Case Report:
Acetabular Reconstruction in treatment of Metastatic Disease using CERAMENT®/BONE VOID FILLER to Reconstitute Bone

Donald Sullivan, MD
Decatur, IL
Acetabular Reconstruction for Treatment of Metastatic Disease using CERAMENT® BONE VOID FILLER to Reconstitute Bone

**PATIENT:** 68 year old female with stage 4 breast cancer

**DIAGNOSIS**
- Stage 4 breast cancer
- Overall poor health; wheelchair and bedbound
- Relatively abrupt onset of severe hip pain
- Referred by Hematology/Oncology
- Obvious lesion on plain films, massive lesion further delineated on CT, both columns with destroyed cortices.

**TREATMENT**
- Upon exposure, as expected, very little reliable bone. Barely adequate rim and entire acetabulum gone, except for far inferior. Situation so dire that resection arthroplasty for pain control was a consideration.
- Intraoperative decision made: Attempt to place multi-hole revision cup, placing screws where ever bone would allow and use CERAMENT® BONE VOID FILLER in hopes of reconstituting bone.
- Filled lesions with 18cc of CERAMENT® BONE VOID FILLER and 30cc crushed cancellous chips for more structural support.
- Fixation extremely tenuous. Did not impact. Gentle scratch fit on the rim with good contact with underlying graft.

**OUTCOME**
- Significant pain relief immediately post op and pain free at 3 weeks.
- At 9 weeks, significant bone formation noted. No pain. 50% weight bearing.
- At 6 months, continued bone formation. No pain and full weight bearing.
- At 1 year, remarkable bone formation. No pain and patient is doing very well.

**Immediate Post-op**
- Lesion well filled
- Radiolucent
- Immediate and significant pain relief

**3 Week Post-op**
- Radiolucent signal reabsorbed, so uncertain about success at this point, however, no obvious loss of fixation or loosening
- No pain
- Continue toe touch weight bearing
FOLLOW UP RADIOGRAPHS

9 Week Post-op
- Delayed follow up (usually 6 weeks) due to medical problems
- Significant bone formation noted
- No obvious loosening (possible it may be tipping vertically, but likely ectopic bone at lateral rim)
- No pain
- 50% weight bearing

6 Month Post-op
- Continued bone formation
- No obvious loosening
- Doing very well medically and Orthopaedically
- No pain
- Full weight bearing

1 Year Post-op
- Remarkable bone formation on x-ray
- No obvious loosening
- Doing very well with cancer treatment
- No pain

COMMENTS

- In treatment planning, cage was a consideration, however, this procedure risks significant soft tissue compromise, which is an even bigger risk considering patient’s health condition. Also, this procedure relies on the presence of bony architecture (iliac wing, ischium, quadrilateral plate, etc) for success. These areas were not reliable.

- The use of CERAMENT provided the fixation, pain control, and lesion filling, comparable to the more traditional method of using PMMA and a polyethylene liner. However, CERAMENT delivers the added benefit of bone generation which is not seen with PMMA use.

- Remarkable bone formation was noted at 1 year post-op, patient in pain free and doing very well with cancer treatment. I believe the success of this operation can be attributed to delicate surgical technique, extreme caution in rehabilitation, and near perfect patient compliance. But I believe it is also due to the unique and proven bone remodeling capabilities of CERAMENT®.