It has been said that a picture is worth a thousand words. Tens of thousands of words have been written about the JFK autopsy photographs, and they have been the subjects of intense study by government panels and researchers for years. Much has been written about alleged touch up or outright fakery of the photos and/or the wounds they are said to depict. I have seen discussion claiming proof that the photos were taken in separate locations because the stripe on the towel showing in other autopsy photos does not show in this back of the head photo, below.

The “Back of the Head” Photo

Photo 1 (above) is the most familiar version of the autopsy photo purported to show an entry wound in the cowlick of President Kennedy’s head. Despite the autopsy report, and the autopsists themselves who spent hours working with the body, noting an entry wound 1” to the right and slightly above the EOP, latter day panels decreed that this photo shows that entry wound to be in the cowlick. Is that bloody splotch in the photo at the cowlick…and furthermore, is it the entry wound seen by the autopsists at all?

Anyone familiar with the various on-line discussion groups knows that I have argued against that photo depicting an entry wound in the cowlick for years. JFK did, indeed, have a prominent cowlick. As can be seen in any number of photos taken of him in life, his cowlick was located on his left side. If his head were a box, his cowlick would essentially be at the left rear corner of the box where top and back of box meet. Apologists will argue that “the cowlick” means the typical cowlick area in general, not JFK’s cowlick location specifically. Okay, I am open to that, the general cowlick area would be anywhere along that line on a box where top and back meet. But that isn’t what the photo shows either.

We can see gloved fingers under the scalp tissue at the top of the photo, lifting and holding it in place. Humes and Boswell have said that the scalp was completely loose and being held up over the bone defect that lurked beneath. Dr. McClelland, of Parkland, made that same observation after looking at the photos for the NOVA television show in 1988. He noted that, “of course,” the large hole in the rear of the head did not show in the photo because the scalp was being held up over it. Okay, that’s reasonable. And because they say the scalp was loose and being held up over the back of the head, perhaps we can be somewhat forgiving in noticing that “the wound” in the photo is obviously not right of the midline (as reported in the autopsy protocol). And given this orientation of the photo, we can take that and some backward flex of the neck into account for a not quite accurate depiction of the wound on a high/low perspective on the back of the head. But is there enough latitude there to account for a full four-inch difference between EOP and cowlick?

While great care must be taken in evaluating 3D objects in a 2D medium (See sidebar on page 38), I believe some valuable information can be gleaned by orienting this photo correctly and making some basic observations. First, the photo must be turned 90 degrees to the left…JFK is on his side in this photo. There is no stripe on “the towel” because the towel is not in the picture … that is the autopsist’s shirt as can clearly be discerned in a less cropped version of the photo. (See Photo 2)

Note the nearly straight on perspective; look at his ear. Also note that there is actually little backward flex in his neck. Pay particular attention to the location of “the wound” in relation to the top of JFK’s ear.

Where is your EOP?

Over the last year, I have done what I refer to as the “string test” on dozens of people and have challenged “cowlick supporters” on the newsgroups to do the same. Simply take a piece of string and run it around the back of your head from the top of one ear to the top of the other. Make sure it is level on a horizontal plane. Where does that string cross the back of your head in relation to your EOP? Try it on several people. I have found that on most people, the string crosses the back of the head just at the top of the EOP or within 1/4 - 1/2” above it; on one person, it crossed 3/4”
above the EOP. (See Photo 3) Also note the location of the tops of the ears and EOP relative to the cowlick in these photos.

Now, again, look at Photo 2 and see where “the wound” falls in relation to the top of JFK’s ear. And, remember, loose tissue is being held up over a void underneath. Between that void and the loose relaxed tissue, it is likely that that it could be pulled up to an artificially high level, unlikely that it would lay too low, and we can also see in the photo that there is no apparent slack in the scalp tissue low down.

I contend that this autopsy photo shows, without a doubt, that what is purported to be “the wound” is nowhere near what anyone would consider to be the “cowlick area” … on anyone.

Is that bloody splotch really “the wound”?

Humes’ supposed recantation of the location of the entry wound in the back of the head being near the EOP has been much ballyhooed by apologists. Actually, Humes never did that in the first place and was clearly confused by what he was seeing in the photo. The splotch that was purported to be an entry wound in the cowlick appeared too high to him. He picked the white bleb at the hairline as what then must have been the entry. He did later agree that the low white spot was no wound and that the upper splotch must be the entry … but he never conceded it was anywhere near the cowlick, in fact, he grumbled a comment saying it wasn’t. The fact is that the only documentation we have as regards statements from the autopsists on the location of the entry in the back of the head are those in which they reaffirm their original findings ….. I” to the right and slightly above the EOP.

