Kyphoplasty increases Vertebral Body Height more than Vertebroplasty in a Cadaver Study

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Purpose

To compare height restoration with kyphoplasty and vertebroplasty in cadavers using MDCT

Materials & Methods

- Cadavers
  - 37 vertebral bodies (21 T, 16 L-spine)
  - mean 82 years
  - Kyphoplasty (n = 19)
  - Vertebroplasty (n = 18)

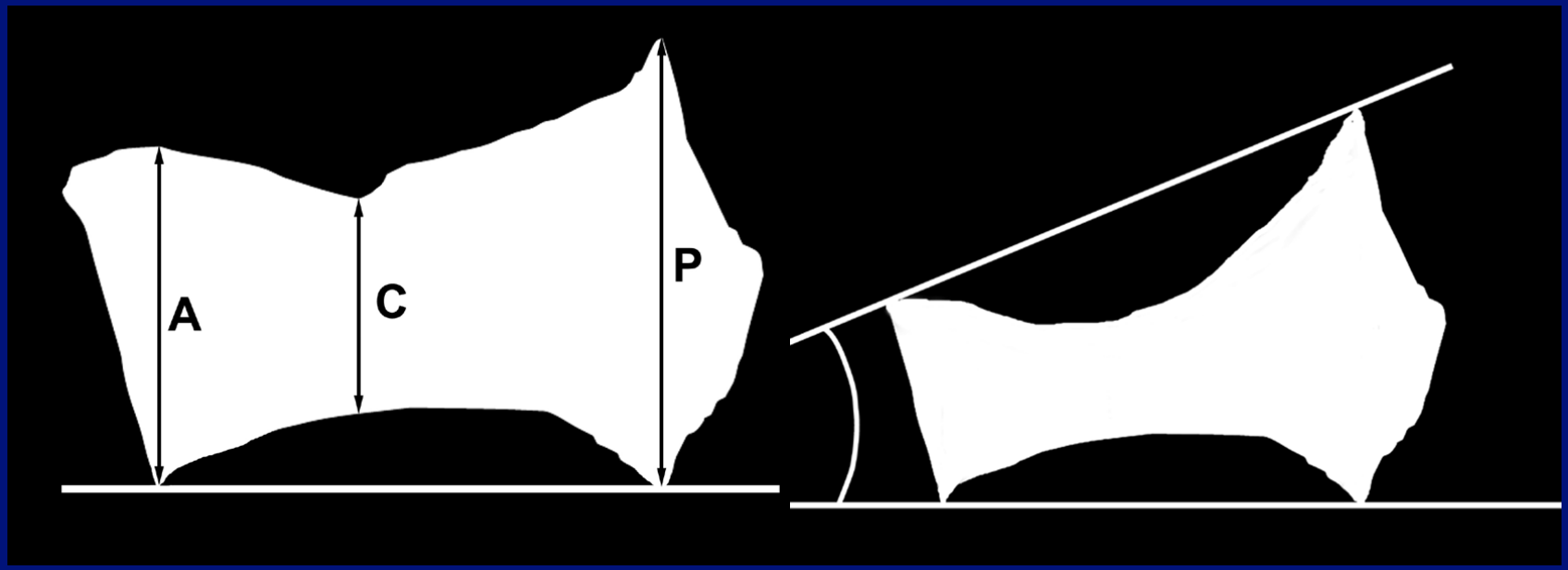
Materials & Methods

- Vertebral bodies were dissected and separated
- Compression fractures were created

Materials & Methods

- Four detector-row CT
  - Before compression
  - After compression fracture
  - After treatment
- Sagittal Reconstructions
  - 1.25 mm slice thickness

