

Constructing Stories of Past Lives: Cadaver as First Patient: “Clinical Summary of Dissection” Writing Assignment for Medical Students

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The Clinical Summary of Dissection assignment encourages students to reflect on their experiences in the Gross Anatomy Lab. The goals we have in human dissection are 1) to help students observe the donor as a whole being and not just as the bones and organs they studied; 2) to have students make careful observations without medical equipment or diagnostic procedures; 3) to have students formulate their observations into plausible hypotheses; 4) to have students identify how lifestyle might have contributed to chronic disease as evidenced by the condition of the body; and 5) to help students appreciate the contribution made to their education by the donors and their families through body donation.

The Clinical Summary of Dissection is a required student writing assignment for Foundations of Clinical Practice I, the first semester of a four-semester course that introduces students to clinical medicine at the Carver College of Medicine at the University of Iowa, in Iowa City. Each group is instructed to keep a log of observations about its cadaver, including a general description, evidence of regular exercise, appearance of structures, evidence of disease, surgery, abnormalities, anatomical variations, and the morphology of the aging process. At the end of dissection, using the data collected, each group writes a one-page summary hypothesizing about the cadaver’s lifestyle, possible diagnoses of chronic and acute diseases, probable age, and probable cause of death. Students are encouraged to reflect on what the experience means to each of them. They are allowed either to work on their own or with their dissection table colleagues to complete this assignment. Grades of *complete* or *incomplete* were used to score the submissions. Since 2004, discussion of the assignment has been included in one of the

Personal and Professional Development weekly small group discussions.

The writing styles of the summaries generally fall into one of four categories: reporting of anatomic, surgical, or clinical observations; presenting a holistic overview of the body studied; a lifestyle-focused report based upon observational hypotheses; or personal reflections on the dissection experience. Here we provide samples of edited assignments that reflect these styles.

In addition to this assignment, medical students are exposed to a number of activities that attempt to link the affective, professional, and intellectual domains of their educational experience. Before classes begin, students are introduced to the curriculum. In the laboratory they are reminded of the privilege assigned to studying the human body and that this privilege is granted by the donors upon whom they will study. A Chaplain from the University of Iowa Hospitals and Clinics leads a short talk; students are allowed time for reflection and encouraged to demonstrate their thanks by learning as much as they are able. Throughout the semester, students are reminded to take respectful care of the donors’ remains. This is encouraged to protect tissue that is not being studied from increased exposure and to build awareness for properly covering patients during physical exam.

... observe the donor as a whole being and not just as the bones and organs ...

Four Clinical Summaries Observation of The Body

The examples presented were written by individual students, edited, and reprinted with permission. The first illustrates careful observation regarding details of the donor’s body.

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I Wonder ... by Adam J Case

The white sheet remains motionless as I stand above his body. I wait nervously thinking it will move at any second, but of course it does not. I am unaware of this feeling inside of me; it is a feeling that is foreign. I know that my curiosity is driving me to pull the sheet back, but my humanity leaves him to rest. I wonder if he was married? I wonder if he had children? I wonder his name? I pull the sheet back.

My first patient's skin is dark and very smooth. He is thin and has signs of good upper body muscle tone. His legs are small and withered; they show signs of great atrophy. I wonder if he was in a wheelchair? A small rubber tube pierces his glossy skin just above his right clavicle. This tube leads directly into his subclavian vein and runs into the right atrium of his heart. It is a central line for medication. I wonder what types of medications? I wonder if he was conscious when he died? The remainder of his body appears unremarkable. From where I stand, this man looks healthy. He looks as though he is lying asleep before me, though his face is wrapped in a towel and bagged. His hands and feet follow suit. He is not asleep, and I must not forget that.

As I prepare the scalpel blade, my hand begins to shake. Is this for real: am I seriously going to cut open a human being? I wonder if he ever hurt anyone? I wonder what he cried about? I make the cut. The blade passes smoothly through his soft skin, and I take care not to push too deep. I pull back his skin. I look into the man that once was a man, so that I may see what it is to be—a man. Heart. Lungs. Liver. Kidneys. Spleen. They are all present. Dreams. Goals. Hopes. Aspirations. Love. They have passed on. I look into what once was, so that I may learn. This man has given the greatest gift to education: himself. I wonder what drove him to donate his body to education?

