

The Clinical Usefulness of Closed Reduction Using a C-Arm in Nasal Bone Fracture

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Abstract

Background: Closed reduction is commonly conducted for the treatment of a nasal bone fracture unless a concurrent fracture or a severe nasal septum fracture is observed. As the reduction, however, is not conducted through the direct gross observation of the fracture site, it is difficult to obtain a good result from it. Accordingly, a supplementary process is required.

Methods: Closed reduction with a C-arm was conducted within the period from March 2009 to January 2010 on 50 patients with nasal bone fractures, to treat their nasal-bone fractures or to evaluate the postoperative conditions of such(Fig. 1)(Fig. 2). The usefulness of the C-arm was evaluated by comparing the aforementioned closed reduction with a C-arm with the closed reduction without a C-arm that was conducted on 64 patients with nasal-bone fractures within the period from January 2008 to February 2009.



Figure 1. A fracture was reduced using nasal elevator in a nasal lateral view via a C-arm.

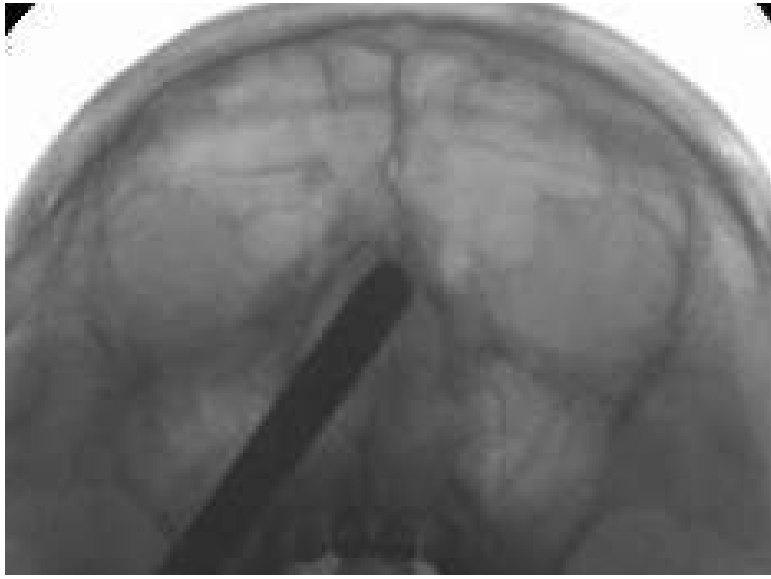


Figure 2. Nasal dorsum fracture was reduced using nasal elevator in a Water's view via a C-arm.

Results: The complication morbidity and reoperation rate were significantly lower in the patient group with closed reduction with a C-arm, and the radiologic examination also showed a significant difference.

Conclusions: If closed reduction is conducted on patients with nasal bone fractures using a C-arm, an accurate result can be obtained by observing the fractured bone indirectly with continuous imaging during the operation, and the operation result can be immediately assessed in the operating room, thereby reducing the frequencies of complications and re-operation

References

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