Supplementary file 1: Scoring criteria (Table S1 to S4)

Article title: Role of Embedded Pure Xenogenous Bovine Platelet Gel on Experimental Tendon Healing, Modelling and Remodelling

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Authors: Ahmad Oryan[1], Ali Moshiri[2], Abdolhamid Meimandi-Parizi[2]

1) Department of Pathology, School of Veterinary Medicine, Shiraz University, Shiraz, Iran
2) Division of Surgery and Radiology, Department of Clinical Sciences, School of Veterinary Medicine, Shiraz University, Shiraz, Iran

Correspondence to Dr Ali Moshiri D.V.M., D.V.Sc. (Veterinary Surgeon). E-mail address: dr.ali.moshiri@gmail.com; Cell phone: +989123409835

Table S1: Clinical scoring criteria

core	Between legs	Estimation of the degree	Condition
	The tarsal flexion degree of the injured leg compared to the normal leg, both in the cage and on the floor		
	• Equal	• 75-90	Normal
	• Non equal	• 74-50	Mild
	• Non equal	• 50-30	Moderate
	• Non equal	• >30	Severe
	• Non equal	• <15	Extensively severe

	Weight distribution between limbs	Weight distribution between hind legs	The most weight bearing legs	The injured left hind leg condition	
	Weight distribution of each animal on the hind limbs, in the cage and on the floor				
	• Mostly hind limb	• Equal	• Both hind limbs	• Weight bearing	Normal
	• Mostly hind limb	• Not equal	• Right hind limb	• Weight bearing	Mild
	• Mostly forelimbs	• Not equal	• Both forelimbs & right normal hind limb	• Weight bearing	Moderate
	• Not Equal	• Not equal	• Both forelimbs and right normal hind limb	• Non weight bearing	Severe
	• Not Equal	• Not equal	• Non weight bearing (sternal recumbency)	• Non weight bearing	Extremely severe

Pain in palpation of the injured area and pain in complete extension of the injured leg	
• No reaction	Normal
• Occasional vocalization	Mild
• Frequent vocalization	Moderate
• Vociferous vocalization, withdraw limb, bites, struggles	Severe

Heel	toe	
Heel and toe position of the injured leg (left hind paw)		
• Up	• Down	Normal
• Near the floor (up)	• Down	Mild
• Down	• Down	Moderate
• Down	• Up	Severe

Swelling at the injured area (left hind paw)	
Is not tender, warm and bowed	Normal
Slightly warm and bowed, color is not changed	Mild
Tenderness, bowed and completely warm. Color in not changed	Moderate
Obvious tenderness, bowed and warm. Color changed.	Severe

Table S2: Gross morphological scoring criteria

Gross pathological findings (visual observation)			
Score	**1) Peritendinous adhesion**	**2) Hyperemia**	**Status**
0	• No adhesion	• No hyperemia, shiny glistening surface appearance	Normal
1	• Tendon was easily detached from the surrounding tissues by blunt dissection	• Only in the paratenon	Mild
2	• For detachment from the surrounding tissues, tendon needed little sharp dissection	• It was extended to the tendon proper but it was not severe in nature	Moderate
3	• For detachment from the surrounding tissues, tendon needed completely sharp dissection	• It was extensively extended to the tendon proper and made its appearance more pink and dark	Severe
Score	**3) General appearance**	**4) Muscle Atrophy**	**Status**
0	• Tendon is a unit structure (the tendinous tissue is organized as a separate tissue and could be differentiated from the surrounding structure) and is continued between the gastrocnemius muscle and calcaneal tuberosity with the same diameter and homogeneity	• The transvers diameter of the largest bulk of the muscle is more than or equal to 350% of the transvers diameter of the largest part of the Achilles tendon at its mid part.	Normal
1	• Same as above but the diameter of the injured area is larger than the proximal and distal parts of the tendon. The tendon generally is a unit structure.	• The transvers diameter of the largest bulk of the muscle is more than or equal to 250% of the transvers diameter of the largest part of the Achilles tendon at its mid part.	Mild
2	• Same as above but the diameter of the injured area is lower than the proximal and distal parts of the tendon. The tendon generally is a unit structure.	• The transvers diameter of the largest bulk of the muscle is more than or equal to 200% of the transvers diameter of the largest part of the Achilles tendon at its mid part.	Fairly moderate
3	• The injured area of the tendon is not a unit structure but the proximal and the distal parts of the tendon are a unit structure.	• The transvers diameter of the largest bulk of the muscle is more than or equal to 150% of the transvers diameter of the largest part of the Achilles tendon at its mid part.	Moderate
4	• The whole of the tendon is not a unit structure. No structure similar to tendon is seen between the gastrocnemius muscle and calcaneal tuberosity and the posterior tibialis tendon is seen. In normal condition Achilles tendon covers the posterior tibialis muscle but in this condition due to the lysis of the Achilles tendon the posterior tibialis muscle could be seen.	• The transvers diameter of the largest bulk of the muscle is more than or equal to 10% of the transvers diameter of the largest part of the Achilles tendon at its mid part.	Severe
Score	**5) Muscle fibrosis**		**Status**
0	• No fibrosis is seen in the gastrocnemius muscle and the tendinous portion of the Achilles is the only connective tissue that covered the muscle		Normal
1	• Mild fibrosis is seen in the muscle but more than 75% of the muscle has red color and had gross appearance similar to the muscle		Mild
2	• Between 50 to 74% of the muscle has the characteristics of the muscle but the fibrosis is significant		Moderate
3	• More than 50% of the muscle shows fibrosis and the fibrous tissue filled the spaces between muscle fibers.		Severe
4	• No muscular characteristic could be seen in the gastrocnemius muscle because all of the muscle was substituted by fibrous tissue		Extremely severe

