

PREGNANCY AND IONIZING RADIATION

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In this report there will be presented the effects of ionizing radiation at the fetus and the necessary radioprotection.

The biological results on the fetus, caused by the irradiation, depend on the dose of ionizing radiation that it receives and the phase of its evolution. The imminent effects of the irradiation can cause the fetus's death, abnormalities and mental retardation, which are the result of overdose. The effects are carcinogenesis and leukemia, which are relative to the acceptable irradiating dose at the fetus and accounts about 0,015% per 1 mSv. The effects of ionizing radiation depend on the phase of the fetus's evolution:

1st phase (1st - 2nd week): presence of low danger.

2nd phase (3rd - 8th week): for doses >100 mSv there is the possibility of dysplasia.

3rd phase (8th week - birth): this phase concerns the results with a percentage 0,015% per 1 mSv.

We always must follow some rules of radioprotection and especially at Classical radiation use of necessary protocols (low dose), at Nuclear Medicine use of the right radioisotope and the relative field of irradiation for the protection of the adjacent healthy tissues and at Radiotherapy extreme caution is required regarding the dose and the treatment.

In any case, it is forbidden to end a pregnancy when the pregnant undergoes medical exams, in which the uterus is in the beam of irradiation. The radiographer must always discuss the possibility of pregnancy.

KEYWORDS: Irradiation, pregnancy, uterus, medical exams, possibility of dysplasia