



**Conclusions.** Based on the above-mentioned observations it can be concluded that the forensic diagnosis of injuries of body falling into the water from a great height requires improvement. There is a major necessity in comprehensive study of such trauma for identifying clear diagnostic criteria for its forensic evaluation.

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**EFFECTS OF HIGH-FREQUENCY RANGE OF ELECTROMAGNETIC  
RADIATION ON THE GROWTH PROPERTIES OF PATHOGENIC  
CORYNEBACTERIA**

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**Introduction.** In our time, the influence of electromagnetic radiation on human exceeds the natural rate of a thousand times, but in the literature there are only individual variability with respect to opportunistic bacterial groups due to the influence of electromagnetic radiation, so *Corynebacterium* as a classic example of infectious agents is a good model for the study of the influence

**Aim.** The purpose of the definition of work- growth properties of pathogenic *Corynebacteria* under the influence of low-energy physics research factors. The object of research - strains of *C. diphtheriae*. Sources of electromagnetic radiation - standard generators G4-141 with power  $P = 5$  mW UHF inductor fluctuations had a standard signal G3-109. Found that treatment of bacterial suspensions wave with frequency of 61.0 GHz led to increase the growth rate of pathogenic *Corynebacterium* 1.2 times, while the frequency of 42.2 GHz led to a reduction in growth of 1.3 times. Thus, defined two modes, which led to the largest change in the growth rate of diphtheria: sequential mode ultrasonic irradiation with waves 61 GHz to cause the greatest encouragement, and sequential mode radiation waves 42.2 GHz, conversely inhibited the growth properties of pathogenic *Corynebacteria*. Certain modes opens the possibility to regulate the rate of growth of cultures of *Corynebacteria* in biotechnological processes as in the preparation of tetanus anatoxin, and the preparation of vaccines based on cell antigens.

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**CONGENITAL DISEASE OF HEART**

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**Introduction.** A congenital heart defect is a problem with the structure of the heart. It is present at birth. The defects can involve the walls of the heart; obstruct blood flow, the valves of the heart, and the arteries and veins near the heart.

Some congenital heart defects are as follows.

Aortic stenosis is a narrowing of the aortic valve or a narrowing of the aorta directly above (supravalvar) or below (sub aortic) the aortic valve. Normally, oxygen-rich blood is pumped from the left ventricle, through the aortic valve, into the aorta and then out to the body. With aortic stenosis, it makes it very hard for the heart to pump blood to the body.



Pulmonary stenosis is a narrowing of the pulmonary valve. Normally the pulmonary valve opens to let low-oxygen blood flow from the right ventricle to the lungs where the blood is oxygenated. Because of the narrowing, the right ventricle has to pump harder to get past the stenotic valve. This can sometimes lead to enlargement of the right ventricle. With pulmonary stenosis, problems with the pulmonary valve make it harder for the leaflets to open and permit blood to flow forward from the right ventricle to the lungs. In children, these problems can include: A valve that only has one or two leaflets instead of three. A valve that has leaflets that are partially fused together. A valve that has thick leaflets that do not open all the way.

Marfan syndrome. Children with Marfan syndrome are at risk for serious problems involving the cardiovascular system, including the following:

Mitral valve prolapse - an abnormality of the valve between the left atrium and left ventricle of the heart that causes backward flow of blood from the left ventricle into the left atrium. Arrhythmia (or dysrhythmia) - a fast, slow, or irregular heartbeat.

Aortic regurgitation - backwards leakage of blood from the aorta, through a weakened aortic valve, and into the left ventricle, resulting in stress in the left heart and inadequate blood flow to the body.

**Conclusion.** Aortic dissection - weakening of the layers inside the aorta, which can result in tears in the aortic wall and leakage of blood into the chest or abdomen; a medical emergency.

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**THE PROCEDURE OF SIGNING THE INFORMED CONSENT AS A KEY  
FACTOR OF BIOETHICAL NORMS GUARANTEE DURING CLINICAL TRIALS  
OF DRUGS**

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**Introduction.** Today according to the Nuremberg Code and Declaration of Helsinki one of the mandatory requirements of trials with human participation is signing the informed consent (IC) form by subjects before the start of any procedure of trial. Informed consent is a process that allows a patient or a healthy volunteer reaffirm their will freely participate in clinical trials (CT). The volunteers should understand all the procedures and risks of participating in CT. Such information is provided by a researcher to a potential volunteer during signing the IC. Unfortunately they do not always understand the aims and content of trial, its main terms, procedures and conditions. It is very important for volunteers to understand in which trial they agree to participate. The procedure of signing the IC form was designed to protect rights, health, well-being, confidentiality and ethical norms with respect to trial subjects.

**The aim** of the research was to analyze the level of the volunteers' understanding of the most common terms that could be used during signing the IC or participation in CT.

**Materials and methods.** The interview of 44 volunteers was held for the evaluation of volunteers' awareness during signing the IC. The questionnaire for respondents consisted of two parts: the first part included general questions (age, number of participations in CT) and questionnaire that allowed volunteers the self-assessment of their knowledge of terms which could be given across during CT, and the second – test questions of closed type for