

Powell doc get patent for surgical instrument

ILENE OLSON - Powell Tribune - Associated Press

Cycling in the Pyrenees of Southern France isn't the setting one might connect with inspiration for a technical innovation to simplify a gynecological surgery procedure.

But that's where Dr. Roger Brecheen was in the summer of 2009 when he had a sudden flash of inspiration about how to design a surgical instrument to simplify non-invasive hysterectomies through laparoscopic surgery.

Brecheen, who now practices obstetrics and gynecology at Powell Valley Healthcare, was cycling the famous climbs of the Tour de France with Jack Koehler, an engineer friend and fellow avid cyclist.

Brecheen said he turned to Koehler and said, "I've had this half-baked idea in my head about a surgical device, and on the way up this mountain, I think I had a vision."

Looking back, he jokes, "It was probably more oxygen deprivation than epiphany."

It seems fitting that the vision for the instrument happened on another continent. By the time his invention became a reality, it would be proclaimed as "the holy grail of minimally invasive gynecologic surgery," and the development effort would expand to include physicians as far away as Amsterdam and India.

Brecheen made his first sketch of his envisioned invention on a napkin in a French coffee shop after the bike ride. Once they returned to the United States, Brecheen said he took Koehler into an operating room to show him firsthand the problems surgeons experience with a couple of key steps during laparoscopic hysterectomy surgeries using current instrumentation.

"The technical difficulty of the procedure is the primary reason that this minimally invasive technique is not performed in the majority of gynecological surgeries, especially in rural areas," Brecheen tells the Powell Tribune (<http://bit.ly/PSLNMc>).

By observing the procedure, Koehler was able to avoid the "surgeon/engineer disconnect," Brecheen said. The two then formed a company to design and develop devices to simplify the procedure.

"Since the idea was first hatched on the Col du Soulor (a mountain pass in the Pyrenees), the name Soulor Surgical seemed fitting," Brecheen said.

Brecheen filed for a patent for his invention, and he was awarded the patent Sept. 6. A second patent is pending on a similar instrument.

"For the second patent, the U.S Patent Office notified Dr. Brecheen that the patent

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has been approved and he should be receiving it any day now," said Jim Cannon, Powell Valley Healthcare spokesman, on Wednesday.

Brecheen said he is working with the Federal Drug Administration now to get the instrument approved for use in operating rooms around the country, including rural areas, where minimally invasive gynecological surgery often is unavailable to women today.

"FDA approval will require clinical research trials of which Powell Valley Healthcare is expected to participate along with Harvard, Stanford, Universities of Maryland, Louisville and Utah," Brecheen said. "Imagine that, PVHC as the only rural hospital conducting medical research on this device along with such established icons of the medical world."

Brecheen and Koehler developed nine prototypes, tested in cadaver models in the anatomy lab of the University of Utah School of Medicine, where Brecheen has served as assistant clinical professor.

Brecheen then introduced his device concept to several prominent minimally invasive gynecologic surgery specialists. They've since joined in the effort, becoming a part of Souldor Surgical.

The first instrument prototypes were used in live surgery in Amsterdam, the Netherlands, by Brecheen and Drs. Andrew Brill, Resad Pasic and Milosevic.

Pasic presented a video of the surgery at this year's American College of OB/GYN annual clinical meeting in San Diego as a preview of coming changes.

Brecheen later learned that another minimally invasive gynecologic surgery pioneer, Dr. Jon Einarrson of Harvard, was working on a similar device along with colleagues in India.

"All are now joined in a collaborative effort to bring this technology to market," Brecheen said. "It was a real treat to me to meet other physicians who shared my frustration ... then to place one of our prototypes in their hands, watch their eyes light up and not have to explain what the instrument did. They knew."

Cannon said the invention will have a huge impact on women's health, especially in rural settings.

"It's still amazing to me that the majority of hysterectomy procedures are still done the old fashioned way (again, more so in rural settings), which is not good for women," Cannon said. "It's a tough recovery. Dr. Brecheen's improvement of the already established minimally invasive procedure is a significant breakthrough and will definitely make for positive outcomes."

Brecheen said he recently had a patient undergo a laparoscopic surgical hysterectomy on a Tuesday morning, and she got married on Wednesday night.

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"Just unreal compared to the way I was trained in the 1980s and the standard methods of hysterectomy," Brecheen said.

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