

언어구분 KOR 논문구분 원저/구연 논문분야 고관절
 논문제목 대퇴 삽입물 주위 골절로 오인될 수 있는 대퇴부 영양 동맥관
 영문제목 **The Nutrient Artery Canal of the Femur can be misperceived as a Periprosthetic Fracture**
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서론 : Periprosthetic fractures caused by impact of the stem tip to the femur shaft may not be found during procedure and may be incidentally detected through postoperative X-ray. These fractures are difficult to distinguish with the nutrient artery canals of the femur (NACs) as the nutrient canal could be misrecognized as fracture. We intend to analyze the radiological properties of NACs and set rules to distinguish them from true fractures.

재료 및 방법 : Periprosthetic fractures caused by impact of the stem tip to the femur shaft may not be found during procedure and may be incidentally detected through postoperative X-ray. These fractures are difficult to distinguish with the nutrient artery canals of the femur (NACs) as the nutrient canal could be misrecognized as fracture. We intend to analyze the radiological properties of NACs and set rules to distinguish them from true fractures.

결과 : Fifty-three (48.2%) of 110 cases showed radiolucent lines compatible with NACs on anteroposterior radiographs and seventy-four cases (67.3%) showed NACs on lateral radiographs. Thirty-seven (33.6%) of 110 cases showed NACs on both projections. The average distance between the tip of the greater trochanter and the proximal end of NAC was 165.6 ± 7.3 mm. Most of the NACs (86.2%) were vertical type ranging within 10 degrees of the anatomical axis of the femur. They were mostly extending upward at the posterior cortex on lateral radiographs. We could divide NACs into two types: proximal and distal. Proximal type was located at an average distance of 120.7 ± 20.0 mm from the greater trochanter tip and had a gentle angulation with an angle of $26.8 \pm 6.1^\circ$ to the shaft axis. Distal type was located at an average distance of 170.8 ± 28.8 mm distal to greater trochanter tip and extended upward at a steeper angle of $11.4 \pm 3.8^\circ$ to the shaft axis. One case was suspected of fracture on the postoperative image and with a follow up imaging, radiolucent line diminished, leading us to assume a true fracture.

결론 : Along and within the NACs, true periprosthetic fractures could be missed as a normal finding. Differentiation of the fractures is crucial, because the overlooked fractures may affect the entire prognosis. NACs are mostly observed with a smoother border, sclerotic wall along the canal, and are

seen at one side of the cortex. However true fractures have a sharp fracture line, involve the ipsilateral cortex and may diminish with follow-up images.

acknowledgment :

Nutrient artery canal, periprosthetic fracture, cementless stem
