

How a Brain Surgeon Learned to Ride a Bike

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Many years from now, I will remember today as the day I learned to ride a bike. At the age of thirty, after working for five years in Philippine General Hospital (PGH), I have performed close to 500 operations on the human brain and spinal cord. And yet, despite having taken out brain tumors, clipped ruptured blood vessels, repaired inborn malformations, and saved motorists from life-threatening head injuries day in and day out, I have not been able to acquire the elementary skill of balancing oneself and moving forward on a two-wheeled vehicle.

When revealed to my colleagues, this seemingly trivial ineptitude is always a source of both amusement and bewilderment. To their incredulous stares, I would respond with a matter-of-fact but sheepish grin, “*Eh hindi ako marunong, eh*” (I just don’t know how to). If cycling were a prerequisite for graduation, I would not have been able to finish my training as a neurosurgeon.

Melbourne weather is being its usual temperamental self this afternoon. When I left my flat in Brunswick West just forty-five minutes ago, the sun was up, its dry summer heat searing to skin accustomed to tropical humidity. Getting off at my tram stop at Saint Kilda Road, I noticed that the warmth had given way to intermittent gusts of cold winds with dark clouds overhead.

Eleven months earlier, on my final year as a resident physician in PGH, I received news that I had been accepted for fellowship training in one of Australia’s leading pediatric hospitals. The hospital being in Melbourne, I decided at the outset that I would not allow myself to spend a year in the city without learning to ride a bicycle. Melbourne has a strong cycling culture, with designated bike lanes on the city’s thoroughfares and bike trails that run along its parks and gardens.

All it took was a quick Google search the other night (“adult learn to ride a bike Melbourne”) and I had found myself a teacher. Immediately I booked two sessions.

Thus, here I am, a two-week-old Overseas Filipino Worker, helplessly shivering in my knee-length shorts and short-sleeved, single layer t-shirt. “Get used to four seasons in one day,” I was told several times by *kababayans* I have met so far. While I already have a template answer to their question, “*Ano, Dok, dito ka na ba titira?*” (Are you staying here for good, Doc?), I have yet to acquire their habit of checking the day’s weather forecast and hourly temperature.

I hear a ding from my mobile phone. It is an apologetic message from my would-be instructor Michelle, advising that she will be a few minutes late. I type “No worries, take your time!” and press send, but only after convincing myself that this is how a polite local would reply.

Standing at the corner of Kings Way and St. Kilda Road, I am at one of Melbourne’s bike share stations. There is a glass-covered map of the city that shows bike routes (“Share from Here to There”) and an automated self-service kiosk where one can pay for bike rental using a credit card. Beside these is a row of the city’s trademark royal blue bicycles docked next to one another. To me, it is a barricade of soldiers waiting for the enemy to attack, every single one refusing to be conquered. I stare intently at the army of bicycles and reiterate as I have told myself with utmost conviction all day: I will not be intimidated.

I continue to wait, blowing warm air into my palms every five minutes or so, lest they become too numb to hold the handlebars later. I should get warmer once I start riding.

GROWING UP, I spent most of my bike-less childhood indoors. While the rest of my peers played games on the street or basketball in the village court after class, I would go straight home to work on my assignments and school projects. I was a typical diligent honor student—a geek even.

I preferred to spend my free time lying on our living room couch to read fiction or science books. In first year high school, I amazed our librarian by consuming four library cards in a period of ten months. I read every single issue of *Reader’s Digest* and every book in the Hardy Boys series that was in the shelves. I would save my allowance so that I could buy secondhand John Grisham novels. Reading was cheap and exciting, and it also took me places. There was no need to learn to ride a bike.

Besides, my parents would not have been able to afford a bicycle then. I am the eldest of five children. My engineer father's income was just enough for our family's living expenses. The sole reason I could enroll in a private high school was that I obtained an academic scholarship, which required maintaining my First Honor status year after year. Books and school supplies were on top of the priority list, toys way below. The only way I would have gotten a bike, which fell under the category of toys, was if a godparent miraculously decided to give me one for Christmas.

I suppose I could have befriended other kids in the neighborhood. One or two of them might have a bike that I could borrow. That would have worked, except I did not make friends easily and my same-age cousins were either abroad or living in the province. Peer pressure was virtually nonexistent.

The yearning began in college, after meeting like-minded individuals from all walks of life, from all over the country: valedictorians, athletes, musicians, writers, and activists—my class of forty students had them all. I realized that my inability put me in a very small minority, but then again, I was studying at the national university. Everyone's background and individuality had to be respected; nobody cared about what one could or could not do outside of academic work.