In the same session with the HSCA Forensic Pathology Panel as Humes’ experience above, Boswell made a direct statement that seems to have been largely overlooked. When Petty, commenting about the splotch just off to the right of the ruler, commented, “What is this opposite – oh, it must be, I can’t read it – but up close to the tip of the ruler, there you are, two centimeters down –,” Boswell replied, “That’s the posterior-inferior margin of the lacerated scalp.” He was saying that the splotch they were calling the entry wound wasn’t the entry at all, but was the rearmost point of a particular tear in the scalp.

When asked by the ARRB to point out the entry wound on the back of the head photo, Boswell was asked to measure, on the photo, to the area he was pointing at. As denoted by the question asked of him in response to his pointing out where the entry was, what he pointed out, “…wound be approximately 3.5 cm at approximately a 45-degree angle from that white spot……And that it’s in the direction towards the right ear.” was clearly not the bloody splotch generally identified as the entry, nor was it a spot visible in the photo at all. Boswell agrees with the statement just made by the questioner, and the questioner then asks, “And the point you are estimating that the entrance wound was located, is that the location that was previously recorded as approximately 2.5 centimeters to the right and slightly above the external occipital ---.“ Boswell replies, “Right.”

Boswell was noting that the entry wound was not visible in the back of the head photo, well in keeping with that overlooked statement he had made to the HSCA so many years before.

In Dallas last November, Doug Horne, who served on the ARRB, shared with me that after hearing Boswell’s comments while being deposed, they did some further computer study of photo #42 (the “back of the head” photo, Photo 1). I later wrote and asked Doug to reiterate what he told me in Dallas, and he has given me permission to use his reply in its entirety. Doug’s letter to me:

Barb,

During his ARRB deposition on Feb 13, 1996 Humes was asked by us whether the red spot (in the “cowlick area”) or the “white spot” (down low near the hairline) on photo #42 [“back of the head” photo] was the entry wound–the same choices the HSCA gave him. He exhibited confusion when answering this question for the ARRB. Initially he told us “the red spot”–the answer he gave the HSCA the second time around (in 1978) during his public testimony; then, when Jeremy probed a little bit to test the strength of his answer, Humes changed his answer and said “the white spot” down near the hairline— the original answer he gave the HSCA Forensic Pathology Panel in 1977. His final conclusion for the ARRB, after he changed his mind, was that the “white spot had to be it because the red spot was too high,” or words to that effect. (I defer to the transcript, of course, for completely accurate portrayals of what Humes said to us during his deposition; I am going from memory here.)

[By the way, I do not consider the so-called “cowlick area” to really be the cowlick, just because Andy Purdy characterized it as the “cowlick” when he was working for the HSCA. I think JFK’s cowlick was up really high, much higher than the “combed-back area” in the autopsy photo of the back of the head. To me, it appears as if someone has literally combed back, or parted, the hair to show the red “lesion” for the photographer. That photograph was clearly taken after the removal of the brain, because in the uncropped version of #38 [“back wound photo” which includes a somewhat oblique view of the back of the head], i.e., the transparency, the hands of two different physicians are pulling or holding scalp in place from INSIDE the cranium, which could only be done if the brain had been removed. Whether it was taken during the middle of the autopsy, or after the autopsy was completed and immediately before restorative procedures, I do not know.]

When the ARRB deposed Boswell on Feb 26, 1996 we took a different (i.e., better) approach with him when trying to make sense out of the back wound photo that includes the back of the head (#38). We asked Boswell if he saw the entry wound described in the autopsy report ANYWHERE in that photograph. After careful consideration, he calmly said, “no.” He identified the “red spot” as the end of a long laceration, the white spot as some type of debris, and said that the actual physical location of the entry wound that he remembered would be located on transparency #38 approximately halfway between the “white spot” in the hairline, and the top of the right ear! In the prints made from the transparencies you cannot see anything in this area. However, in Rochester at Kodak’s research lab, after transparency # 42 [the original photo of the back of the head] was digitized on the world’s best scanner, the Kodak techs and I (and later, Jeremy) looked at extreme blow-ups and enhancements of extreme blow-ups of this area (between the white spot and the top of the right ear) and lo and behold, there is a suggestion of a possible puncture in this area (unclear because the hair is thick and there is some shadow), clearly surrounded by a circular pattern of blood-
spatter. This appeared to Jeremy and I to be a possible entry wound surrounded by bloody back-spatter from the entry.

