

Effective dose levels in infants for pelvis X-ray exposures. First data for Chile

Niveles de Dosis Efectiva a Lactantes en Radiografía de Pelvis. Primeros Datos Para Chile

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In order to know the irradiation parameters in infants in Chile, the first data of entrance surface air kerma (ESAK) was determined from X-ray tube output and effective dose by software simulations with PCXMC for pelvis AP projection, in 69 pediatric patients aged between 3 and 6 months, in Arica city.. Results of mean effective dose \pm st.dev. (mSv) were: 0.0353 ± 0.0276 in colon; 0.0909 ± 0.0830 in ovaries/testes and 0.1338 ± 0.1082 in bladder. Meanwhile, the mean \pm st. dev. ESAK estimated for the entire sample was 0.1160 ± 0.0187 mGy, with a 75th percentile of 0.1176mGy, constituting our reference dose level, which is 20% above the proposed value in Europe. Of all the variables, it was determined that the most influential one in ESAK was the tube charge (mAs), so that it should be the focus when optimizing radiation protection of patients.