The medical student's desire to become an excellent physician was more pressing than the inner child's wish to pedal without training wheels or a sidecar. I had exams I needed to pass, patients who needed to be examined, hospital paperwork that needed to be completed, and a home tutorial job that I needed to find time for, so that I would have extra money for medical school expenses.

It was quite easy to justify things from my perspective.

A MIDDLE-AGED, CAUCASIAN woman on a bicycle is waving her arm from across the intersection. This must be Michelle.

She whizzes past me and stops just beyond the bike share station. She gets off and walks to where I am. She introduces herself with a smile and a handshake. Once more, she offers her profuse apologies; her son is getting a motor vehicle license and needed to log driving hours with parental supervision. I tell her not to worry about it. I have already waited over two decades for this bike lesson. Fifteen minutes more hardly mattered.

We walk back to the kiosk, and she explains how the city's bike share system works. She undocks one of the blue bikes and inspects its gears and wheels. Her lithe physique allows for elegant, deliberate movements. Her

brown-blond hair has been pulled back in a ponytail. She demonstrates how the bike is docked properly to avoid paying penalty charges, before finally handing the bike to me, with such force I almost topple to the ground, just now realizing how heavy these blue bikes are. To get a bruise even before starting, that would have been embarrassing.

Michelle unstraps a helmet from her bike's rear rack and attempts to fit it securely onto my head. Its blue color matches the city bicycles', and Melbourne is printed on either side.

"Helmets are required in the city. You can get these ones for just five dollars from any 7-Eleven store. Just remember that you are a large, darling."

She tightens the straps. I feel no different from a grade one pupil being readied by his mother for first day of school.

"How's your balance?" she asks.

"To be quite honest, I think it's not good at all. That's probably why I never learned in the first place."

"I see. Have you tried riding a bike before?"

As a matter of fact, I have. On my final year as a resident physician, I purchased a mountain bike intending to learn during my free time. Twice, I practiced with a friend in a parking lot, but the frequent falls and the difficulty of dodging cars entering and leaving made me abandon the sessions. For a year, my bike remained stationary inside my apartment unit, never to be used on an actual road. After my graduation from the hospital, I had to bring it home where it is now stored, accumulating dust and rust, waiting for my return to the Philippines.

"In that case we might have a problem. It's important that from the beginning, we set expectations on what you can learn from me in two sessions. In cycling, balance is key."

Did she just doubt my ability to learn at my age?

I want to interrupt her and say that I do not believe in the word impossible, but I remind myself that I am not a surgeon inside his operating room anymore. This afternoon, I am the student. I do not want to antagonize my teacher early on, so instead I continue to nod and listen.

"This is how you walk a bike. Put one hand on the handlebar and hold the seat with the other. Yes, that's it. If you could just follow me, darling, we will do your lessons in Fawkner Park. It's just across the road two blocks from

here. Remember that in Melbourne, if it's called a garden, you are not allowed to ride your bike inside. But if it's called a park, then you may practice there."

While walking, Michelle explains what she plans to do for the next sixty minutes. She also starts to give advice on riding a bicycle safely in the city.

"Always ride one car door away from traffic. And I don't understand why anyone would wear black when cycling."

My chest is pounding, making it difficult to listen to every detail. After a while, elm and oak trees come into view straight ahead.

"Here we go," I mutter to no one in particular.

SINCE ELEMENTARY, I had always known that I wanted to become a doctor. Being the eldest child in a lower middle class family, however, I was not certain if this lifelong dream was remotely possible.

During my final year in high school, relatives repeatedly tried to convince me to take up any course related to engineering or computer science. This was year 2000 and information technology was the popular and pragmatic choice. After graduation, getting a high-paying job abroad was almost guaranteed; it would allow me to help my parents financially in the soonest possible time. It was not illogical either; I had always excelled in mathematics, qualifying for interschool competitions at the regional and national levels.

It was a good thing my parents gave me the freehand when I was filling out my college application forms. I remained adamant about my decision to pursue medicine.

Armed only with an indomitable spirit, I got admitted into the Integrated Liberal Arts Medicine (INTARMED) program of the University of the Philippines (UP). The accelerated program would allow me to become a doctor in just seven years after high school. Fortuitously, I was also awarded the Oblation scholarship for exceptional performance in UP's entrance exam. Over 64,000 took the test, and I belonged to the top 50. In 2008, I graduated from the College of Medicine with honors.

Experience has taught me that if you work hard enough, the only thing left to do is to believe in the impossible. That was what I wanted to tell my bike teacher.

FORTY-FIVE MINUTES HAVE passed since Michelle and I started our bicycle drills. I am exasperated and nothing seems to be working.

