This paper presents the opinion and clinical experience of Vip Dev, MD. Bovie Medical Corporation's J-Plasma electrosurgical generators and hand pieces are indicated for the delivery of helium gas plasma to cut, coagulate, and ablate soft tissue during open and laparascopic surgical procedures. Dr. Dev is a paid consultant to Bovie Medical Corporation.

White Paper

NOVEL SURGICAL APPROACH TO BREAST CAPSULE SCORING WITH J-PLASMA®

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The Challenge

Breast implant and expander exchange is a fairly common procedure that often involves capsular scoring. Traditional techniques utilized for these procedures have often included the use of cautery. Unfortunately, this technique quite frequently results in trauma to the overlying pectoralis muscle.

We present an innovative device utilized with a traditional technique for breast capsule scoring that does not require the use of traditional cautery. This device has helped reduce the rate of grade II and grade III capsule contractures, and has eliminated the chance of trauma to the overlying pectoralis muscle.

The Solution

J-Plasma® from the Bovie Medical Corporation represents a patented approach to electrosurgery whereby a helium gas plasma, fueled by electrosurgical energy, flows into the application site for only a brief interval then disperses leaving very precise, predictable effects. There is no net flow of electricity around the body, so no return electrode is required. The cold plasma effect is highly localized, minimizing collateral damage to surrounding healthy tissue. This and needing no grounding pad, differentiate-J-Plasma® from standard electrosurgical devices.

What is 'plasma'? In its simplest state, plasma is the result of energizing a gas to a level that produces a mixture of neutral atoms, molecules, ions and electrons. Plasma has the unique ability to exist and function in a cold state (room temperature) or extreme temperatures (>800°F). Researchers have found that this unique spectrum of temperatures opens itself to enormous therapeutic possibilities.

J-Plasma® uses non-conductive currents and limits direct injury with its reduced tissue spread, minimizing the risk of direct and capacitive coupling. J-Plasma allows for breast capsule scoring with controlled precision and reduced fear of injury to surrounding structures.

The Result

Before

J-Plasma® offers surgeons a safe, viable alternative in the performance of breast capsule scoring. A case series of eight patients treated using J-Plasma® was conducted from July through November, 2015, as described in the following chart:

Patients	Capsule Contracture	Expander/ implant exchanges	Follow-up	Breast revision/implant exchange, cosmetic breast	Follow-up
2	Grade I	1	3 months	1	4 months
3	Grade II	2	5 months	1	5 months
3	Grade III	--	--	3	4.5 months

All contacted patients reported that they were pain free and happy with the result. No adverse events were reported. Patients will continue to be enrolled in this protocol and followed for an additional 12 to 24 months. In all patients, the following benefits were identified:

- Improved capsule contracture rates in the short term <6 months
- Decreased pain
- No hematoma formation
- No seroma formation
- Decreased use of pain meds
- Less trauma to breast tissue

"I suggest the use of the J-Plasma® device for capsule contracture dissection and recurrence. I believe the J-Plasma® device may be utilized as a potential tool for dissecting tissue and identification of tissue planes without causing surrounding trauma."

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***CAUTION**: Federal law (USA) restricts this device to sale by or on the order of a physician. For listing of indications for use, precautions and warnings, refer to the instructions for use for all J-Plasma® products and accessories.*