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## Kindest cuts made with 'cold hard steel'

"Surgeons have historically referred to the scalpel as 'cold hard steel,'" said DR. ALLEN ROSEN, medical director of the Plastic Surgery Group, 37 North Fullerton Ave. "I find it interesting to go to medical museums, and one of the things you see is that the scalpel hasn't changed much since before the Civil War. It's a very simple tool."

While new cutting technologies such as laser and ultrasound have challenged the scalpel, nothing has supplanted it. "In general," Rosen said, "a metal edge has remained the most efficient way to make incisions."

One reason is that cold hard steel obeys the basic rule of medical practice: "First, do no harm."

"A classic scalpel has no what we call zone-of-injury," Rosen explained. "It very cleanly separates tissues, whereas some of the new technologies, which are very accurate, cut with a thermal element. So you get a mild zone-of-injury, a little warming and swelling of the tissues adjacent to the incision site."

"They've improved laser scalpels, but the concept of no damage to the surrounding tissues is better in my mind than some, even minimal, damage."

Scalpel blades come in many shapes and sizes: 1 is the largest, 20 one of the smallest. A size 1 might be used in thoracic surgery, a 20 for corneal repair. In cosmetic surgery, Rosen uses mostly 10s and 15s, the latter more often. "Pakistani steel is economical and can be good," he said, "but German steel is still the best." He buys his scalpels from Bard-Parker, a large medical supply company.

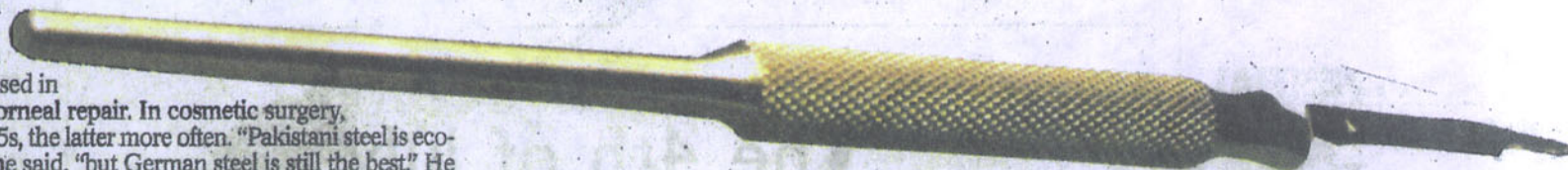
Rosen often finds it wise to invoke the company's name as code. "If I'm doing outpatient surgery and the patient is awake," he said, "I don't want to scare them by asking for my scalpel. So I say to my nurse, 'Bard-Parker.' Every once in a while a patient asks, 'What's that?' And when you say 'scalpel,' they go, 'Aaaaaa!'"

Scalpel technique varies with the size of the blade and the cut. "When we need to make very broad strokes, the scalpel is held more in the palm and the stroke is more with the arm," Rosen explained. "When we make a very fine cut, as in nasal or facial surgery, we hold the scalpel in two or three fingers and make a very small gentle stroke. It's a little like painting with different size brushes, but there's also a tempo to it, like dancing. For young surgeons in training, the most difficult thing to learn is how hard to press."

At medical trade shows, Rosen said, manufacturers demonstrate their wares on various materials: A piece of latex, an unpeeled banana or orange or a piece of preserved pigskin.

"Pigskin actually is very similar to human skin in terms of dynamics," Rosen said. "Pigskin in its preserved form is a little more rubbery than the live tissue, and certainly more rubbery than human skin. It's not an exact replica, but it gives you a feel for how the knife works."

Scalpel handles are almost as immune to change as the blades themselves. Yet there is a new twist to handles, according to Rosen — the thin cylindrical handle.



"When you're making a small circular incision, like around the nipple area, you actually can rotate the cylindrical handle in your fingers as you come around," he said. "That is much harder to do with the flat handle."

It's a wonder no one thought of it before. Of course, it isn't esoteric and expensive like laser and ultrasound. It's just a piece of cold, hard steel.