Table S3: Histological scoring criteria

Histopathologic analysis			
Score	**1) Alignment**	**2) Perivascular edema**	**Status**
0	• Collagen fibers were longitudinally oriented in only one direction and the tenoblasts and tenocytes were laid longitudinally along their orientation	• No edema	Normal
1	• Collagen fibers were longitudinally oriented in one direction pattern but there were few areas of unorganized collagen fibers in the field	• Presence of edema just around small vessels	Mild
2	• Collagen fibers were not longitudinally oriented and the irregular orientation pattern was predominant	• Presence of edema around small and medium sized vessels	Moderate
3	• There was no obvious pattern and the collagen fibers were disorganized	• Presence of edema around all types of vessels	Severe
Score	**3) Tissue Maturity**		**Status**
	A) the appearance of the collagen fibers	**B) cellular populations**	
0	• More than 75% collagen fibers are dense and they have large size	• More than 75% are fibrocytes	Normal or near normal
1	• More than 50% of the collagen fibers are dense and they are of large size	• More than 50% are fibrocytes	Highly mature
2	• More than 25% of the collagen fibers are dense and they are medium sized	• More than 25% are fibrocytes	Moderately mature
3	• The collagen fibers are not dense but they are medium sized	• More than 75% are fibroblasts	Immature
4	• The collagen fibers are not dense and they are of small sized	• The inflammatory cells are predominant	Highly immature
Score	**4) Crimp pattern**	**5) Vascularity (at remodeling stage)**	**Status**
0	• More than 75% of the collagen fibers in the light microscopic field are wavy	• No vascular structures are visible in the tissue sections.	Normal
1	• 50%-75% of the collagen fibers in the light microscopic field are wavy	• Less than 10% of the tissue density belongs to vessels.	Optimum (remodeled)
2	• 25%-50% of the collagen fibers in the light microscopic field are wavy	• Less than 25% of the tissue density belongs to vessels	Early remodeling (fairly acceptable)
3	• Less than 25% of the collagen fibers in the light microscopic field are wavy	• Less than 50% of the tissue density belongs to vessels	Fibroplasia (bad)
4	• No crimp pattern is seen	• Less than 75% of the tissue density belongs to vessels	Early fibroplasia or degenerative changes (extremely bad)
5		• More than 75% of the tissue density belongs to vessels	Healing is not in progress and the newly regenerated tissue is only vascularized.

Table S4: Base scoring system used for defining the ultrastructure analysis (TEM)

	1) Alignment		
Score	**Status**	**Directions of the collagen fibrils**	**Direction of the fibroblasts and fibrocytes**
0	Near normal	• Most of them are aligned in one directions	• Most of them are laid in the direction of collagen fibrils
1	Highly align	• More than ¾ of the collagen fibrils are aligned in one directions	• More than ¾ of the cells are laid in the direction of collagen fibrils
2	Moderately align	• More than ½ of the collagen fibrils are aligned in one directions	• More than ½ of the cells are laid in the direction of collagen fibrils
3	Fairly align	• More than ¼ of the collagen fibrils are aligned in one directions	• More than ¼ of the cells are laid in the direction of collagen fibrils
4	Amorphous	• Collagen fibrils are not aligned in one direction.	• Most of the cells are not laid in the direction of the collagen fibrils
	2) Maturity of the collagen fibrils		
Score	**Status**	**Description**	
0	Normal	• Collagen fibrils are distributed in multimodal pattern. Minimum of five different categories of fibril's diameter (extremely small (0-64nm), Small (65-102nm), medium (103-153 nm), large (154-256nm) and extremely large (257-307nm)) are seen at ultra-micrographs.	
1	Highly mature	• Collagen fibrils are distributed in multimodal pattern. Four different categories of fibril's diameter (extremely small (0-64nm), Small (65-102nm), medium (103-153nm) and large (154-256nm)) are seen at ultra-micrographs.	
2	Mature	• Collagen fibrils are distributed in multimodal pattern. Three different categories of fibril's diameter (extremely small (0-64nm), Small (65-102) and medium (103-153nm)) are seen at ultra-micrographs.	
3	Immature	• Collagen fibrils are distributed in bimodal pattern. Two different categories of fibril's diameter (extremely small (0-64nm) and Small (65-102nm)) are seen at ultra-micrographs.	
4	Highly immature	• Collagen fibrils are distributed in unimodal pattern. Only one category of fibril's diameter (extremely small (0-64nm) is seen at ultra-micrographs.	
Score	**3) Crimp pattern**		
0	• More than 75% of the collagen fibers in the field are wavy		
1	• 50%-75% of the collagen fibers in the field are wavy		
2	• 25%-50% of the collagen fibers in the field are wavy		
3	• Less than 25% of the collagen fibers in the field are wavy		
4	• No crimp pattern is seen		