

P32: Radiographer's best practices for image quality assurance in diagnostic pediatric pelvic radiographs

Joana Miranda¹, Paula Cardoso², Sandra Rua Ventura³

¹School of Allied Health Technologies, Polytechnic Institute of Porto, Portugal

²Department of Radiology, Centro Hospitalar S. João, Porto, Portugal

³Department of Radiology, School of Allied Health Technologies, Polytechnic Institute of Porto, Portugal

Presenting author: joanamiranda_93@hotmail.com

Introduction: In pediatric diagnostic imaging, the image quality must be a constant concern to radiographers and orientated to the particular clinical problem. Pelvic radiographs are a common examination in children requiring specific preparation to be achieved.

Objectives: Our study aim to demonstrate the relevance of best practices when performing pediatric pelvic radiographs to improve diagnostic quality.

Materials and Methods: Through the retrospective analysis of 101 radiographs performed in children, image quality criteria were checked using the software MicroDicom. A visual grading scale of 8 points-scored regarding the technical aspects when performing a pelvic x-ray in children was also performed.

Results and Discussion: The most common errors of image quality criteria are the pelvic tilt (52.45%) and the central ray location of the x-ray beam (55.45%). The gonadal protective shields were absent in 42.57% (n = 101) of the patients.

Conclusion: The application of the current European Guidelines concerning the quality criteria when performing pediatric pelvic radiographs must be assessed and followed as far as possible.

Acknowledgments: The images considered were acquired at the Radiology Department of Hospital S. João, Porto, with the collaboration of Isabel Ramos (Professor from Faculdade de Medicina da Universidade do Porto and Department Director) and the technical staff, which are gratefully acknowledged.

References

1. MacKay, M., Hancy, C., Crowe, a, D'Rozario, R. & Ng, C. (2012). Attitudes of medical imaging technologists on use of gonadal shielding in general radiography. *Journal of Medical Radiation Sciences*, 59(2), 35-39.
2. Mbbs, G. B. I., Ao, F., Mbbs, A., Uu, F., SC, E. B., Nzotta, H. C., & Egbe, N. O. (2013). A study of pelvic radiography image quality in a Nigerian teaching hospital based on the Commission of European Communities (CEC) criteria. *The South African Radiographer*, 51(2), 15-18.
3. Ventura, S.R. (2013). *Técnicas e Procedimentos em Radiologia Convencional*. (1ª Edição). LIDEL. Lisboa.