

Images in clinical medicine



“Accidental computed arthrography” of an open knee joint injury cleaned with povidone-iodine solution

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“Accidental computed arthrography” of an open knee joint injury cleaned with povidone-iodine solution

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Image in medicine

A 13-year-old boy, with no significant medical history, presented following a road traffic accident. Upon examination, he exhibited an open wound on the left knee and mobility impairment. Despite these injuries, he remained hemodynamically stable. Following analgesic treatment and wound cleansing, a non-contrast computed tomography (CT) scan of the knee was performed to assess potential traumatic lesions. The scan revealed a loss of skin substance on the lateral side of the left knee without any fractures (A-B, red arrows). Additionally, spontaneous linear hyperdensity was observed in the soft tissues and

the articular cavity of the left knee, resembling the appearance of a CT arthrogram (C, white arrows). Importantly, this finding was unilateral, and there was no history of intra-articular contrast injection. Moreover, considering the patient's age and background, a diagnosis of chondrocalcinosis was deemed unlikely. Upon further inquiry with the emergency staff, it was discovered that a povidone-iodine solution (Betadine®) was employed for wound cleansing. The iodine content

in the solution was responsible for enhancing the joint cavity, creating the CT arthrogram-like appearance. This unexpected finding played a crucial role in confirming the presence of an open knee joint injury. This case highlights the possibility of a CT arthrogram-like appearance resulting from the use of a povidone-iodine solution during wound cleaning in a pediatric patient.

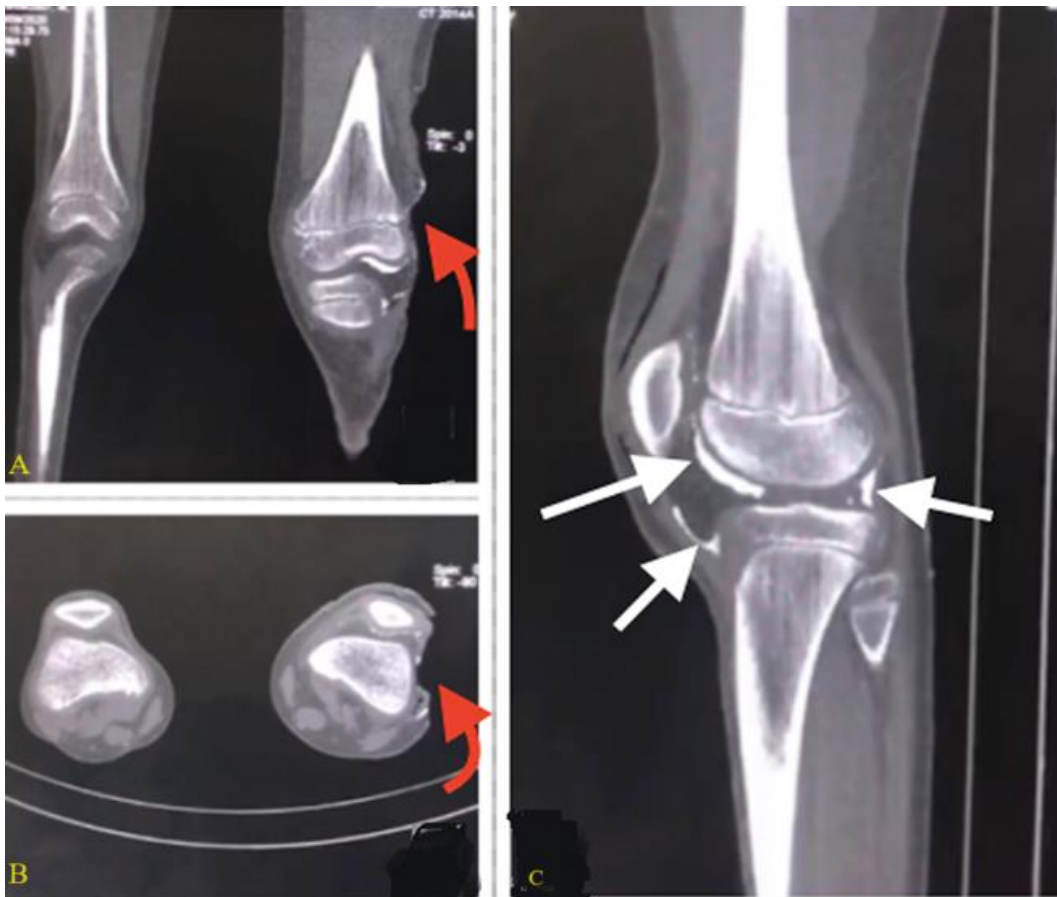


Figure 1: non-contrast CT showing open knee wound with arthrography-like appearance legend