

A case of painful “enostosis” or “bone island”

Case Report

In this article, we are presenting a rare case of painful enostosis or bone island of a 29 years old Syrian healthy young chap complaining of pain and tender noticeable swelling at the radial aspect of the dorsum of his left wrist joint insidious onset slowly progressive course few months duration. The Patient cannot recall any history of trauma, with the pain on and off, increases with physical activity of the wrist, Sometime even at rest and sleep, otherwise, he is perfectly healthy with no other complain.

On examination there was a tenderness over the base of the second metacarpal bone and a slight swelling at the site of the tenderness with no skin changes (Figure 1) Other than this, the ROM, power of grip and sensation are within the normal level in comparison to the other normal side.

X ray (Figure 2) and CT scan (Figure 3) (Figure 4) done revealed a smooth dense cortical rounded bony lesion at the base of the second

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Safaa-Eldin Elsayed Abaza

Orthopedic Consultant, Gulf Diagnostic Center Hospital
GDCH, UAE

Correspondence: Safaa-Eldin Elsayed Abaza, Orthopedic consultant, Gulf Diagnostic Center Hospital GDCH, UAE, Tel +971504146390, Email safaa.abaza@yahoo.com

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metacarpal bone with a clear even rounded edge characteristic of Bone Island. Surgical Exploration via dorsal approach, revealed erosions of the posterior cortex of the lower metaphysis of the second MC bone by the lesion (Figure 5) which was easily removed en mass (Figure 6) (Figure 7) and the cavity left (Figure 8) was filled with ipsilateral punched iliac bone graft (Figure 9).



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6

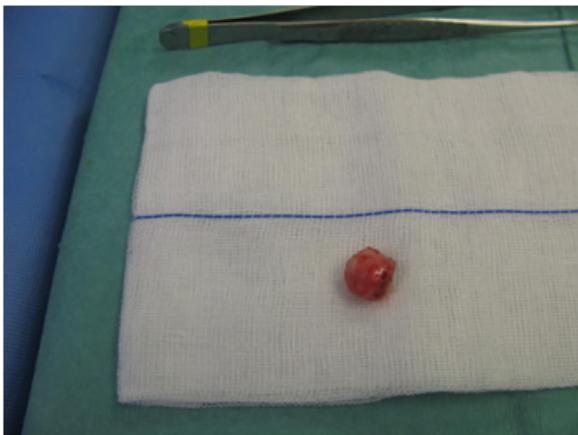


Figure 7



Figure 8



Figure 9

Histopathology findings: Normal, mature, lamellar bone with normal architecture, and no cartilage formation or enchondral ossification confirming the diagnosis of an enostosis or bone island lesion.

A brief discussion

An enostosis or bone island represents a focus of mature compact (cortical) bone within the cancellous bone (spongiosa). Thought by

some to be a tumor-like condition and by others a hamartoma, this benign lesion is probably congenital or developmental in origin and reflects failure of resorption during endochondral ossification. A bone island can be virtually diagnosed based on its characteristic clinical and radiologic features. Typically asymptomatic, the lesion is usually an incidental finding on imaging studies and is considered one of the skeletal “don’t touch” lesions. However, if the lesion is large or demonstrates increased scintigraphic activity, or if the patient is symptomatic or has a history of malignancy, clinical follow-up and/or biopsy may be warranted (<https://www.medscape.com/viewpublication/9252>).

Possible cause of the pain

We hypothesized the possible cause is due to abnormal site of the bone island at the base of the second metacarpal bone where there is a continuous tremendous pressure and torque force at the posterior cortex of the metaphysis by the micro motion of the lesion, as the flexors of the fingers are far more powerful than extensors leading to erosion of the posterior cortex of the second metacarpal metaphysis associated with a possible mild instability around the second trapezoid metacarpal joint.

Increased scintigraphic activity, or if the patient is symptomatic or has a history of malignancy, clinical follow-up and/or biopsy may be warrant.^{1,2}

Acknowledgements

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Conflict of interest

None.

References

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