

Abstract

RISK ASSESSMENT OF IONISING RADIATIONS EXPOSURE IN ORTHOPAEDIC SURGERIES

In intervention radiology, and more specifically in orthopaedics, X-rays are intensely used allowing the visualization of many acts of clinical intervention. From a clinical perspective, the advantages of that practice are significant; however, involved health care professionals are susceptible of being exposed to radiation dose values that mean their classification as exposed workers.

The present study, performed in a hospital, aimed to obtain an estimation of the doses involved in intervention orthopaedics through several experimental methodologies in order to characterise the primary and the secondary radiation fields.

Different levels of dose were observed according to the anatomic area exposed to X radiation: (i) gonads — 0.02 a 3 mGy/h; (ii) crystalline lens — 0.06 a 1 mGy/h e (iii) hands – 0.6 mGy/h.

Such results denote a clear need of protection equipment use and of dosimetric surveillance by the health care professionals involved in the surgical procedure.

Keywords: occupational health; X-ray; occupational exposure; risk assessment; risk perception.