Concentrated bone marrow aspirate for spinal surgery

HAYES, Inc.

Record Status
This is a bibliographic record of a published health technology assessment. No evaluation of the quality of this assessment has been made for the HTA database.

Citation

Authors' conclusions
Description of Technology: Concentrated bone marrow aspirate (CBMA) is produced from native bone marrow aspirate (BMA), usually obtained from the iliac crest or local vertebrae. An aspiration probe or needle is inserted into bone under the guidance of fluoroscopy to obtain a sufficient quantity of BMA for a planned procedure. The BMA is then processed, often filtered first, and then centrifuged, to concentrate its contents. CBMA contains mononuclear cells such as mesenchymal stem cells (MSCs), hematopoietic stem cells, B cells, T cells, monocytes, and growth factors (regulating proteins). The MSCs can differentiate into a variety of cell types, including osteoblasts, while various BMA growth factors can stimulate additional bone growth. The quality of the CBMA may vary according to a number of factors, including the health and age of a patient and the aspiration and concentration techniques; these can affect the amount of osteoinductive and osteogenic cells and constituents in CBMA, and perhaps the success of their use in spinal fusion. Patient Population: CBMA is indicated in adult or pediatric patients undergoing spinal surgery who do not have a contraindication to the collection and use of CBMA.

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