To summarize, we found photographic evidence of a possible entry wound in photo # 42 (we used the Nov 10, 1966 Inventory List for numbering) EXACTLY WHERE BOSWELL SAID IT REALLY WAS ON THE BODY. You will recall that in front of the HSCA Forensic Pathology Panel in 1977, both Humes and Boswell both said “that’s no wound” in regard to the red spot, and somewhat tentatively (by process of elimination, apparently) identified the white spot as the entrance wound. After being pressured, Humes changed his mind about what the red spot depicted in his public testimony in 1978, but clarified to the ARRB after his deposition (in writing—see last page of transcript) that he always insisted, and still did in 1996, that the entrance wound was low on the head, slightly to the right of the EOP.

Later, the ARRB had Dr. Lee and Dr. DeMaio look at the enhanced images of the possible “Boswell entrance wound” in photo # 42. Dr. DeMaio, who was a vociferous Warren Commission supporter, refused to consider that anything other than what the Warren Commission concluded could have been true. He was a pretty close-minded fellow. Dr. Lee, however, said that the enhanced area of photo # 42 could indeed depict an entrance wound (or puncture), but that the photo alone (without the body and better x-rays) was not definitive.

We did not view the enlarged and enhanced images at Rochester stereoscopically—only on a very high-quality computer monitor.

By the way, as enhanced from the transparency and magnified, the “white spot” does NOT repeat NOT appear to be debris (fat or brain tissue on the hair), as the HSCA said. It appears quite pink and even red, with the substance of jellified brain tissue, and appears to be oozing out of a puncture in the scalp near the hairline. The puncture in the scalp even appears to be at the end of a “tunnel.” This seems to be what is described as the entry wound in the Military Review of January 1967!!!

Two punctures in the rear of the head???? I don’t know. That is what it looks like to me, under enhanced and magnified viewing conditions.

All such images are preserved in the Archives on JAZZ drives, but are available for viewing only with the permission of the Kennedy family.

Please feel free to use the above, but only if you quote it all 100% without modification. No excerpts or paraphrasing, please!

Hope this helps,

Doug

The Back Wound Photo

Like the back of the head photo, one must first orient it properly. JFK is on his side in this photo as well. From the creases in his neck, we can tell that his head/neck is flexed back further in this photo and that his shoulder is scrunched up a bit by the autopsist who is holding him up. (See Photo 4)

Regardless of whether or not Gerald Ford relocated the wound by changing the terminology, we can see that the wound in this photo falls below what most would call the top of the shoulder….where one would lay their hand to pat or tap someone on the top of their shoulder, where one in that sort of uniform would wear an epauleau. That in itself tells us something anatomically. (See Chart 1) Note where the vertebrae fall in relation to the top of the shoulder where one would pat, tap or wear an epauleau. Also note that all of T1 and a good portion of T2 are suprascapular, that is, above the shoulder blade.

According to the autopsists, the entry wound in JFK’s back was measured to be 14 cm below the mastoid process and 14 cm from the tip of the acromion process. Neither of these are fixed, unmovable points on the body. As can be seen in Photo 5, flexing the neck backwards has a profound effect on where 14 cm from the mastoid process will fall. In this photo, without having taken the ruler away from the mastoid process between measurements, it made over a 2” difference. Likewise, 14 cm from the tip of the acromion process would vary with shoulder position, but that particular measurement has an additional problem.

