A 14-year-old girl presented to the Endocrinology out-patient service for evaluation of delayed puberty. Salient physical examination findings included short-stature, hypoplastic mandible, multiple pigmented naevi, short 4th and 5th metacarpals and hypoplastic, wide-spaced nipples, and dimpling over the knuckles of both clenched fist (Figure 1). Radiograph of both hands (antero-posterior view) (Figure 2A) revealed that a tangential line drawn from the distal-end of head of 4th and 5th metacarpals passed through the distal end of 3rd metacarpal (positive Archibald’s metacarpal sign). Peripheral blood lymphocyte karyotype was suggestive of 46, XX and she was diagnosed to have mosaic Turner’s syndrome.

Archibald et al\(^1\) labelled the term 'the metacarpal sign' and a positive sign is characterized by shortening of the fourth and fifth digits, presenting as dimpling over the knuckles of a clenched fist (Figure 1). This sign describes the difference in the relative lengths of the lateral three metacarpals. It was described as a diagnostic marker of gonadal dysgenesis\(^1,2\) and is seen in 33.8% patients with Turner's syndrome.\(^3\) A positive metacarpal sign is also seen in Albright's hereditary osteodystrophy, brachydactyly with pseudohypoparathyroidism, acrodysostosis, rarely with homocystinuria\(^4\) and as a normal variant in about 2%-4% of the subjects.\(^1\)

Metacarpal sign is determined in the radiograph of the hand by a line, drawn tangentially to the circumference of the distal ends of the 4th and 5th metacarpals. Normally, the extension of this line passes distal to the head of the 3rd metacarpal and does not intersect (negative metacarpal finding) (Figure 2B). Sometimes, such a line is tangential also to the circumference of the head of the 3rd metacarpal (borderline metacarpal finding). When the
line runs through the distal end of the third metacarpal it has been termed as a \textit{positive metacarpal finding}.\textsuperscript{1}

\section*{REFERENCES}


