

# Study Crystal-related

# **Gouty Arthritis**

Dorsal longitudinal scan of first metacarpophalangeal joint

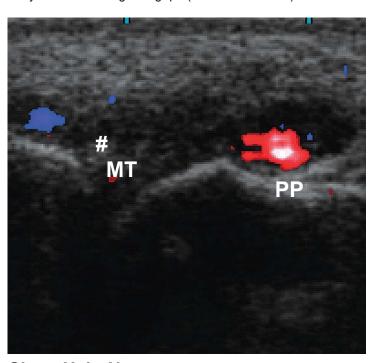
Proliferative synovitis. Marked joint cavity widening mainly due to synovial proliferation.

MT = metatarsus

PP = proximal phalanx

## Lin, Liang-Hung

Grey scale US using a Logiq 5 (General Electrics) with a linear probe (12L)



# Crystal-related

## **Gouty Arthritis**

## **Dorsal longitudinal scan of** 1<sup>st</sup> MTP joint

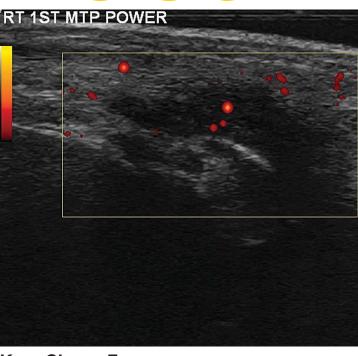
Widening of joint cavity mainly due to with synovial thickening(#). Color Doppler signals present in the synovium.

MT = metatarsus

PP = proximal phalanx

Chen, Hsin-Hua

Color Doppler US using a Logiq 500 (General Electrics Medical Systems, Milwaukee, WI) with a linear probe (7-12MHz)



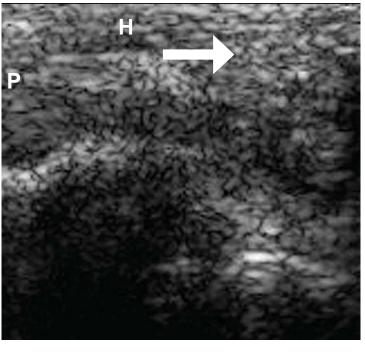
# **Gouty Arthritis**

Dorsal longitudinal scan of first metatarsophalangeal joint

Extended joint capsule with marked synovial fluid accumulation. High vascularity was found by power doppler mode.

### Kuo, Chang-Fu

Grey scale US using a Logiq 9 (General Electrics Medical Systems, Milwaukee, WI) with a volumetric probe (4D16L), with power doppler



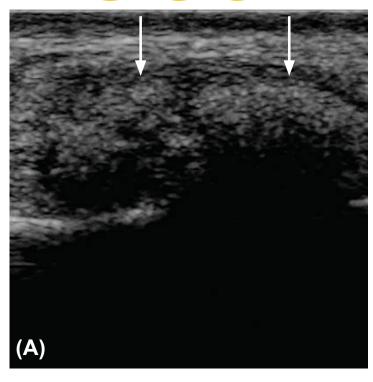
Chen, Ying-Chou Grey scale US using CGM OPUS 5000

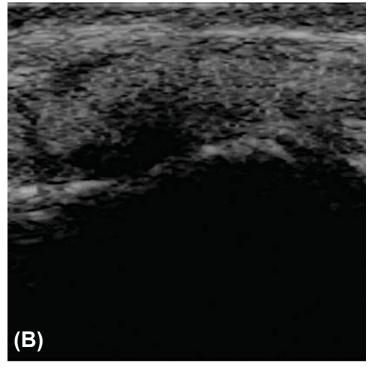
# Crystal-related

# **Chronic Tophaceous** Gout

Longitudinal scan along the plantar fascia

Punctate pattern of "urate sand" is identified in the hypodermis (arrow) and along the proximal plantar fascia. Abbreviations: Hypodermis (H), Plantar fascia (P)





# **Tophi**

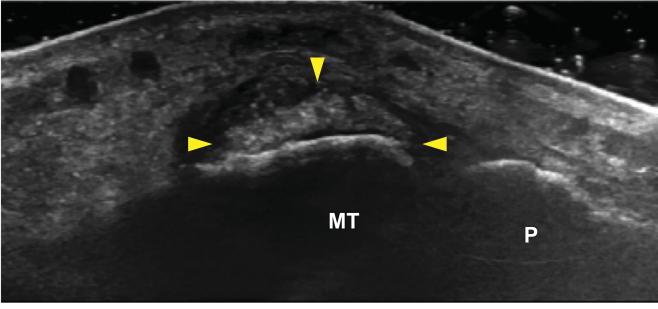
Longitudinal scan over medial aspect of 1st MTP joint (A) and power Doppler image (B).

