

Introduction

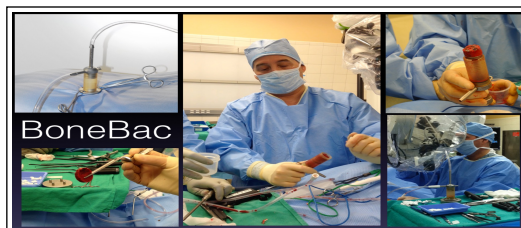
The cost of TLIF surgery has markedly increased in the last 10 years. The sources of bone graft can include autograft, allograft or bone substitutes. The BoneBac Press (Thompson MIS, Salem, NH) was developed to collect drilled local bone collected during the decompression. The cost savings of this series is estimated regarding the effectiveness of collecting local bone, need for additional allograft, and fusion rates.

Methods

A retrospective review over a 6-year period included 403 patients (60.8% female, 39.2% male), mean age was 64.1±12.5 years with refractory debilitating back pain from various pathologies. The amount of local autograft collected using the BoneBac Press was recorded.

The additional allograft supplement used for each case and the ratio of autograft to allograft used was determined. The cost of each surgery was estimated based on the allograft savings.

Additional variables analyzed included surgical time, intra- and post-operative complications neurological and non-neurological, autograft harvested, fusion rate, cost savings. post-operative length of stay, re-operation rates, and patient generated outcomes including visual analogue scale (VAS) for pain, Oswestry disability index (ODI) and Short Form 36.



The estimated average total savings for this series of patients was \$1.3

Results

The total estimated collected bone graft was 3224cc collected over the 403 patients analyzed, (average 8.01cc/case). The percentage of autograft to allograft used ranged from 42% - 333% with the vast majority of cases using 2/3 autograph to 1/3 allograph. Cost savings range from \$1820.00 to \$6145.50 per case with an average of \$4965.43/case.

A greater than 95% fusion rate was achieved based on dynamic radiographic assessment at 3, 6, and 12 months post-operative intervals.

Conclusions

Marked cost savings and fusion rate were achieved using the BoneBac Press harvested morselized autografts. More randomized trials might provide additional cost benefits and excellent

BoneBac local Autograph



Post operative MRI showing autologous graft material to reconstruct laminar defect.

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