



Comments on the article “high complication rate following dynamic intraligamentary stabilization for primary repair of the anterior cruciate ligament”: the story of the cyclops syndrome is not over

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Received: 16 January 2019 / Accepted: 29 April 2019 / Published online: 17 June 2019
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Dear Editor-in-Chief,

I was very interested in reading the article “high complication rate following dynamic intraligamentary stabilization for primary repair of the anterior cruciate ligament” [11]. This article highlights the high rate of complications following primary repair of the anterior cruciate ligament (ACL) by dynamic intraligamentary stabilization (DIS). DIS may lead to healing of an acute ACL rupture [1], especially in case of ACL tear with an intact synovial coverage [2].

Among the described complications, the cyclops syndrome rate is top rank. This syndrome corresponds to a local arthrofibrosis and was described in 1990 as a loss of knee extension after ACL reconstruction due to the progressive development of a fibrovascular nodule at the tibial side of the ACL graft [6]. The term cyclops was chosen because of the eye-like appearance of this lesion on MRI and at arthroscopy, by analogy to the giants of Greek mythology with a single eye in the middle of their forehead. This syndrome includes a progressive loss of knee extension of 10°–20° in the first 6 months after ACL reconstruction, associated with anterior knee pain and a clunk when trying to extend the knee [4].

At the beginning of the twenty-first century, other authors have reported patients presenting a progressive loss of extension after partial or complete ACL tears not treated by surgical reconstruction [9, 14–16]. If associated with a partial ACL tear, the knee is not unstable with a negative pivot shift because of the loss of extension, and patients show an average 10° loss of extension. During arthroscopy, a cyclops

nodule is easily found when associated with a partial ACL tear, and isolated removal of the cyclops is mandatory. On the contrary, if associated with a complete ACL tear, the cyclops nodule may be hidden in the fat pad. Removal of the cyclops associated with ACL reconstruction is necessary to prevent extension deficit.

More recently, it has been shown that augmentation ACL procedures with preservation of the ACL remnant fibers [12, 13] and DIS procedures for primary repair of the ACL [7, 10] could lead to a high rate of cyclops syndrome. Augmentation procedures [5] and primary repair [17] are old techniques for ACL tears, and it is well known since more than 30 years, that an augmentation procedure may lead to a mechanical block of extension [5]. One could say that the recent revival of augmentation or primary repair for ACL tears [3, 8], also leads to the revival of well-known complications.

This letter to the editor is therefore intended to recall the potentially high rate of cyclops syndrome encountered with ACL primary repair or augmentation and to alert on the paradox of the cyclops syndrome’s recent return, due to the recent revival of old techniques for ACL tears. In conclusion, the story of the cyclops syndrome is not over: it may persist after ACL reconstruction, it is not well known after a partial or complete ACL tear and its revival due to ACL repair, or augmentation techniques is a concern.

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