Researcher Bill Hamley expressed puzzlement about that measurement to me a couple of years ago. He noted that 14 cm from the tip of the acromion process, no matter which way one measured from that point, would not seem to be a sufficient distance on an adult male to reach a wound 1-1/2” from the spine as the H S C A determined this wound did. So, Bill wrote to Dr. Humes and asked him if the distance from the acromion process to the wound was, “measured
directly from the acromion process to the wound, at an angle, or
was the measurement taken in a straight line perpendicular to the
spine?” Dr. Humes actually replied! Dr. Humes highlighted, in
yellow, the words “or was the measurement taken in a straight line
perpendicular to the spine?” and initialed it. Now for the math.
Since 14 cm = 5.5”, and since we can see in the photo that the
wound is somewhat away from the spine (the HSCA determined
1-1/2”), that gives us 5.5” + 1.5” from the tip of JFK’s acromion
process to his spine. Double that for a width measurement (tip of
acromion process to tip of acromion process) and we have a 6 ft
tall, 170 pound president with a shoulder span of 14”. Doesn’t
sound likely, does it? My 5’2”, 120 pound son measures 14” from
tip of acromion to tip of acromion. Measurements on the average
sized adult males I have attacked with tape measure in hand yield
an average of about 17-1/2”. As can be seen in Photo 6, 14 cm
falls quite short of 1-1/2 inches from the spine on an adult male …
the gap in this photo is 2.7”. I encourage readers to try these
measurements themselves, but be very careful to measure from
the tip of the acromion … not the outside edge of the arm. Refer to
the “bones” chart to see how to locate the tip … and it can easily
be felt on the top of a person’s shoulder. If you have your finger
on the tip of their acromion process and have them gently swing their
arm, you should not feel the bone under your finger move. Kudos
to Bill Hamley for noting this problem with the measurement from
the tip of the acromion process!

In Summation

Considered at face value, both the back of the head and back
wound photos yield valuable information when observed in their
proper orientation. In my opinion, there is no doubt that the splotch
proffered as the entry wound in the back of the head is a far cry
from the cowlick area. In addition, Boswell’s comments and
measurements in front of the ARRB, and the further study of the
transparency done by the ARRB, casts doubt on that splotch actually
being the entry wound at all. The back wound photo does not
anatomically show a wound at or above T1, and the 14 cm
measurement from the tip of the acromion process appears to make
no sense at all. In addition, in his comments on the back wound
photo to the ARRB, Boswell seems to identify the second spot
down in the photo as the back wound entry … not the top spot!
Now there is fodder for another article!

All HSCA/ Forensic Pathology Panel references can be found
in HSCA Volume 7. In meeting with the panel, comments by both
Humes and Boswell that pertain to the issues raised appear in more
than one location. I encourage readers to read it all. ARRB
references can be found in the transcript of Boswell’s deposition
to the ARRB.

Dangers Inherent in 2D/3D Evaluations

In response to a newsgroup post asking me what I thought
about an evaluation done by Dr. Robert Artwohl some time
ago on the angles involved between JFK’s back and throat
wounds, I responded with the following. While the specific
situation is not applicable to the subject of this article, it does
point out the pitfalls in analyzing 3D objects in a 2D image.
I replied:

We cannot calculate what the angle was from any one
picture as Artwohl has apparently proffered.

Artwohl’s plane reference appears to be a line parallel to
the bottom of the picture. What relevance is that supposed to
have as regards the wounds on the body? His 21 degree angle
relates to the edge of the photo, not to the body in the photo. It
could only be relevant the way he has it set up, if the body and
camera were known to be perfectly aligned with one another.
That’s obviously not the case given the position of the body in
the picture.

When measuring angles from photographs, you are mea-
suring the projection of a 3D object on a 2D medium. Move
the medium and the angle relationship to the shadow changes.
You can demonstrate this by holding your index finger out as
the “line” between point A and point B. Take an index card
and place it behind your finger. Have a light source behind
you so that your finger casts a shadow onto the index card.
Hold your finger still as you move the index card (tip for-
ward, back, waggle one side edge closer, then the other, etc.)
behind your stationary finger. You will see the angle change.
The angle of your finger has not changed...because you are
holding it still. But the angle of the shadow of your finger
changes relative to the edge of the card.

Without knowing the relationship between the plane of
the film and the object to be measured, the angle is meaning-
less. Such an angle can be calculated from photographs, but it
requires photos of the same scale taken from different angles
with a fixed reference point common to all. A vertical scale
would need to be determined on a frontal photo and also on a
photo taken from the rear. A lateral photo is needed to deter-
mine the thickness from front to back. Then, by using the ver-
tical difference between entry and exit and the thickness, one
can calculate the actual angle relative to the standard anatomi-
cal planes.

Any angle not referenced to a standard such as the ana-
tomical reference planes is worthless.

Likewise, in the case presented in this article, we do not
know the angles, focal length, etc involved in taking this photo
of the back of JFK’s head. We can see that it appears to be
pretty straight on; we can see that his outer ear is not being
viewed from either above or below but appears flat. But the
pitfalls as described in my response to the Artwohl evaluation
above remain a factor that has to be taken into consideration.

Barb Junkkarinen

has been studying the assassination since 1980. She became
active in the research community and online in 1994. Her clinical
laboratory background makes the medical evidence a natural as
her main interest and focus.