

Medical Education Series

# Minimally Invasive Treatment of a Benign Proximal Humeral Cyst: 5 year follow-up

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#### DIAGNOSIS

Large benign proximal humeral cyst with thinning of proximal cortices (Fig. 1).

#### TREATMENT

- The cyst was aspirated using a large bore needle. The needle was placed in the proximal-most extent of the cyst. The needle was exchanged for a cannula for pressure relief during injection of CERAMENT<sup>®</sup> BONE VOID FILLER (Fig. 2, 3).
- An additional cannula was placed into the distal-most extent of the cyst. The CERAMENT<sup>®</sup> BONE VOID FILLER delivery syringe was attached to the end of the distal cannula and injected one minute after mixing to ensure complete fill of the void via a bottom-to-top (distal to proximal) technique.
- 30cc of CERAMENT<sup>®</sup> BONE VOID FILLER was injected. Iohexol provides visibility of product under fluoroscopy (Fig. 3, 4).

#### OUTCOME

- No complications reported.
- 6 week X-ray demonstrates a white 'halo sign' outlining the cyst (Fig. 5).
- At 3 months, early bone remodeling is seen, along with a 'puddling sign' at bottom of cyst (Fig. 6).
- 5 month X-ray shows on-going replacement of CERAMENT<sup>®</sup> BONE VOID FILLER with new cancellous bone (Fig. 7).
- 5 year X-ray shows good bone remodeling (Fig. 8)

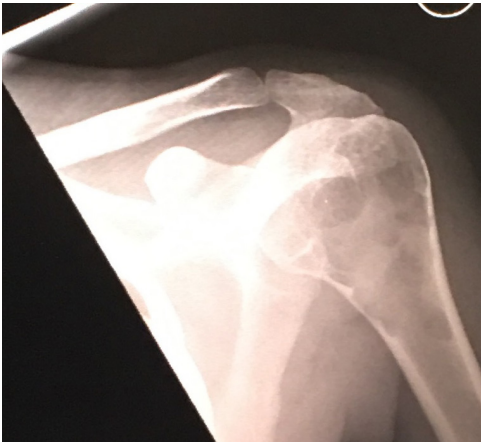


Figure 1: Pre Op



Figure 2: Intra Op



Figure 3: Intra Op

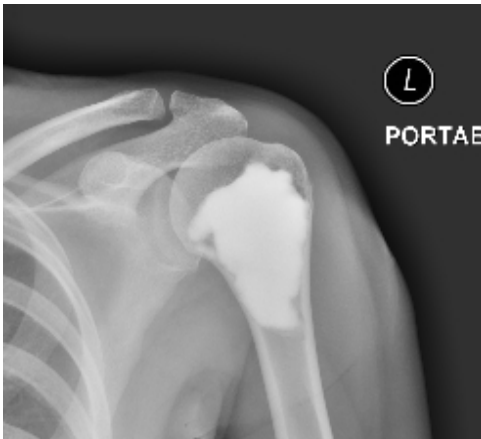


Figure 4: Post Op

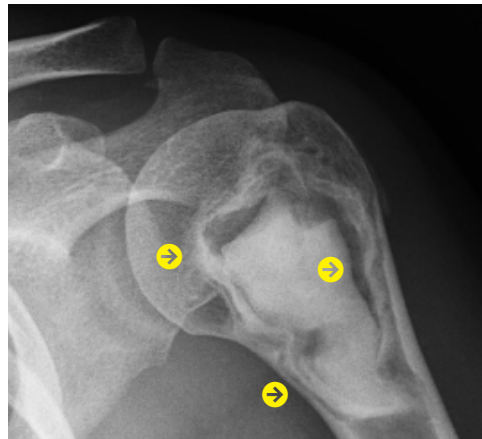


Figure 5: 6 week follow up showing 'halo sign'

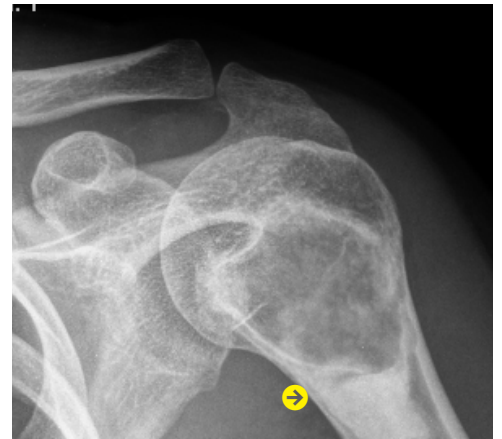


Figure 6: 3 month follow up showing 'puddling sign'

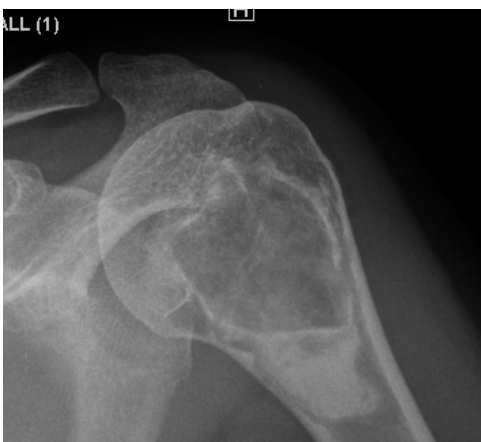


Figure 7: 5 month follow up



Figure 8: 5 year follow up



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