We have tried all permutations possible: level ground or slightly downhill, soft grass or pebbled surface, start in motion and then stop, or begin stationary and then move. I just could not go beyond one revolution of the wheels. Inevitably, I would fall sideways and Michelle would have to run to catch me.

At one point, an elderly gentleman who had been observing us from a park bench said, “Even kids can do that easily.”

“Well, everybody learns at a different pace,” Michelle retorted, her maternal instincts kicking in.

I am otherwise oblivious to the stares of the people passing through the park to jog or walk their dogs. I am a stranger in a free country, and I could not care less about what they think. I just want to prove to myself that I can do this.

Whenever Michelle lets go of my bicycle, I sense from her a trepidation that amplifies with every inch that separates us. Toward the end of the hour, she says, “I’m wondering what is making it difficult for you. Let me try to think about it later.”

“That’s okay, I really appreciate your patience with me, Michelle.”

I ask when she would be available for our next session, but she cannot commit to a schedule. I want to pay in advance to guarantee that there will be a second opportunity for me to learn, but she refuses to take the money. Walking back to the tram stop in defeat, I listen to her advice on what I can do at home to attain balance. Her parting words are practice, practice, practice.

The winds remain cold and indifferent. I hop on my tram dejected. I have never thought an hour of bicycle lessons could feel more arduous than a whole day of operating. I try to recall my arm and leg movements earlier, and visualize the resulting motion of the bicycle. It is no different from the introspection that invariably follows a failed surgical procedure, when a surgeon scrutinizes every stage of the operation to identify the misstep that led to the unfavorable outcome.

I could not find an answer.

As soon as I get home, I turn on my computer and look for another teacher on Google.

MANY YEARS FROM now, I will remember today as the day I learned to ride a bike, I tell myself a second time.

I am seated on a bench at the edge of Albert Park Lake, not far from where I took my first cycling lesson. It's quarter to nine in the morning. Almost time. The sun is up on clear skies and a gentle steady breeze cools the surroundings.

Out on the lake, there is a group of primary school kids learning how to sail. Their male teacher has just signaled to everyone that the day's lesson has come to an end. Boys and girls in their neon lifejackets start docking their sailboats. In groups of two or three, they take down their red, blue, and yellow sails, and carry their respective boats to the shed behind me.

Perhaps after learning to cycle, I can learn to swim next.

My prospective teacher Rick was quick to reply to my messages when I was finalizing the schedule yesterday. He asked for my height and weight because he wanted to bring the optimal bicycle.

"I really would like to learn how to ride a bike, but I'm afraid I might be a difficult student. Is that all right?"

"Trust me, mate, I've plenty of experience with adults like you. I think you will be riding in no time."

Thinking things over, I realize that I am actually not afraid of falling off my bike. As a neurosurgeon, I have had to deal with fears more real than superficial scuffmarks or broken bones. I have always had to confront life and death head on. So no, it is not falling.

It is failing that I dread more.

"I AM SORRY, sir. I think I am going to lose this patient."

I had long feared having to say these words in the operating room, long wished I would never have to say them. When the inevitable mistake did happen, I spoke in a voice that was flat and unhurried, devoid of any emotion, almost inappropriately calm in an attempt to shove panic to the side. I could have been reading the classifieds to my consultant at the other end of the line.

My patient's brain was mushrooming out of her skull, and it was bleeding from all corners. I stood frozen, overcome by the realization that she was on the verge of dying on the operating table. In my head, I ran through all the options I had left as I gave my consultant a quick narrative of my surgery over the phone. There was simply no room to feel anything.

"My patient's blood pressure is dropping, sir. I might just have to close this and talk to her family. Sorry *po*."

A pause. From the corner of my eye, I could see the anesthesiologist injecting medications and hooking intravenous fluid for resuscitation. Then, after a few seconds that seemed to linger for an eternity, instructions:

“Try to control the bleeding first. Open the neck and clamp the carotid. Take out the swollen brain, more frontal than temporal. Wait for me.”

“Okay po, sir. Thank you po.”

I gestured to the nurse holding the mobile phone next to my ear that our conversation had ended, and I proceeded with the surgery as I was told.

Just fifteen minutes earlier, I gave myself a pat on the back for an elegant bone opening in record time. I sat at ease on the cushioned chair, with both eyes fixed on the operating microscope as I navigated through the webs inside my patient’s brain and identified her blood vessels, suction tip on the left hand and dissecting instrument on the other. My patient had an aneurysm, a condition in which a vessel that delivers blood and oxygen to the brain develops a sac-like outpouching, in her case likely due to smoking and uncontrolled high blood pressure. This focal point of weakness in the vessel wall had already ruptured once, and the goal of the surgery was to apply a clip on the aneurysm’s neck to keep it from re-bleeding.

