

Clinical Analysis of Image Quality for Barium Special Investigations

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ABSTRACT:

This study aimed to report the inadequacies in the assessment of the image quality range of some hospitals in Sudan for a selection of standard specific radiologic exams to experience the level of matching to European Commission guidelines and to compare the findings with worldwide standards.

A subjective evaluation of 319 Images obtained from 95 individual radiologic GIT Barium Studies distributed as 138, 101 and 80 images from 40 (B. Swallow), 14 (B.Meal), 15 (B. Follow Through) and 26 (B. Enema), respectively. For each procedure, the Entrance Surface Air Kerma (ESAK) values were recorded. The image quality criteria scoring system was set for each projection, where two assessors reviewed the compliance of the films with the CEC recommendations. The maximum scores obtained were found to be Fully Acceptable; all anatomical structures were found to be 1.6 ± 13.66 , 53.2 ± 28.86 , 62.5 ± 15.53 for (B. Swallow), (B.Meal+ B. Follow Through) and (B. Enema) respectively. Also, The ESAK values recorded in this hospital survey yielded, 1.4 ± 0.48 mGy, 2.3 ± 0.90 mGy and 2.1 ± 0.60 mGy for the same cases respectively. The set of Image Criteria scoring system practiced in this study has been found to be convenient, and it is advised to be implemented in routine practice in the hospitals and moreover, the image quality needs to be combined with the patient dose.