I see his lungs are discolored and enlarged. This must be from the pneumonia, which is what ultimately ended his life. I wonder if it really was pneumonia that killed this man? I wonder what other problems he had that placed him in this condition? As I work further, I notice small stitches on the heart. The blue colored strands stand out amongst the shade of tan all the structures have taken. These stitches are indicative of a heart transplant. I wonder when he had the transplant? I wonder why he had one? As the weeks pass, I notice more pathology on our body. I wonder if he had regular dialysis? I wonder if he had regular injections? His spleen is enlarged almost twice the normal size. I wonder what type of infection he had? I wonder if it was from the pneumonia?

The lab is coming to a close now. Our body has taught me more than I ever dreamed I could know about the human body. I wonder how much I have truly learned about life? I know that when I stand above him, as I did the first day, I still have that same feeling. I look at the white, motionless sheet and wonder. I wonder where he had his first kiss? I wonder where he is from? I wonder what kind of foods he enjoyed? I wonder if he ever loved? I wonder his name ...

Donor as Whole Being

The second example focuses on the donor as a whole being and not just the bones and organs being studied.

Honored (name withheld by request)

I was scared to meet you. Then, after I met your "body," became intimately aware of your organs, vessels, muscles, I was scared to see your face. And still, after weeks of seeing your eyes, your hair, your ears, I get nervous before I look directly into your face. I guess I worry about seeing a resemblance to my grandfather; although, when you died, you were healthier than he. But your height, the size of your hands, the toughness of your skin, reminds of my grandfather.

You must have been active during your life. People comment on the size of your muscles and how clearly they can be seen. You have a lining of fat that has preserved your muscles, and under that fat, your muscles are large and well defined. You probably were not a runner or did not go to the gym very often, but I bet you were active. Maybe you were a farmer, or did construction, or worked in a garden because, in addition to your preserved muscle mass, your hands are large and strong.

You must have been healthy for most of your life. Your body is not scarred from surgeries, muscles not weakened from inactivity, no bed sores or broken bones. Your prostate was slightly enlarged and the surrounding area looked healthy; so, despite being diagnosed with prostate cancer, it appears to be in a very early stage. A possible cause of death was the aortic aneurysm found when we opened up your thoracic cavity. Lastly, although you had very large, pronounced muscles, your feet were unhealthy. You may have had diabetes, with poor circulation to your feet, and that may have limited you in your later years.

There were very few abnormalities in your body—almost a textbook layout. You did have your transverse cervical artery coming off your dorsal scapular artery, which is abnormal, but makes no difference as long as

you have the artery. This is the case for your posterior humeral circumflex artery, as well. Your artery is a branch off the subscapular artery, but normally the artery branches from the axillary. You had a new lens put in your eye, probably when you got older, because of cataracts. The anatomist helping my table said that almost everyone your age gets a new lens. Your body seems to indicate you led a long, healthy, and active life. I hope that the health problems you did have did not cause you too much pain or distress. I want to thank you and your family for making the decision to donate your body to University of Iowa Medical School. This was a brave choice and I hope that I was respectful of your gift. I know I feel honored to have been given this opportunity, which would not have been possible without you. Thank you very much.

Lifestyle Contributions

The third example identifies how lifestyle might have contributed to chronic disease and provides a glimpse into the student's future relationships with patients.

The Book I Couldn't Buy by Emily (Isaak) Schindler

I remember the difficulty we had with the electric saw that day. A professor had to come over and help us. There was smoke, the blade was turning brown, and you refused to yield to his heavy-handed attempt. He stopped, turning off the saw. "There's your problem." A wire, covered by connective tissue, had been used to rejoin your sternum after open-heart surgery. I remember thinking that it didn't look very elegant—I briefly wondered if the surgeon had misplaced the real wire, forgotten the real technique, and instead taken a paperclip, wrapped it around the bone, twisted it a couple of times, folded it down, patted it, and closed you back up. It just didn't seem very official.

We scoured you for clues. Your heart, large and broken, told most of the story. Neat blue stitches anchored vessels borrowed from your inner chest wall and your leg to your failing heart. The thick, muscular wall of your left ventricle invoked thoughts of strength, thoughts I knew were wrong—your heart was weak. Your left atrium exploded. It simply wasn't there. Your heart failed you and your aorta followed suit.

I'm sorry. I really am. I remember looking at the impersonal card hanging from our table and thinking almost 90 was a nice, solid age to live to. Perhaps you had a taste for steak, indulged in dessert, and drank beer. Maybe you just ate too much. I would have gently told you that your weight was a little too high, that you

would feel better and live longer if you changed your eating habits. I would have also remarked on how lucky you were to be so strong still—your muscles are all so long, large, and defined. It's just that you've got a little too much fat on top of all that. Your prostate is enlarged. It was probably a nuisance. But that's no matter now.

