*Included in my group were Torch Dalgleish, Kingsley Logan, Anthony Crutchley, Paddy Reynolds, Richard Godden, Gordon Lennox and Garth Denyer.*

**Second Year**

The next academic year started earlier than most of the rest of the University and classes now took place at the Medical School campus, approximately 4 miles from College House. To get there we would have to cajole lifts or take a bus. The class of students now had dropped from about 250 to about 180; about a third were woman and about 10% were Black, Indian or mixed race. I believe all of us going into the 2nd year were excited, we were now based on the Medical School Campus and we were now about to start studying subjects more relevant to our intended vocation. There were only two subjects that year, Anatomy and Physiology.

On the first day we were instructed to form groups of 8 students. Woman tended to gravitate and form their own groups and those from the residences formed theirs together. The head of the dissection laboratory, a large, albino man with a jutting jaw, who we later suspected of having acromegaly, a disease resulting from excessive growth hormone production from a pituitary tumor, allocated cadavers to the groups. He was called Oom Daan (Uncle Dan) Coetzee. The cadaver dissecting room was a large rectangular room about 40 yards by 10 yards. It contained metal tables approximately 2 feet high along each side surrounded by stools. On each table covered by a white sheet and plastic was the form of a cadaver. The first thing that assailed one on entering the cadaver dissecting room was the pungent smell of formalin. Many started coughing and sneezing. The smell of the room can be remembered to this day. For a year the smell followed us wherever we went; it clung to our lab coats, the anatomy books and to our hands despite repeated washing.

For most of us the cadaver was our first exposure to a dead person and anatomical dissection and even looking and fingering the naked body took time for us to get accustomed. Gradually over time our attitude changed from viewing the body as a person to that of an object. It took me about three months before I was comfortable dissecting our cadaver with the head not covered. Covering the head made dissection less personal. Oom Daan had a wicked humor. He allocated one of the women groups a body that had ‘true love’ tattooed on his penis.

We were allocated for the year a set of numbered bones. I had a skull, a mandible, a clavicle, a rib, cervical, thoracic and lumbar vertebra and a pelvis. There were bones of the extremities – humerus, radius, ulna, femur, patella, tibia and fibula. The only bones we did not have an example of were the small bones of the hand and foot. These bones were studied on articulated skeletons. I kept my bones in a cardboard box under my bed. At the end of the year I could tell what structures emitted from each orifice at the base of the skull and which muscle was attached to every ridge on a bone. I could recognize where each vertebra came from and roughly tell which numbered rib was in my hand.

There were two lectures every morning, one on anatomy and one on physiology. Most of the anatomy lectures were given by retired surgeons. The physiology lectures went through each of the body systems, including the biochemical changes such as the Krebs cycle. The anatomy lectures started with embryology then the limbs, abdominal and chest cavities and lastly the face skull and brain. Of all the subject’s neuroanatomy and neurophysiology were the most difficult to grasp. One became aware of nerve fibers, tracts, ganglia and synapses and how a sensory stimulus traveled from the stimulus site to the sensory cortex; how motor function, initiating from the motor cortex of the brain with impulses traveling to the muscle caused the muscle to move. We were taught about reflexes and the autonomic nervous system.

Following the lectures, we spent the remaining morning dissecting our cadaver. Two students were each allocated an arm to dissect; the remaining four dissected the legs. We followed instructions printed in an anatomy dissection manual, which was usually propped on the body and soon became soaked in formalin. At the end of the year the books were tossed away or sold second hand to the next group of students. Allocated to about 4 dissection groups was a supervisor, usually a surgical resident brushing up on his anatomy prior to his post graduate diploma exams. Questions about structures were directed towards the supervisor. My partner was Paddy Reynolds, a good friend, who had shared a room with me in College House. Our group stayed together for the remaining five years.