It was my fourth operation of this kind. Though my hand movements still wavered between tentative and definitive, I had already acquired some dexterity during my first month as senior resident physician.

At the start, I was leisurely pointing anatomic structures to my junior resident, alongside casual conversation with the anesthesiologist and nurses about my plans after finishing residency training in December and my recent trip to attend a pediatric course in Singapore. Alternative music resonated within the operating room from my iPad. It was the perfect morning to save a life.

Until, with a single flick of my right hand probing aimlessly where it shouldn’t, a rookie mistake, my operating field filled with blood. Since I had not yet completely dissected the source of bleeding, one of the largest vessels of the brain, I knew outright my patient was in danger.

I turned to the anesthesiologist and said, “I ruptured the aneurysm,” and to the nurse, “*Pakitawag si James, please*” (Kindly call James). He was my fellow senior resident, assisting a tumor case at that time in another operating room. There was no shouting. No clanging of surgical instruments being propelled in the air and falling to the floor. Only the cardiac monitor was

bold enough to beep with arrogance, announcing the passing of time as one life slowly slipped past my trembling, stubby fingers.

That life belonged to Ofelia Reyes,* a 38-year-old beautician and single mother from Cavite. When I first talked to her in the intensive care unit (ICU), she was proud to say that she could do everything in the salon where she worked: hair cut, hair style, manicure, pedicure, and all else that would make her clients feel pampered and fabulous. Her hair was dyed auburn, and both eyebrows, trimmed to a gentle curve, complementing the sharp angulation of her cheekbones. Her salary from the beauty parlor was barely enough to raise three kids. I never asked about her husband and neither did she volunteer any information about him.

Two weeks earlier, as she was about to finish applying hair color on a client, she suddenly felt lightheaded. She excused herself to go to the restroom, only to be found unconscious on the floor a few minutes later by her coworkers. She awoke with severe headache and was taken to PGH, admitted as a charity patient under the neurosurgery service. Imaging of her brain and its blood vessels confirmed the presence of an aneurysm that had just bled. She was still fortunate; as many as 15 percent of patients with a ruptured aneurysm die even before they reach the hospital.

As a charity patient, Ofelia would not have to pay for doctors' fees or the daily rate for ward admission. Treatment would not be entirely subsidized, however. Her family would still need to shoulder the cost of laboratory tests, medications, brain scans, and the clip to be used for surgery. In a private hospital, a total treatment cost of half a million pesos would not be unheard of.

Charity operations are decked among residents. James and I took turns clipping aneurysms, and Ofelia's was my turn.

On the day before her surgery, I explained to Ofelia that there was a risk of developing complications such as bleeding, infection, or difficulty speaking. Foremost of all, because I would be working on the right side of her brain, she could develop weakness of her left arm and leg. At worst, there was a small possibility of complete, permanent paralysis of the left side of her body.

“Kabiti saan po kayong ospital magpunta, wala pong doktor na magsasabi sa inyo na 100 percent sure, walang magiging problema sa operasyon.” (No matter

*Not her real name

which hospital you go to, no doctor will give you a 100 percent assurance that no complications will arise during the operation.)

Because the risk of her aneurysm bleeding again and potentially causing instantaneous death without treatment was much greater than the possible risks of surgery, Ofelia gave informed consent, but only after expressing her greatest concern: she was left-handed.

“Itong kaliwang kamay lang ang ipinanghahanapbuhay ko, Dok.” (This left hand is my only means of earning a living, Doc.)

I put my right palm over the back of her left hand and promised that I would do my best, knowing that I needed to, and that in truth, she did not have much of a choice. She was stuck with me because she would not be able to afford the cost of treatment elsewhere.

“Kayo na po ang bahala, Dok. Maliliit pa po ang mga anak ko.” (I leave everything up to you, Doc. My children are still very young.)

And so, as I tried to apply and reapply clips on Ofelia’s blood vessels in a continued attempt to close off the point where I inadvertently ruptured her aneurysm, I kept thinking about the three kids. And the brown, slender fingers that worked six days a week to be able to give them a decent life. Still, the bleeding in Ofelia’s brain would not stop. I was not ready to lose her. Not this day. Not this single mother of three children.

What an immense relief it was to see my consultant walk into the operating room. I had been expecting either criticism or sarcasm, perhaps both, but instead we proceeded directly to the task at hand.

