

Technical Note

Removal of the Instrument Makar Shoulder Staple

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Summary: We present a technique to remove the Instrument Makar staple (Instrument Makar Inc, Okemos, MI) using a Synthes DHS/DCS coupler screw (Synthes Ltd, USA, Paoli, PA). **Key Words:** Complications—Fixation—Shoulder—Staple—Arthroscopy.

During the 1980s, technological advances resulted in attempts to provide stability to the shoulder using arthroscopic techniques. The most commonly used metallic fixation device in arthroscopic stabilization was the Instrument Makar dual-pronged barbed staple manufactured by (Instrument Makar Inc, Okemos, MI) in a technique popularized by Johnson.¹

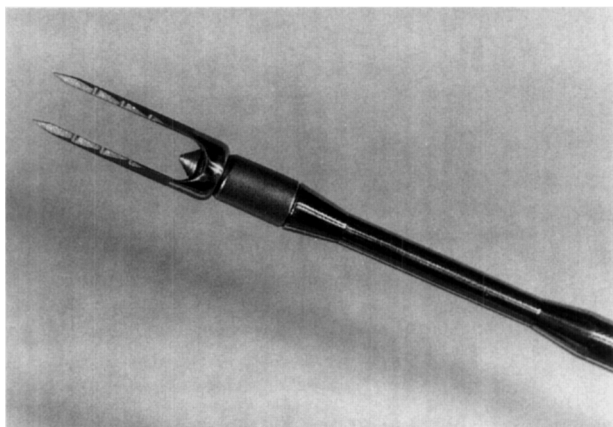


FIG 1. Instrument Makar staple with attached driver/extractor.

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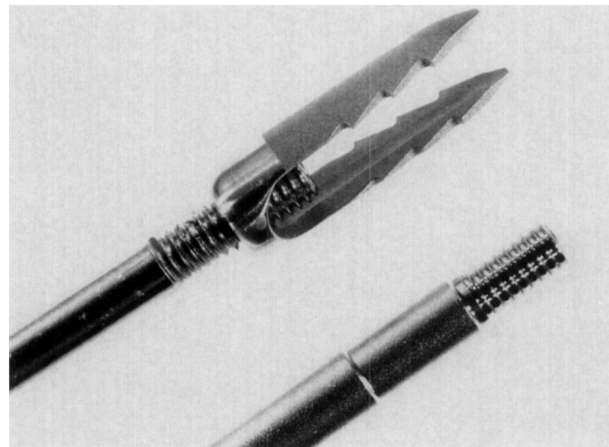


FIG 2. Instrument Makar staple with Synthes DHS screw extractor.

A variety of techniques involving the use of trans-glenoid suture techniques, absorbable fixation devices, arthroscopic Mitek suture anchors (Mitek Surgical Products, Inc, Norwood, MA), and arthroscopic knot-tying techniques currently are more commonly performed. In general, the results of arthroscopic stabilizations have been less successful than open stabilization techniques.

Additionally, the Instrument Makar staple has been used in anterior cruciate ligament reconstruction and other ligamentous stabilization procedures about the knee. The purpose of this report is to describe an extraction technique that we have used for removal of the Instrument Makar staples.

TECHNIQUE

The Instrument Makar staple driver/extractor is commercially available from the manufacturer (Fig 1).² However, in our operating room, the extraction device is no longer available because the technique has not been used at our institution since 1986. On two occasions, the surgeon was confronted with the challenge of removing a firmly embedded instrument Makar staple at the time of revision open Bankart stabilization. In both situations, the Synthes DHS/DCS coupler screw (Synthes Limited, USA, Paoli, PA; Part No. 338.22 or 338.20) was used to assist in removal of the Instrument Makar staple (Fig 2). The Synthes DHS coupler screw easily threaded into the threaded hole of the staple head to facilitate removal of the staple. Disimpaction of the staple was then performed in a routine fashion.

SUMMARY

When confronted with the challenge of hardware removal during revision shoulder stabilization procedures, specialized instrumentation such as the Instrument Makar staple driver/extractor may become necessary. The Synthes DHS/DCS coupler screw may be more readily available, and can effectively substitute for the Instrument Makar staple driver/extractor.

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REFERENCES

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2. Instrument Makar: Surgical Technique. Instrument Makar, Inc, 1994.