

Ring artefacts in cranial CT

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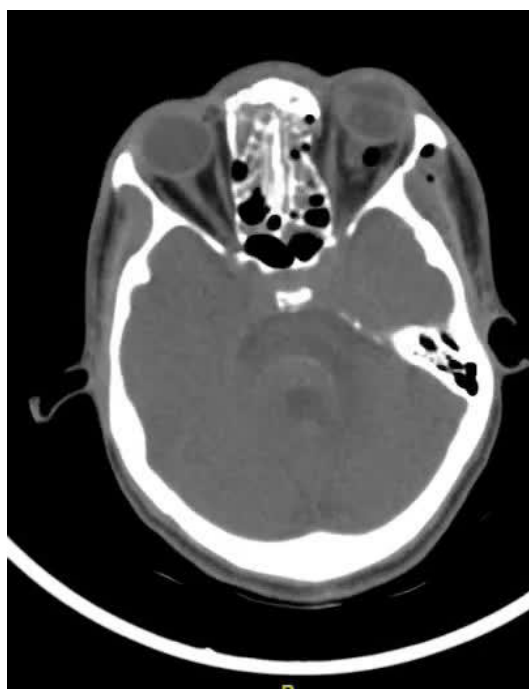
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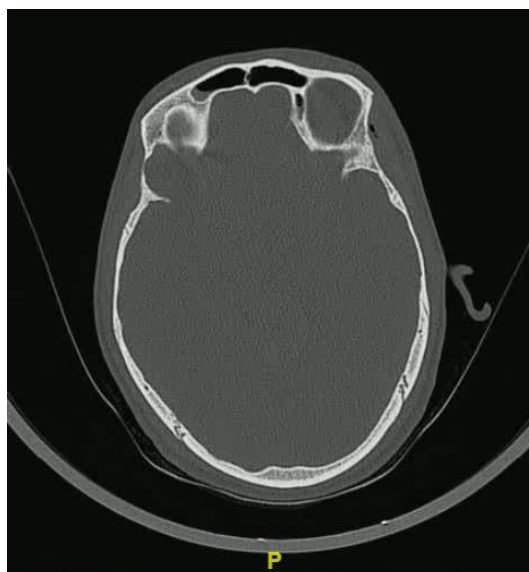
Accepted 8 July 2018

DESCRIPTION

A ring or arc artefact in a CT is a hardware related artefact that occurs due to a defective or miscalibrated detector. It is more common



Video 1 Serial sections of the scan (soft-tissue window) showing ring artefact.



Video 2 Serial sections of the scan (bone window) showing ring artefact.

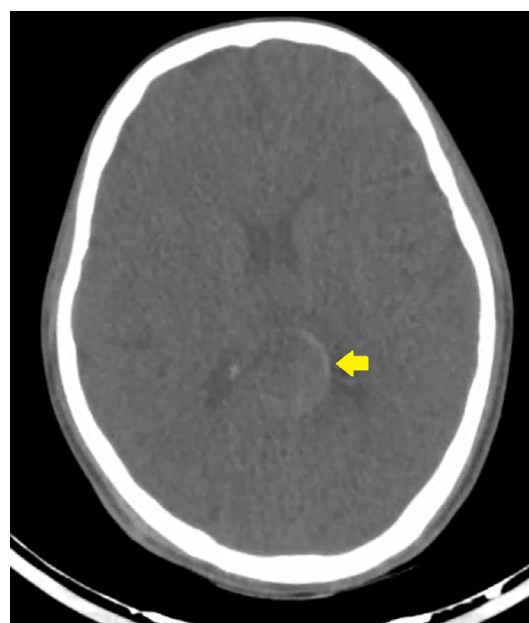


Figure 1 Axial section of scan showing the ring artefact (yellow arrow).

with third-generation CT scanners with solid-state detectors. It appears as complete circles (sequential scans), annular rings (multiple circles) or partial rings (helical/multislice CT) at the same spot near the isocentre in multiple sections.¹² Recognising this artefact is important as it may be subtle and misinterpreted as a pathological entity by the novice clinician.³ This artefact is usually more clearly visualised in the soft-tissue window of CT scans (video 1) than in the bone window (video 2).

Presented here is a case where an arc artefact was noted in the CT made for the evaluation of facial fractures (figure 1, videos 1 and 2). The artefact posed no diagnostic challenge as it exhibited the characteristic features for easy identification and was away from the region of interest.

Learning points

- ▶ Ring artefacts in CT appear as complete circles, annular or partial rings in multiple slices.
- ▶ They occur due to a defective or miscalibrated detector in CT hardware.
- ▶ Key to identification is the occurrence of smooth circular artefacts near the isocentre in sequential scans.

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To cite: Ramasamy A, Madhan B, Krishnan B. *BMJ Case Rep* Published Online First: [please include Day Month Year]. doi:10.1136/bcr-2018-226097

Contributors AR identified the important nature of the finding, wrote the draft of the article, collected materials, finalised and approved the final proof of the article. BM was involved in correcting the draft, suggesting edits and approving the final proof. BK was involved in correcting the draft, suggesting edits and approving the final proof.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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