

## USE OF ULTRASONOGRAPHY IN DIAGNOSING FOREARM FRACTURES IN A PREGNANT WOMAN

Eva Mahirah Zulkifli<sup>1</sup>, Wong Wai Kit<sup>1</sup>, Muhammad Lutfi Abdul Rashid<sup>1</sup>, Yohan Khirusman Adnan<sup>1</sup>, C. Sankara Kumar Chandrasekaran<sup>1</sup>

<sup>1</sup>University of Malaya Medical Centre

**Introduction:** This is a case study of the use of bedside ultrasonography to diagnose a forearm fracture in a pregnant woman. A 28-year-old lady, pregnant at 8-week of gestation, presented to our centre with pain over the left forearm after she had a low-energy motor-vehicle-accident. On examination, there was tenderness along the subcutaneous border of the left ulna, with no obvious swelling or deformity. After being counselled regarding the risks of fetal radiation exposure, she opted not for x-rays. She agreed for a bedside ultrasonography to help in diagnosing her injury.

**Discussion:** A sonographer performed the procedure on the patient. 2 perpendicular views were obtained, both along the longitudinal axis of the forearm bones. A break in the cortex of the subcutaneous border of the left ulna at the midshaft area was seen. No irregularities were observed along the cortices of the left radius. She was then diagnosed with a closed nightstick fracture of the left ulna. An above elbow cast was applied. At 8-week post-trauma, the cast was removed, and, as there was no tenderness or mobility at the fracture site, the fracture was considered to be clinically united. After physiotherapy, she had full wrist and elbow range of motion, including supination and pronation.

**Conclusion:** The use of ultrasonography as an alternative to radiographs in diagnosing fractures is well-known in the literature, especially in austere centres with no access to x-rays. Its availability, ease-of-use, and high specificity and sensitivity make it a reliable and accurate tool in detecting fractures. There is a scarcity of case reports and studies regarding its use in diagnosing fractures in pregnant women. Bearing in mind its limitations compared to radiographs in identifying orthopaedic pathology, this case study shows that ultrasonography, which is radiation-free, can be safely and successfully used in confirming fractures in pregnant women.