

Grid Malalignment Artifact

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History

9 year old male with cough.

Diagnosis

Grid Malalignment Artifact

Discussion

Scatter radiation can decrease image contrast and image detail resulting in poor image quality. Scatter can be reduced by grids and air gap. The use of radiographic grids is the most effective means of eliminating scatter radiation from an image; air gap results in magnification and more patient dose than use of a grid. The biggest problem with radiographic grids is malalignment which can result in an underexposed image or haziness of the edge. Grid cutoff can be caused if the central ray is not perpendicular to the grid surface (off-level), the central ray is not aimed at the center of the grid (off-center), the distance from the X-ray tube head to the grid surface is beyond a given tolerance (off-focus) or the grid is upside down.

Findings

CR-Image density decreases from right to left.

Reference

Barnes GT. Contrast and Scatter in X-ray Imaging. Radiographics (1991); 11:307-323.



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