Medical Coverage Policy | Autologous Platelet-Derived Growth Factors (i.e., Platelet-Rich Plasma)

EFFECTIVE DATE: 11|15|2016
POLICY LAST UPDATED: 11|15|2016

OVERVIEW

This policy documents the coverage determination for autologous platelet-derived growth factors (PDGF) (i.e., platelet-rich plasma [PRP]). Autologous platelet-derived growth factors have been investigated as wound-healing products for Commercial products only.

PRIOR AUTHORIZATION

Not applicable

POLICY STATEMENT

Commercial Products

Autologous blood-derived preparations (i.e., platelet-rich plasma) are considered not medically necessary as there is insufficient peer-reviewed scientific literature that demonstrates that the service is effective.

MEDICAL CRITERIA

Not applicable

BACKGROUND

A variety of growth factors have been found to play a role in wound healing, including platelet-derived growth factor (PDGF), epidermal growth factor, fibroblast growth factors, transforming growth factors, and insulin-like growth factors.

Autologous PDGFs have been investigated as wound-healing products. For example, platelets are a rich source of PDGFs, transforming growth factors (which function as a mitogen for fibroblasts, smooth muscle cells, and osteoblasts), and vascular endothelial growth factors. Autologous platelet concentrate suspended in plasma, also known as platelet-rich plasma, can be prepared from samples of centrifuged autologous blood. Exposure to a solution of thrombin and calcium chloride results in the polymerization of fibrin from fibrinogen, creating a platelet gel. The platelet gel can then be applied to wounds or may be used as an adjunct to surgery to promote hemostasis and accelerate healing. Activated platelets then degranulate, releasing the various growth factors.

There are a number of commercially available centrifugation devices used for the preparation of PRP. For example, AutoloGel™ (Cytomedix) and SafeBlood® (SafeBlood Technologies) are two related but distinct autologous blood-derived preparations that can be prepared at the bedside for immediate application. Both Autologel and SafeBlood have been specifically marketed for wound healing. Other devices may be used in the operating room setting, such as Medtronic Electromedic, Elmd-500 Autotransfusion system, the Plasma Saver device, or the Smart PreP device. In the operating room setting, PRP has been investigated as an adjunct to a variety of periodontal, reconstructive, and orthopedic procedures. For example, bone morphogenetic proteins are a type of transforming growth factors, and thus PRP has been used in conjunction with bone-replacement grafting (using either autologous grafts or bovine-derived xenograft) in periodontal and maxillofacial surgeries.

The evidence for PRP in individuals who have nonhealing wounds or acute surgical or traumatic wounds includes a number of small controlled trials. Relevant outcomes are symptoms, change in disease status,

morbid events, quality of life, and treatment-related morbidity. The potential benefit of PRP has received considerable interest due to its appeal as a simple, safe, low-cost, and minimally invasive method of applying growth factors. Current results of trials using PRP are mixed and the studies are limited in both size and quality. The evidence is insufficient to determine the effects of the technology on health outcomes. Therefore, the use of autologous blood-derived preparations (i.e., platelet-rich plasma) is considered not medically necessary for Commercial members.

COVERAGE

Benefits vary between groups/contracts. Please refer to the Subscriber Agreement or Benefit Booklet for limitations of benefits/coverage when services are not medically necessary.

CODING

Commercial Products

The following HCPCS codes are not medically necessary:

G0460 0232T

RELATED POLICIES

Clinical Trials BlueCHiP for Medicare
BlueCHiP for Medicare National and Local Coverage Determinations

PUBLISHED

Provider Update	January 2017
Provider Update	April 2015
Provider Update	Sep 2014
Provider Update	August 2013
Provider Update	Sep 2012
Provider Update	Sep 2011
Provider Update	July 2009
Provider Update	Oct 2010
Provider Update	May 2009

REFERENCES

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2. Martinez-Zapata MJ, Marti-Carvajal A, Sola I, et al. Efficacy and safety of the use of autologous plasma rich in platelets for tissue regeneration: a systematic review. Transfusion. Jan 2009;49(1):44-56. PMID 18954394

3. Carter MJ, Fylling CP, Parnell LK. Use of platelet rich plasma gel on wound healing: a systematic review and meta-analysis. Eplasty. 2011;11:e38. PMID 22028946

4. Picard F, Hersant B, Bosc R, et al. The growing evidence for the use of platelet-rich plasma on diabetic chronic wounds: A review and a proposal for a new standard care. Wound Repair Regen. Sep 2015; 23(5):638-643.
PMID 26019054

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