

Letter to the Editor

We read with interest, and some concern, the method of stabilization of Tossy type III acromioclavicular joint (ACJ) injuries as described by Lögsters et al. [1], which relies on two smooth K-wires to fix the ACJ, with coracoclavicular augmentation using polydioxanone suture (PDS). In their series, limited mobilization in the first 6 weeks of surgery was permitted as part of rehabilitation regime. From the 32 patients that were followed up, two cases of K-wire migration were reported; however, it was not mentioned if there were any associated complications from this technique. The study began with 68 patients, but only 32 were followed up. Four others are accounted for, but a further 32 patients appear to have been lost to follow up, presumably with K-wires in situ.

Undoubtedly, smooth K-wires are an important device in the armamentarium of any orthopedic surgeon. Their use around the shoulder – and subsequent complications – has been well described in the medical literature.

There have been many documented reports describing the migratory abilities of smooth K-wires when used around the shoulder with subsequent life-threatening complications. Lyons & Rockwood [2] reviewed all published reports of K-wire migration around the shoulder between 1943 and 1990. Migration from various parts of the shoulder girdle to major intrathoracic vasculature, lung, spinal canal, and contra-lateral ocular orbit were described. These complications are still being described in more recent publications [3, 4].

We believe techniques aimed at reducing the chances of migration, such as shortening the duration of use, may render fixation ineffective. Bending the lateral ends of the wires may not prevent migration as wires are prone to breakage, especially in the athletic patients in whom mobilization is allowed, as in this series. Also, loss of patients to follow-up could potentially increase the chance of migration.

The principles of surgical treatment of ACJ separations have recently been clearly described by Fraser-Moodie et al. [5] to include: ACJ reduction, repair or substitution of disrupted ligaments, and prevention of

acute re-displacement. Techniques of ligament reconstruction using native ligament, tendon graft, or ligament substitution have been described. Following ligament reconstruction, stabilization of ACJ is paramount to allow soft tissue consolidation. The coracoclavicular ligament transfer described by Weaver & Dunn, or its modification, is the most widely used operative technique for the repair of ACJ separations. In addition, there is currently limited, though encouraging results describing arthroscopic repair of ACJ disruptions [6].

Given the array of “safe” and well-described options available for ACJ repair, we would not advocate the use of K-wires for stabilization as fixation will be suboptimal and there is an association with potentially disastrous consequences.

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References

1. Lögsters TT, Brien D, Lohde C, Janssen A, Rueger JM, Windolf J, Linhart W. K-wire arthrodesis and coracoclavicular augmentation of complete acromioclavicular separations: functional and subjective results. *Eur J Trauma Emerg Surg* 2008;34:43–8.
2. Lyons FA, Rockwood CA. Migration of pins used in operations on the shoulder. *J Bone Joint Surg* 1990;72:1262–7.
3. Durpekt R, Vojacek J, Lischke R, Burkert J, Spatenka J. Kirschner wire migration from the right sternoclavicular joint to the heart: a case report. *Heart Surg Forum* 2006;9:E840–2.
4. Mellado JM, Calmet J, Garcia Forcada IL, Sauri A, Gine J. Early intrathoracic migration of Kirschner wires used for percutaneous osteosynthesis of a two-part humeral neck fracture: a case report. *Emerg Radiol* 2004;11:49–52.
5. Fraser-Moodie JA, Shortt NL, Robinson C. Injuries to the acromioclavicular joint. *J Bone Joint Surg Br* 2008;90:697–707.
6. Snow M, Funk L. Techniques of arthroscopic Weaver-Dunn in chronic acromioclavicular joint dislocation. *Tech Shoulder Elbow Surg* 2006;7:155–9.