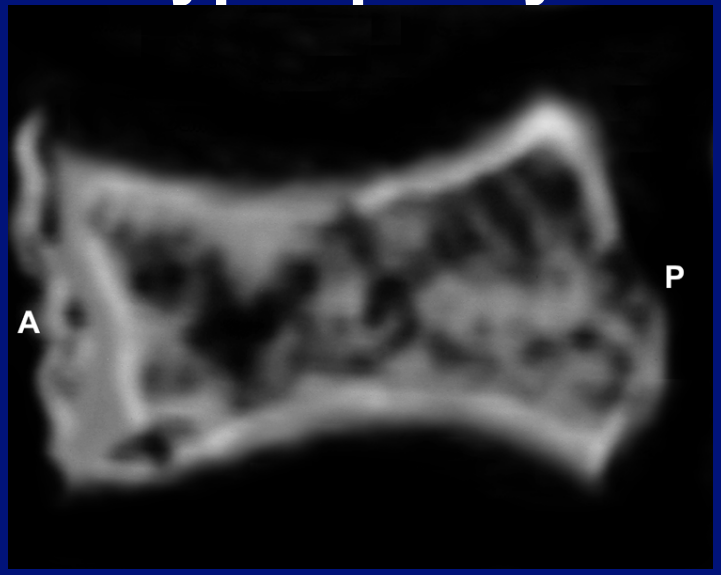
Materials & Methods

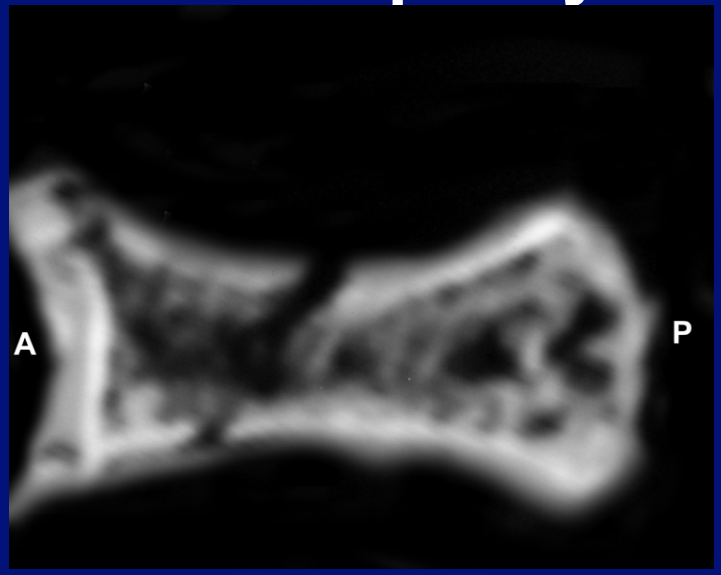


Kyphoplasty

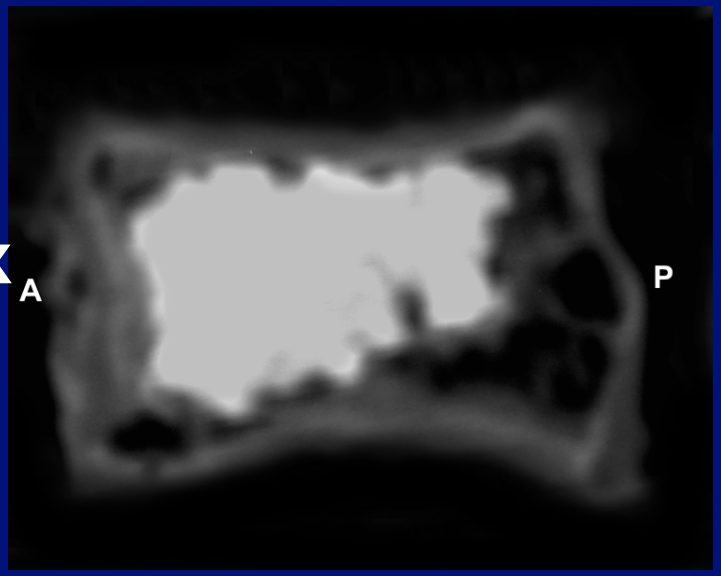
Vertebroplasty

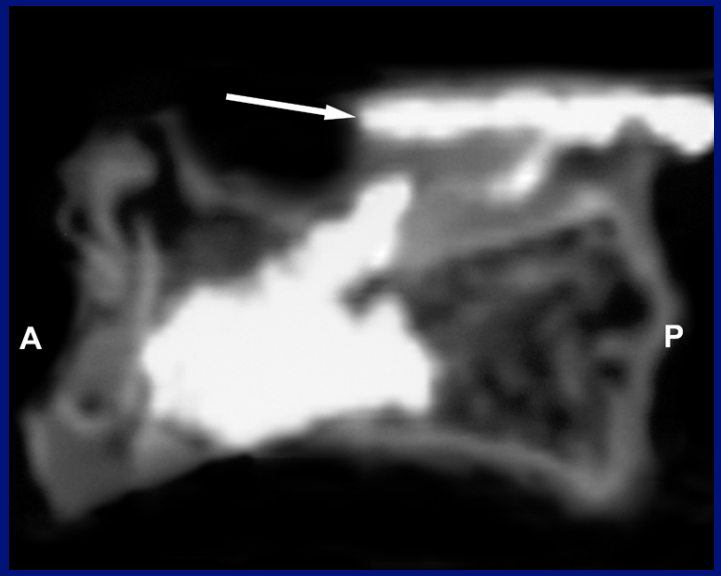
Pre tx





Post tx





Results

	Kyphoplasty	Vertebroplasty
Initial	22.2mm	21.8mm
After Fx	15.3	15.4
After Tx	20.5	17.6
Height restoration	93%	82%
Angle reduction	3.1°	1.6°

Conclusion

- Kyphoplasty increased vertebral body height more than vertebroplasty
- The differences in height restoration between the two techniques were small (3 mm) and the clinical significance remains to be documented