

Excerpt From:

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Q.

The autopsy protocol noted or reported there are conjunctival hemorrhages in both eyes. I'll now call your attention to Exhibits [numbers], which are two photographs. What do they show?

A.

I see nothing in the right eye beyond what I would call slight congestion. I would not be able to go further than that with regard to that particular photo. Exhibit [number] shows the upper lid of the left eye being pulled upwards by an examining hand, and I see again minimal focal congestion and one discreet petechial hemorrhage in the superior mid-portion of the conjunctiva.

Q.

Will you show the jury what you're talking about, please?

A.

In the left eye, most of the whitish portion, which is referred to as the conjunctiva, is white, normal in appearance. There are some very fine markings, like small tributaries, small rivers on a map, and those are blood vessels which are slightly congested. Then about the mid-portion there is one irregularly shaped reddish patch, and that is what is referred to as a petechial hemorrhage.

Q.

What can you tell us about Exhibit [number]?

A.

The first photograph which I referred to, as you can see, has rather dark lighting, particularly on the right side, which is the eye that was being visualized on that

photograph. Here I can see some small blood vessels which are somewhat congested, but I do not see a discrete punctate or petechial hemorrhage in the conjunctiva, as I can see in the other photograph demonstrating the left eye.

Q.

Before I ask you specific questions about the hemorrhage, I'll ask you, first of all, have you formed an opinion with reasonable medical probability as to what was the cause of death of [name of victim]?

A.

Yes. I have.

Q.

What is that opinion?

A.

In my opinion the cause of her death was asphyxiation due to drowning.

Q.

Did you see the conjunctival hemorrhages?

A.

What I just discussed and described, namely, the conjunctival hemorrhage in the left eye. That's what I see in the pictures.

Q.

If you look at the picture you see a little blood spot. Is that what you referred to when you talked about a hemorrhage?

A.

Yes. A hemorrhage means any extravasation of blood, no matter how small, from inside a blood vessel. It can be very extensive, or it can be extremely small. Very small

hemorrhages are usually referred to as petechial hemorrhages, or pinpoint hemorrhages.

Q.

What are the causes of hemorrhages of that kind seen in the left eye?

A.

Two causes are most likely involved. One has to do with deprivation of oxygen in the final moments of life, which may lead to some increased permeability of the small blood vessels. That is to say, as the tissues are deprived of oxygen for whatever reason, then the normally impervious lining of blood vessels, which does not permit the blood cells within the circulating blood to move through the wall to the outside, becomes compromised and blood cells may be able then to seep through the blood vessels. So anoxia or hypoxia, that is, a lack or deficiency of oxygen in the tissues, may be the cause of many of the small hemorrhages. Another accepted probable etiology for small petechial hemorrhages is a change in the normal hemodynamics, a change in the various pressures that exist between the arterial system and the venous system.

Q.

Can that come after death by a person lying in a fetal position in the water?

A.

Yes. These hemorrhages very often occur as a result of gravity changes, or from a person lying in the water or in other positions in other places postmortem.

Q.

Can it come from asphyxia?

A.

Yes.

Q.

Can it come from strangulation?

A.

Yes.

Q.

Can it come from drowning?

A.

Yes.

Q.

So does that have any real significance in arriving at a diagnosis in this particular case?

A.

No. The petechial hemorrhage that I see here can result from many causes. I should also like to say, because I think it is an important part of the answer, that we see these in cases of people who have not died of asphyxia, but who have died as a result of natural disease process where there was a deprivation of oxygen, or a state of hypoxia. In other cases they occur as postmortem artifacts because of gravity, the position of the body, or the condition of the person's vascular system immediately prior to death. There are a variety of reasons that petechial hemorrhages in the conjunctiva may be found at autopsy.

Q.

Doctor, what do you mean by artifacts?

A.

An artifact is an artificial or extraneous feature that is introduced into an object of observation.