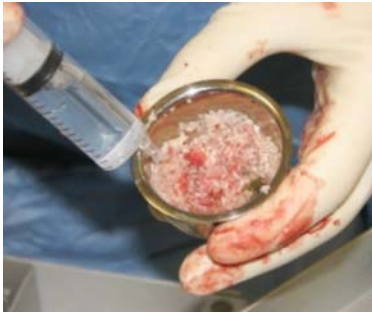


Bone graft preparation

A suitable vial of Veterinary Tissue Bank freeze-dried canine cancellous chips (0.1-1mm) with a vial is chosen and rehydrated with sterile Hartmann's solution in a Galli pot. Graft volume is matched to the size of the defect present. Approximately 3cc for small dogs, 5cc for medium-sized dogs and 10cc for large/giant breeds.



Demineralized bone matrix (DBM) (Hoffer and others 2008) as available from Veterinary Tissue Bank is mixed with the allograft chips to further enhance osteoinduction.

Implant placement

For fractures such as this, internal fixation with plate and screw fixation provides the most stable environment for bone formation. The specific challenge in this case is to achieve sufficient bone purchase in the distal fragment. Because bone stock distally is limited, the biological environment needs to be optimised with bone graft to facilitate bone formation in as short a time span as possible. One could consider use of an allograft cortical strut to provide mechanical support.



Case example – 11 month old Chihuahua

Figure 2: Post-operative radiograph: Mini-plate fixation in conjunction with canine cancellous chips allograft (1-2mm chips) (Veterinary Tissue Bank Ltd). (Photo courtesy Carlos Macias, Centro Veterinario de Referencia Bahia de Malaga, Spain)

References

Hoffer, M. J., Griffon, D. J., Schaeffer, D. J., Johnson, A. L. & Thomas, M. W. (2008) Clinical applications of demineralized bone matrix: A retrospective and case-matched study of seventy-five dogs. *Veterinary Surgery* 37, 639-647.

