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# SIGNIFICANT IMPROVEMENT REPORTED: SCIENTIFIC STUDY REPORTS PUBLISHED IN MEDICAL JOURNALS

**Case Report**

Access this article online  
Quick Response Code:  
  
Website:  
www.ajph.org  
DOI:  
10.4103/ajph.ajph\_100\_20

## A successful booster umbilical cord blood transplantation for a 10-year-old patient with beta-thalassemia major in India

Vijay Ramanan

**Abstract:**  
Beta-thalassemia major is characterized by a genetic deficiency in synthesis of beta-globin chains, resulting in reduced levels of functional hemoglobin. It is characterized by anemia, hepatosplenomegaly, and iron overload due to repeated blood transfusion. Hematopoietic stem cell transplantation is currently the only known curative treatment. We present a case of a 10-year-old girl with beta-thalassemia major who was successfully cured with allogeneic booster umbilical cord blood (UCB) transplantation with outcome data after 3 years of transplantation, in India. Postdiagnosis, she was on regular once-a-month blood transfusion until the age of 10 years, with no improvement. No serious adverse events occurred in the patient post-UCB transplantation. Chronic graft versus host disease was limited and was managed by medicines. Signs of primary graft rejection were also not seen.

**Keywords:**  
Beta-thalassemia major, human leukocyte antigen-matched sibling, umbilical cord blood transplantation

Received: 25 July 2019 | Revised: 5 August 2019 | Accepted: 5 August 2019  
DOI: 10.1111/hla.13660

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## Discovery of a novel HLA class I allele, *HLA-B\*38:75*, in an Indian umbilical cord blood sample

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The novel HLA allele *HLA-B\*38:75* differs from *B\*38:02:01* by nonsynonymous change in codon 50.

**KEYWORDS:**  
cord blood units, human leukocyte antigen, next generation sequencing

The HLA genes, located within the human major histocompatibility complex on the short-arm chromosome 6 (6p21.3). We discovered the novel HLA-B allele during routine HLA typing of samples derived from umbilical cord blood

Contents lists available at ScienceDirect

**The Knee**  
journal homepage:

ELSEVIER

## Outcomes following gel-based autologous chondrocyte implantation for articular cartilage defects of the knee

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**ARTICLE INFO**  
Article history:  
Received 27 December 2023  
Revised 29 March 2024  
Accepted 20 May 2024

**ABSTRACT**  
**Background:** Gel-based autologous chondrocyte implantation (GACI) enables a simpler and more effective delivery of chondrocytes with reproducible three-dimensional structural restoration of the articular cartilage surface. There is limited documentation of medium-term outcomes. This study assessed safety and effectiveness of GACI for treatment of car-

Orthopedic Research and Reviews  
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ORIGINAL RESEARCH

## Retrospective Study on Implantation of Autologous-Cultured Osteoblasts for the Treatment of Patients with Avascular Necrosis of the Femoral Head

This article was published in the following Dove Press journal:  
Orthopedic Research and Reviews

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**Purpose:** Osteonecrosis of the femoral head is a progressive and debilitating disease that causes pain, osteoarthritis and hip joint collapse, eventually necessitating hip replacement. This study evaluated the long-term outcomes of autologous adult live-cultured osteoblasts (AALCO) implantation in patients with osteonecrosis of femoral head.

**Patients and Methods:** In this retrospective multicenter study, we collated and analyzed data of patients  $\geq 12$  years of age who underwent AALCO (OSSGROW<sup>®</sup>) between 2010 and 2015 for the treatment of osteonecrosis of the femoral head.

**Results:** Data from 64 patients (101 hip joints) were assessed in this study. The mean  $\pm$ SD duration of disease since diagnosis of osteonecrosis was 7.4 $\pm$ 1.6 years. The mean follow-up duration was 6.3 $\pm$ 1.4 years. The mean VAS score (n=98 hips) reduced significantly from 58.8  $\pm$  13.8 to 32.2  $\pm$  32.1 post-operatively (mean difference: -26.5 $\pm$ 35.2, p=0.001) and Harris hip score (n=97 hips) also significantly improved from 47.1 $\pm$ 12.3 to 63.7 $\pm$ 27.7 post-operatively (mean difference: 16.7 $\pm$ 28.7, p=0.0001). Following the AALCO treatment, 29 hips in 13 patients (28.7%) underwent total hip replacement (THA), indicating that AALCO treatment could delay THA for 71.3% of hips. A total of 39.1% of hips diagnosed in early stage versus

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### USP 2 Astha's Cord Blood Transplant

**ASTHA, THE FIGHTER**

Astha, a survivor of thalassemia was treated by a cord blood transplantation using her younger brother's cord blood stem cells. She now lives a normal life without undergoing multiple blood transfusions.

[Watch Video](#)

### USP 3 Purvi's Cord Blood Transplant

**PURVI, MPS VI SURVIVOR**

Purvi, a 6-year-old, underwent a cord blood transplantation using her sibling's preserved stem cells through Biocell TM's Sibling Program. She has fully recovered from her condition and has rejoined school.

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