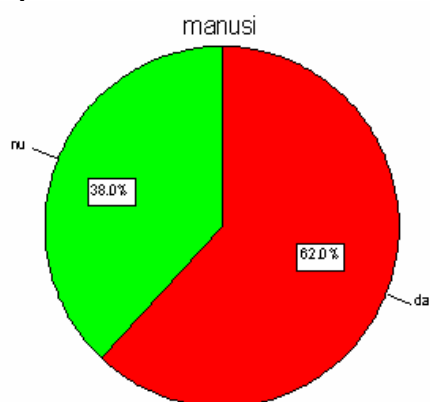
The professional accidents through blood exposure during 2006-2009 have been studied .

Regarding the good practices, every accidentated person was questionned and answered the following question: - which do you thing it was the cause of your accident and how do you thing you could avoid it?

RESULTS AND DISCUSSIONS

62% of the medicosanitary personnel was wearing gloves at the moment of the accident production and i 38% wasn't wearing gloves at the moment of the accident production.(figure no.1)

Figure no. 1 The distribution of the professional accidents through blood exposure in accordance with the wear of the gloves as a protection mean



68,3% of the medicosanitary personnel wasn't wearing a mask at the moment of the accident production and 31,7% was wearing a mask at the moment of the accident production(figure no2)

100% of the medicosanitary personnel was wearing a gown at the moment of the accident production (figure no.3).

Figure no. 2. The distribution of the professional accidents through blood exposure in accordance with the wear of the mask as a protection mean

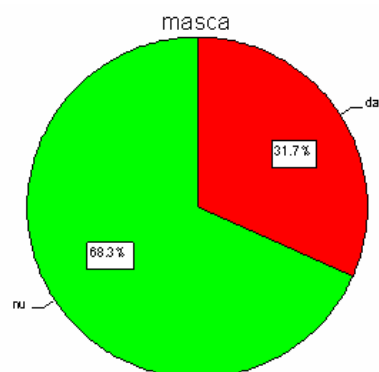


Figure no. 3. The distribution of the professional accidents through blood exposure in accordance with the wear of the gown as a protection mean

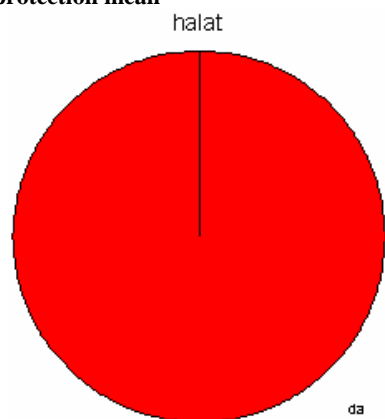
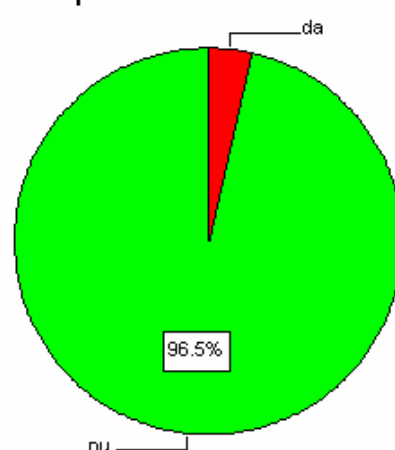


Figure no. 4. The distribution of the professional accidents through blood exposure in accordance with the wear of the facial protector as a mean of protection

protector facial



96,5% of the medicosanitary personnel wasn't wearing a facial protectorin at the moment of the accident production and 3,5% of the medicosanitary personnel wore a facial protector at the moment of the accident production (figure no.4)

From the point of view of the universal precautions application and of the good practices all the questionnaire have been analyzed and we have elaborated a list with the main eronated practices met at the medicosanitary personnel. Here are some of them:

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- It is not used the table for treatments and the collector for pricking cutting waste products in the ward within reach, the needles are put at the sick man's bed.
- No gloves are worn.
- the needles are recapped.
- If the collector for pricking objects is used the collector for the pricking cutting objects is at a great distance from the place of treatment and the needles are put on the sick man's bed.
- Used needles are left on the collector's lid.
- The needles fallen by mistake are collected with the bare hand, no gloves.
- Lack of the concentration and attention when they work with restless patients.
- Emptying the recipients for waste products with the intention of recycling them.
- Throwing needles in yellow sack.
- The transport of waste products in improvised box.
- The face and eyes are not protected enough with facial protector and eyes protector in the departments with high risk.
- It is not respected the level of filling of the special boxes for waste products.
- The waste products aren't correctly sorted out on categories.
- Needles are temporary collected in renal trays.
- They force the closing of the boxes full of wastes.
- The needles for insuline administration are left on the patients bedsides ,a source of accidents for the cleaning personnel.
- The graduate nurses washes the patient's bed clothes spotted with blood without gloves.

CONCLUSIONS

The majority of the medicosanitary personnel wears protection equipment. Although the wear of the whole protection equipment would have been necessary in a higher percentage of cases, because the wear of two pairs of gloves doesn't reduce the frequency of the accidents through blood exposure, but divides with three the contact risk with the blood or any other contaminated product.

It is remarkable the fact that a very big percentage of the medicosanitary personnel didn't wear during the job (or during the contact with the patient) a facial protector (more than 90%). The wear of the facial protector would have protected the employee of the accidents through splashing, but also of the ordinary intercurrent affections.

Regarding the possible severe consequences of the accidents through blood exposure (coming down with the B hepatitis virus, C, HIV but also with other pathogenic agents) each worker is responsible of taking care, if possible, of his health and security and of the other persons that may be affected by its actions and errors at the work place, in conformity with the preparation and the instructions given by its employee.

For reducing the number of such accidents, we consider that one of the most important elements is the formation of the medicosanitary personnel.

Initial shaping

This must be assured at the employment for the whole personnel, including the doctors.

Continous shaping

A general plan of continuous formation has to be organized deferring to: the evolution of the knowledge in different professional domains that implies risks, the frequency of the work accidents and of the professional diseases.

Adapting the programs to the individuals in accordance with the specific risks they are exposed at the work place.

Evaluation

Regularly it has to be effectuated an audit to evaluate the efficacy of the forming actions reported to the declared objectives.

The informing has an essential role in preventing risks. Its objective is of remembering the principles of prevention assimilated in the initial and continuous formation and of bringing technical precision. The informing should take into consideration all the risks. The formation instruments are:

- Posters that remind of the risk existence where they appear, the procedures and security orders.
- Symbols for biologic, chemical risk.
- Technical documents that may be emitted by the hospital's administration, by formators, by syndicates.
- Notes that specifies new modalities, new responsibilities, new formation strategies or information reunions.
- Elaborating mini-guides of wrong practices observed by the persons that manage the accidents through blood exposure

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