Longitudinal scan over medial aspect of 1st MTP shows an intraarticular heterogenous hyperechoic lesion with or without acoustic shadow (arrows) (A).

PDUS shows no Doppler signal within joint cavity. The above findings are compatible with tophi deposition within 1st MTP joint cavity(B).

Chen, Hsin-Hua

Grey scale and power Doppler US using a Philip iU22 with a volumetric probe (4D, 5-13MHz)

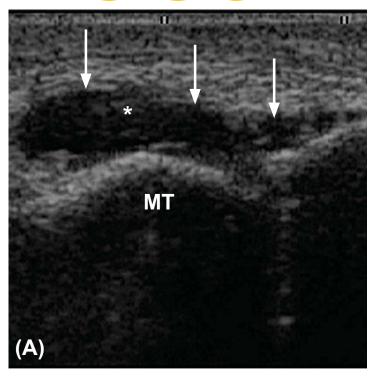


Lai, Kuo-Lung Gray scale US using a GE E9 (General Electrics) with a linear probe (15MHz)

## **Tophaceous gouty** arthritis

# Longitudinal scan of first MTP joint

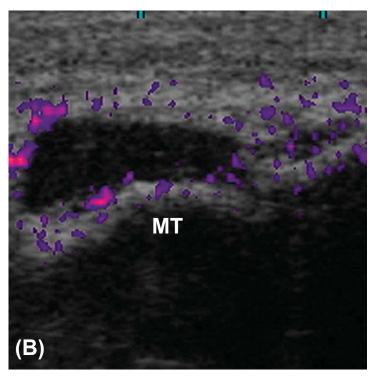
Tophi and gouty arthritis. Longitudinal US scan at dorsal side of 1st MTP joint showed a heterogeneous hyperechoic mass (tophi, arrowheads) within joint capsule, with hypoechoic rim. MT: metatarsal head, P: proximal phalanx.



# **Gouty Arthritis (3<sup>rd</sup> day)**

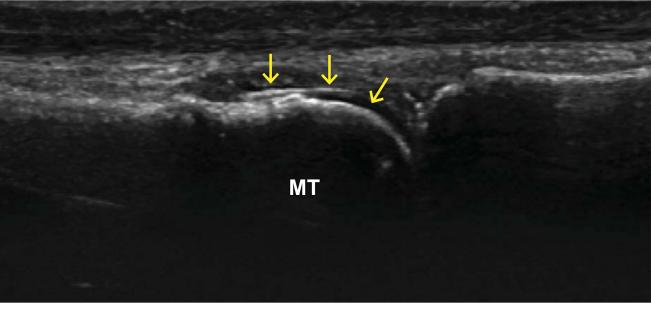
**Dorsal Longitudinal scan** (A) and Power Doppler image of 1<sup>st</sup> MTP(B).

- (A) Widening of joint cavity (arrows) with synovial thickening (\*).
- (B) PDUS shows scarce intrasynovial Doppler signals. MT = metatarsus



Chen, Hsin-Hua

Grey scale and power Doppler US using a Logiq 500 (General Electrics Medical Systems, Milwaukee, WI) with a lineár probe (7-12MHz).



Lai, Kuo-Lung Gray scale US using a GE E9 (General Electrics) with a linear probe (15MHz)

## **Gouty arthritis**

# **Longitudinal scan of first MTP** joint

Gouty arthritis. Longitudinal US scan at dorsal side of 1st MTP joint showed a hyperechoic band on the surface of cartilage and was parallel to the bone cortex, named double contour sign (arrows). This sign is specific to gout. MT: metatarsal head, P: proximal phalanx.