

Fact Sheet Nurse case

A young nurse, 26 year-old, is working in an pediatric oncology unit. She performs the classical tasks of a nurse (blood sampling, administration of medications, reports to the medical team). Furthermore, she often use N2O for short term analgesia and she occasionally performs cytotoxic reconstitution in a safety cabinet. She uses appropriate gloves, gowns and a mask for that task. She has no specific disease, except an history of atopy. She sometimes work at night.

She is about to start a pregnancy and asks for advice concerning the risks induced by her work.

She has been advised to switch to a geriatric unit by her employer for the duration of her pregnancy.

Risk assessment.

The main risks are

Lifting : no so much important due to the weight of the patients

Biological : as usual in health care settings

Psychosocial : the work in pediatric oncology unit is highly demanding

Chemical : the use of N2O may be hazardous. Cytotoxic drugs are hazardous but the exposure seems to be controlled by the use of a safety cabinet

Input of a specialist in OM

The fact that this nurse is pregnant should lead us to avoid exposure to N2O.

The safety cabinet does not offer a 100% protection and, given the risks for the fetus, this task should not be allowed.

Considering the use of PPE, this nurse should be aware of the risk of allergy to latex, and should, when possible, use other glove material. However, the permeation of the material should be taken into consideration according to the cytotoxics drugs used.

Night shifts should be avoided after 10 weeks of pregnancy (risk of stillbirth)

The transfer to a geriatric unit does not appear to be a perfect solution considering the risk of lifting during pregnancy.

Lastly, if this nurse is anxious concerning her pregnancy, this fact in itself should be taken into consideration, besides any risk assessment procedure.

Hepatitis B vaccination

A 46 year-old male orthopedic surgeon (born in 1979 in Senegal) is hired in your hospital.

He has no particular medical history (varicella in his young age) and has no complain nor clinical sign.

He is just overweight (BMI 33) and is a current smoker.

He shows you his vaccination history.

DTP are correct.

He has received three doses of HBV vaccine 5 and 6 years ago (2 doses at 1 month interval and a third dose after 6 months)

You perform blood examination and you find a level of 2 UI/L of Hbs antibodies.

This case needs some knowledge in occupational medicine concerning the HBV status: This person has been vaccinated properly, and the decrease in antibody levels is usual.

However, he comes from a HBV endemic area, he is at risk of non-response (age > 40, overweight and current smoker) and he performs exposure prone procedures.

You ask for anti-Hbc antibodies, Hbs antigen and liver test.

Anti-Hbc antibodies and Hbs antigens are positive but liver tests are normal.

This colleague has a chronic HBV infection.

What can be done?

The OP can focus on the prevention of needlestick exposures, for the surgeon and his patients; the implementation of blunt needle should be discussed.

The OP should inform the surgeon on the necessity to refrain from performing exposure prone procedures, according to the level of HBV DNA serum levels.

The OP is the only one to be able to implement preventive measures in the operating theatre, without breaking medical secret.