

“Stitch,” I say to the scrub nurse.

I hold out my hand, waiting. Instead of keeping up with me, the next suture ready to slap into my palm, she’s hit a snag trying to pull the suture out of the package and load the needle in the gold-handled needle holder. I wish I could reach across the instrument tray and do it myself, but I can’t move. If I look away, I’ll lose my place, and that will only delay me further. I’m focusing on an area no bigger than a postage stamp through a pair of surgical loupes that magnify my limited view. I can see the exact spot where the next stitch needs to go, between two gaping edges of intestine, the width of a matchstick.

“Let’s go,” I say. “Let’s get this finished.”

I know I seem impatient, but it is not because I’m in a hurry to get to something else. My only focus at the moment is on this baby, Clare. I know that every moment she is under the drapes on the operating room table her life is at risk. Born eight weeks early, she weighs only four pounds. A breathing tube no bigger than a straw is keeping her alive during this operation. The correct position of this tube, inside her trachea, is measured in millimeters. If it is accidentally pushed in or pulled out, even a minuscule amount, her lungs will fail to expand and deflate and an alarm will go off.

Any interruption in ventilation will cause us to stop operating. The anesthesiologist will have to check the breathing tube and adjust it as needed. If the tube completely dislodges, the oxygen level in the bloodstream will plummet and within seconds

the baby's heart, deprived of oxygen, will start to slow dangerously. When that happens, the baby will be close to cardiac arrest. And if her heart does stop beating and normal blood circulation ceases, not only will this interrupt the operation, it could end it before we finish repairing the congenital malformation we came here to fix. We will have to staple everything closed and get out as quickly as possible.

In other words, a complication like this can result in disaster, a nightmare for surgeon and patient alike, and I had seen it before.

Three decades ago, when I was training to be a surgeon, I was assisting in an operation to repair bilateral inguinal (groin) hernias, persistent openings between the lining of the abdomen and the scrotum, in a premature baby boy with chronic lung disease. This is normally a straightforward repair that requires making a small incision on either side of the lower abdomen and locating and tying off a tissue sac. But on this particular morning, when the pediatric surgeon and I were about to finish and close the skin, the breathing tube slipped down too far, into the right-side bronchus, so that only the right lung was being ventilated.

Within seconds, the infant's oxygen level dropped, his heart rate slowed, and the anesthesiologist disconnected the ventilator and started bagging the baby by hand to inflate his scarred and stiffened lungs. In his excitement to correct the problem, he used too much force. The pressure blew out both lungs like they were dime-store balloons, rendering them temporarily useless. The chest filled up with air, which compressed the lungs and kept them from expanding at all.

The surgeon and I pulled off the drapes and started CPR using two fingers, rather than the weight of an entire hand, to compress the undersized newborn's heart. Then we incised both sides of the chest with our scalpels and slid small drainage tubes between ribs as thin and pliable as Q-tips. Within seconds, the air drained out of the chest cavity and the tiny lungs reexpanded. The heart

started beating again, and the baby stabilized. We prepped the field and finished closing.

“That’s the first time I’ve ever done bilateral hernias and bilateral chest tubes at the same time,” the surgeon said. A nervous laugh spilled out to punctuate his relief.

Everyone in the room knew how close we had come to losing that baby when no one was expecting it. Hernia operations are not usually considered high risk. But because we were working on a baby who weighed four pounds rather than the usual nine, a baby who had been in the neonatal intensive care unit the entire two months of his life and had chronic lung disease, the margin for error was slim enough to be virtually nonexistent.

While pediatric anesthesia has continued to improve since this case took place, similar mishaps can still occur. Pediatric patients, particularly infants, have shorter, smaller-diameter airways compared to the larger anatomical structures of adults. With infants it takes only a slight imprecision to throw everything into chaos—a breathing tube that slid in too far or not far enough, too much pressure used to inflate the lungs, the slightest bit of swelling in the lining of the bronchus. What appears on the surface to be a tiny error can cause the vital signs to destabilize, the monitors to alarm, the eruption of a full-out emergency where utter calm had reigned only moments before.

*There is no such thing as a routine operation in a baby.*

As I wait for the scrub nurse to hand me the next suture, all the things that can go wrong run through my mind: the breathing tube, Clare’s temperature, whether the closure will leak or close off from scarring because the sutures are too far apart or too close together. *Does she need another dose of antibiotics? More blood? Will she get a postop infection? Pneumonia? Will the whole thing fall apart and have to be done over again?*

These passing seconds seem like a long time, long enough for me to wonder if there were any way to avoid the delay, long

enough to think about exactly how I will line up the stitch again should I lose my place, long enough to remind myself that I am, after all, simply waiting in this 80-degree cauldron, baking under radiant warmers like a carton of French fries on the back counter of a McDonald's. The heat is necessary to keep the baby warm, but consequently sweat is starting to drip down my back under the impermeable layers of my gown. At least for now, though, the baby is stable. The price of this wait so far, measured in time, not disaster.

The situation could be much worse. The baby could be moving, seizing, crashing, or bleeding. But, still, all I want at this moment is for the next stitch to be placed perfectly into my hand, now. Otherwise, I will have to stand here, bent over, peering into this tiny body cavity, the muscles between my shoulder blades knotted and tightening down, doing nothing whatsoever to finish this operation that must be completed before catastrophe strikes.

Operating is not an individual event. It is a team effort.

I need an operating room, the right equipment, a pediatric anesthesiologist, a scrub tech, a circulating nurse, and on some days another surgeon to assist. I have to rely on other people in this high-pressure venue, people I do not always choose, people who may not be as torqued up as I am when I'm operating on a premature infant, people who may not fully appreciate what is at stake.

The nurses and techs assigned to my room may be inexperienced in neonatal operations and may have only been assigned at the last minute because the regular scrub tech is sick or because it's a holiday, night, or weekend and everyone else has gone home. They might be slow, inexperienced, and unaware of the risk of imprecision and delays.

And then I am stuck sweating this out with an assistant who cannot anticipate my next move, who runs out of suture at a critical time, who does not have a single, necessary, 6-zero prolene on an RB needle, loaded and ready to pass so I can put in the next stitch. These are not idle minutes. They are minutes that add risk, something I can't take the time to explain.