My consultant deftly continued to dissect where I left off, pointing out the idiosyncrasies that made the case difficult. After several tries, he applied the final clip that would secure the aneurysm. All bleeding came to a halt. Ofelia’s blood pressure and heart rate began to normalize.

“Never give up,” said my boss, before handing back to me the surgical instruments.

“NEVER GIVE UP,” I say under my breath as soon as I see Rick’s utility vehicle pull up on the lakeside driveway.

My new teacher is a cheerful bearded fellow, your typical Aussie bloke, someone who would join you for a beer at the end of a busy workday. He gets off his truck and brings down two bikes from the rear, one for each of us.

“I am that confident we will both be riding around the lake before the hour is up.”

I have to say, his optimism is contagious.

My new bike is still blue, but with a frame that is noticeably lighter than the city bike. I climb onto it and try the seat at the lowest possible position. My toes cannot reach the ground.

Rick is not pleased. He goes to his truck and returns with a handy saw. He pulls out the seat post and cuts off two inches from the distal end, right in front of me. A bike has just been irreversibly mutilated just so I could learn. I surmise the theatrics was my teacher’s way of implying, *There is no turning back, Doctor*. He asks me to try again.

“That’s better.”

We walk to a nearby track and field practice court. He removes my bike’s pedals and tells me to roam around, momentarily lifting both feet off the ground every few seconds or so, for progressively longer periods each time.

“If you feel that you are going to fall sideways, just turn the handlebars to that side. Most beginners end up tracing figures of eight, but you will soon be able to go straight once you get the hang of it.”

I do as I was instructed, and he watches from afar.

RIGHT AFTER OFELIA’S surgery, I spoke to her father in the waiting room. It was he who took care of the menial tasks of bringing blood and urine to the laboratory, scheduling procedures in radiology, and buying medications from the pharmacy day after day. He smelled of old clothes on a rainy afternoon, and his gentle manner belied the strength of his age.

I was physically and mentally exhausted but I owed him an explanation: where I failed, why I had to call my consultant, and what to expect from hereon. I told him that most likely, Ofelia would wake up in the ICU unable to speak and with significant weakness on the left side of her body. I apologized. Throughout our conversation, he remained calm and understanding.

“*Salamat pa rin po, Dok,*” (Thank you still, Doc) he said at the end. He was somber, but that did not inundate the sincerity of his gratitude, and I wondered how he did that.

The harrowing surgery would cripple me for days, Ofelia’s lifeless left arm and leg being a daily reminder of my near-fatal mistake. Inasmuch as I

wanted to cry from anger and remorse, there was hardly any time for that. A pause button did not exist. Charity patients who needed brain surgery kept coming to PGH, and I was duty-bound to serve them in all earnestness.

The last time I would see Ofelia and her father was several weeks after her discharge from the hospital. The two turned up at the neurosurgical ward, requesting for her skin staples to be removed. After missing their scheduled follow-up appointment, her father had to borrow money for jeepney fare to PGH on this day, only because Ofelia's wound had already begun to itch.

My patient wore a rosary conspicuously around her neck. Her behavior regressed to that of a child's. She was unable to comprehend commands, but she could utter simple phrases. The weakness on the left side of her body was decreasing steadily; she was now able to grasp objects and walk on her own. Her father told me that they had recently started selling handmade rugs to earn a living.

Seeing Ofelia again, I was just thankful she did not die on my operating table.

TWENTY MINUTES HAVE elapsed and I am cruising with ease. Rick is satisfied with what he is seeing.

“What do you think about putting the pedals back on?”

He does not wait for my reply. He pulls me over and attaches the pedals to my bike.

“Don't think about it. Just keep doing what you were doing a while ago.”

To my astonishment, pedaling has become instinctive. I am moving forward. Wobbly still, but moving nonetheless. Rick brings out his mobile phone and takes a video of me cycling for the first time.

“I bet you didn't think you'd be riding this quickly!”

My heart is racing, ecstatic at the prospect of biking along the Yarra River and exploring a city that will be my home for a year. I look up and feel the congratulatory warmth of the sun against the onrushing wind. I have the grin of a hundred children combined. This is how it feels to achieve the impossible.

THE JOY OF neurosurgery comes from lives saved and lives improved, be it from the simplest or most complicated of operations. At the other end of the spectrum, when a brain surgeon fails, one is eternally burdened by self-

hatred, frustration, and regret, knowing that the slightest of errors may lead to prolonged suffering, permanent disability, or worse, even death. Trying to find the balance may seem futile; the only way to move forward is to learn from one's mistakes, and to bear in mind that as a doctor, one only acts with the best of intentions.

I am a Filipino neurosurgeon, and today, I learned to ride a bike.