Our dissection kit was a scalpel, scissors, forceps and a probe. These instruments were kept in a canvas roll with slots for each instrument. An initial incision was made vertically from the shoulder to the palm. At the palm and the shoulder, the incision was T-d circumferentially. The skin, pickled in formalin, was thick and leathery in consistency. Underneath was a fatty layer and underneath this layer were the muscles. We carefully cut through the fatty layer and exposed nerves and vessels which were preserved and followed to their attachments. The removed fat was placed in a bucket. The arm dissection took about two weeks to complete; we then reviewed the leg dissection done by our colleagues. It took me a short while to get the hang of dissection, but once I had the knack, I seemed to go faster than others. Perhaps it was the first inkling that surgery may be a career. We had still not taken the cover off the cadaver’s face, but the open toothless mouth, obvious through the coverings, because of a depression, made a very convenient spot to rest one’s elbow while dissecting.

Some of the groups found while doing their dissection the cause of death. Tumors were found lurking within the body and some had severe coronary artery disease indicating that ischemic heart disease was a possibility. Our cadaver was thin and obviously malnourished. We did not find a cause for death. We suspected he was a pauper.

Every few weeks we were tested on our knowledge. Testing was done in an interesting, but efficient way. There were about 180 stations positioned in rooms around the anatomy area, including the cadaver room. Each student stood at a station with a numbered sheet of paper and a clip board. The stations were variable, some had microscopes with slides, some a bone with an arrow pointing to a ridge or landmark, and some were dissections with colored pins attached to specific structures to be named. At some stations were lecturers and supervisors who asked specific questions. We were given 30 seconds at each station to write down the answer of the questions posed, at the end of thirty seconds a bell rang, and we moved to the next station. When we completed the stations the answer sheets were handed in.

 Obviously, no talking was allowed. One mischievous student moved a colored pin to another anatomical structure the answer of which he knew. What he did not appreciate was that everyone who followed him now had the same incorrect answer and it was thus easy to find the culprit.

In the afternoons were histologic classes, or physiology practicals. In histology classes we were assigned microscopes. Next to the microscope was a box containing about a hundred different numbered slides. We were expected to make drawings of tissue cells such as skin, tongue, salivary gland, pancreas, kidney etc. At the end of a few months we could recognize from which part of the body a microscopic slide came.

Physiology studies were largely done on ourselves. Occasionally small animals such as anesthetized cats or dogs were used. Paper was smoked over an oily flame then placed on rotating drums. Devices to monitor blood pressure, ventilatory efforts or other physiologic parameters were attached to a tambour lever which moved over the rotating smoked paper, which we then removed, varnished and dried. This was a very messy process.

Barium was swallowed and its passage down the esophagus observed under an X-Ray viewing machine. It was during one of these swallow studies that one of our colleagues was noted to have large mediastinal lymph nodes within the chest. Biopsy confirmed Hodgkin’s lymphoma for which he had chemotherapy and radiation. He completed his six years of study and passed all his studies, but he sadly died just weeks before graduation.

Later in the second half of the year we were introduced to two new subjects, Ethics and Pharmacology. It was becoming more obvious how the Medical School curriculum had been structured. We were being grounded in the basics and then slowly introduced to the clinical side.

Dr Norman Sapeika was our pharmacology lecturer. He had written a book about pharmacology which we used as a Textbook. He had an obvious love for the subject and soon we were learning about competitive inhibition, tissue receptors, narcotics, inotropes and antibiotics. There were practical’s in pharmacology that we had to attend. On one occasion there was an anesthetized cat with a cannula placed in the carotid artery measuring pressure. The tubing was attached to a tambour lever which was adjacent to our familiar but hated smoked drum. Intravenous adrenaline was instilled intravenously, and we saw the blood pressure and heart rate dramatically increase. Atropine was given to reduce the heart rate. Similarly, other drugs were instilled to demonstrate their effect on the cardiovascular system. Dr Sapeika’s tracings on the smoked paper looked beautiful. Why were ours so awful?