Maybe you tried to change. Maybe you did change. I can't know. Won't know. It's odd, knowing things about you no one else knows. Your obturator artery comes off your inferior epigastric artery. The arteries feeding your large intestine were truly unique—from everywhere to everywhere. The instructor told us not to even look at them, lest we get confused. None of this really matters to you, I know.

Wildly variant minor arteries probably weren't going to change who you were as a son, lover, student, employee, citizen, father, man. Fortunately, you saw that they might change who I would become as a physician. I wonder if you knew what would happen to your body, if you understood the violence that would be done to it. I have a feeling you did. I'm guessing you knew that we would separate you layer by layer, bone by bone, and learn you inside and out. You knew we needed you. You knew I needed you.

Your body was the book I couldn't buy, the class only you could teach. You knew it and that's why you were there. Now I know it, too.

Personal Experience

The final example, which has been edited for length, demonstrates the writer's personal reflections about the dissection experience and expresses gratitude to the donor for the gift she has given.

The Hyoid Bone by Benjamin Lewis

Before I had even made the first cut into the female cadaver at the table, an uneven and timid slice down her sternum, it seemed that all of my possible reactions to seeing and enacting this ritual of violence were pre-configured and delivered in various formats including Foundation of Clinical Practice lectures, a special lecture in Anatomy, a speech by a Chaplain, and a Deeded Body ceremony. Although this speaks perhaps to the thoughtfulness of the curriculum, I felt it necessary to inject a dose of skepticism, even cynicism. And so I steadied my gloved and wavering hand as it drew the blade down and deep between breasts that were bleached pink and hardened by formaldehyde: this was no longer a body, I told myself, but an incredible mannequin.

In the Gross Anatomy Lab it is easy to forget what you are, in fact, doing. You have sheets—of terms and places and things and stuff—which you attempt to find. The body, apparently, is full of stuff. The problem, it seems, is that when you are constantly surrounded by trees, the very concept of “the forest” is incoherent—there are no boundaries to demarcate it, no clearings from which to survey it: the body stretches out like a vast and alien landscape.

Although it seems that the extrapolation of a brachioradialis, witnessed in the lab, to its existence in one's own forearm is not a particularly involved mental maneuver, it was one that I made relatively rarely throughout the process. At the same time, during these long afternoons possessive tense predominated. A particularly good example of the chorda tympani nerve became ours, something we owned: “Oh, if you guys can't find it you can come over and see ours.” There was a bustling economy of transactions taking place between Table #3's fantastic thoracic duct and the cadaver's sturdy sympathetic chain. There was never any protest.

You get to know the dead in reverse. Here you begin with the inside and work your way to the surface. And yet, as the cadaver was emptied of itself it seemed to grow heavier, weighed down with a spiraling interconnectedness only made apparent when broken. It was a body laden with the gradual passage of time as it is measured in the anatomy lab: by the significance of what is missing. Or perhaps it was I who was changing. How could I thank her for allowing me to know her in a way that no one else ever has or ever will, in a way that I could never know myself? Look at this, I told myself, look at this now and do not forget it.

At the end of the first of seven books of Vesalius' Fabrica, there is a woodcut of a human skeleton leaning up against a tomb examining a separate human. Lying nearby on the surface of the tomb is what looks like the hyoid bone... that normally hangs suspended below the mandible, solely by ligament and muscle without attachment to the rest of the skeleton. It is a bone that could have come from either the examiner or his subject of study. The inscription on the tomb reads “The spirit lives on; all else is Death's portion.”¹

Conclusion

At the conclusion of the semester, student identifiers are removed from the essays and the essays are shared with Gross Anatomy Laboratory teaching faculty. Each year, the University of Iowa conducts a memorial service to honor those who made this very generous gift. The focus of the ceremony is to allow families to come to closure with the great gift that was made. Students participate by sharing expressions of gratitude through readings or poetry of personal reflection that share how the gift benefited their education, by leading music as part of the ceremony, or by assisting in distributing the ceremony program and helping seat individuals. ❖

Editor's note

The University of Iowa Writers' Workshop was the first creative writing degree program in the United States and is the model for contemporary writing programs. It has produced Pulitzer Prize and National Book Award-winning authors.

Reference

1. Vesalius A. De humani corporis fabrica libri septem [1543].

Contentment

In the minds of the virtuous, general contentment is produced.

— Sikhism