

Cost Savings Associated with Novel Autograft Collection during Minimally Invasive Transforminal Interbody Fusion

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Introduction

It has been well documented over time that success in spinal arthrodesis is much greater using autograft rather than allograft. Utilization of autograft has fallen out of favor secondary to pain and morbidity associated with the technique of traditional autograft harvesting and with the increase of novel minimally invasive approaches to the spine. Recent usage of commercially available allograft has increased as have the costs associated with it. Our goal is to demonstrate the cost savings of using a novel minimally invasive autograft technique (BoneBac) compared to allograft in a series of transforminal interbody fusions.

Methods

Retrospective analysis of consecutive minimally invasive interbody fusions was completed. These were performed by a single surgeon at one institution over 12 months. The per case usage cubic centimeters of institutionally approved allograft and harvested autograft were collected. A cost savings per case was calculated, assuming that the total cc's of bone graft used in each case would have entirely been allograft if the autograft technique was not used. A commercially available and institution approved allograft, Trinity,

Results

After review of 93 cases, the average savings per case was calculated to be \$4,965.43. The savings over the entire series was calculated to be \$342,615. The mean cubic centimeters of autograft harvested was 8.01 per case.

Conclusions

Using a novel technique of BoneBac minimally invasive autograft harvesting and collection, we have demonstrated reduced allograft usage and considerably reduced cost per case and over time for these procedures. Furthermore, the use of autograft has served our patients better, as has been well documented over time in spine surgery. The use of this technique and technology should become standard as part of minimally invasive arthrodesis.

Learning Objectives

Considerable Cost Savings per case and over time with better outcomes for patients using a novel minimally invasive autograft collection technique compared to commercially available allograft.

References