

# Injuries to the Hands of the Man of the Shroud

Dr. Andrew Husselbee (AH) with Pam Moon (PM)

27<sup>th</sup> May 2022; BSTS Shroud Conference, Brewood

with further questions by Hugh Farey (Appendix)

PM: Dr Andrew Husselbee BA, BM, BCh (1986 Oxford) DA, MRCP did his medical training at Oxford University and worked as a doctor in Nigeria. For years now he has been the highly respected senior partner at Brewood Medical Surgery. When the exhibition of the Shroud of Turin was in Brewood in 2017, I had written that there are no thumbs on the Shroud because of median nerve damage. Andrew challenged that. We would like to explore the injuries to the hands of the Man of the Shroud in a question and answer format.

PM: Given the position of the blood flow visible in the wrist area which would suggest that trauma, perhaps Andy you could explain the nature of median nerve damage?

AH: Right, so, as a G.P. (General Practitioner in medicine) one of the commonest conditions we deal with is carpal tunnel syndrome – which one or two of you here may have experienced, and that involves the median nerve. So, if a nail goes through the centre of your wrist it is likely that the median nerve would be significantly damaged. Now the median nerve is one of the three nerves which supplies the forearm, the wrist and the hand and it goes through the centre, the middle of the forearm and the wrist under the carpal tunnel. Now if it is damaged, the functions that will be affected are really the movement of the thumb. So, the median nerve supplies the muscles which will move the thumb across the palm towards the little finger and it will move the thumb away from the hand. It is that sort of movement which you would lose if your median nerve is significantly damaged. If the nerve is significantly damaged the thumb will then take up the position, really, being sort of paralysed, next to the index finger and there will be very little movement away from that position. So that's what median nerve damage would do (image<sup>1</sup>).

PM: So, it doesn't bring the thumbs in?

AH: No, no

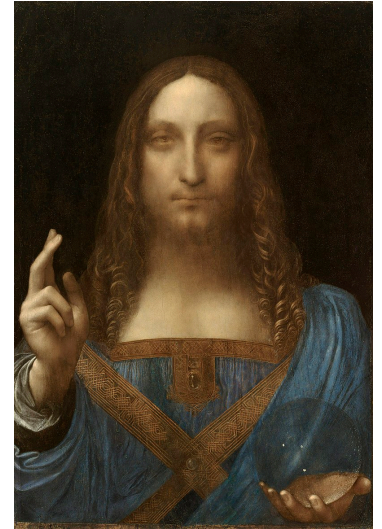
PM: So, it would bring them out

AH: Yes, it would be out

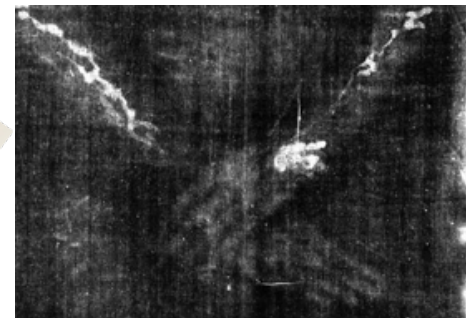


PM: Some people argue that Christ may have made a sign of benediction from the cross because of median nerve damage. Would that be likely?

AH: If you damage the median nerve at or above the elbow then it does affect other muscles which it supplies by branches which come off the nerve at that level. So, if you try to make a fist these two fingers (index and middle) would not flex or bend. If you damage your median nerve at the elbow or above and you try to make a fist that is what you would end up doing (see Salvador Mundi <sup>2</sup>). But because the damage is at the wrist, those muscles which flex the fingers would still be intact. So, you wouldn't get a sign of benediction due to the damage caused by a nail in the wrist.



PM: After Andy pointed out the problems of the hands; that the thumbs aren't missing because of median nerve damage, I went to Sellmans funeral directors to understand if there might be another reason for the lack of thumbs on the Shroud. The mortician Robert Smith showed me how he positions the hands of the deceased.



However, Edward Poole at Sellmans explained that while a wooden coffin would support the weight of the arms after death a Shroud would not do that. So possibly the thumbs were tied together. We can't see it because it is underneath the hands as we see them. So, Andy, would you agree with Edward that there is a case in our understanding of rigor mortis and muscles after death that if the thumbs and hands weren't tied together the arms may have pulled away from the body?



AH: Yes, if a body is lain in a supine position, in other words on the back, the arms will naturally, with gravity or with weight would just fall by the side of the body. I think that is the most likely position for a dead body.

PM: Working with Andy led me to the following: St. John describes strips (plural) of linen in the tomb. When Lazarus was resurrected Jesus said ‘untie his hands and his feet,’ so we can anticipate Jesus’ hands and feet were also tied. John Jackson has argued that the strip of linen which goes the length of the Shroud was once integral to the cloth and was then re-attached. It tied Jesus’s feet together and then wrapped round the body. If the hands were also tied together I wondered if that strip existed.

It didn’t take long to discover the Holy Blood of Bruges.<sup>3</sup> It is a linen cloth soaked in blood which is the same red as the Shroud. You could go tomorrow and see it. It is beautiful. In the Ancaster paper, from the Conference in 2019, I quoted Andy’s description of median nerve damage and suggested the Holy Blood of Bruges could have tied the hands of Christ together.

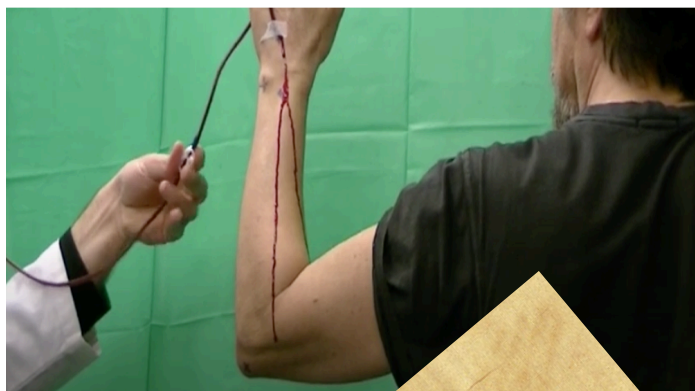


So, if we could move on to the hands in more detail. Looking at Barrie Schwartz’s<sup>4</sup> image of the hands, how can we explain the blood flows? First of all, can I ask you: a nail wound would be a penetration injury - do you anticipate there would be much blood flow from the wound while the nail was in situ?



AH: With the nail in situ, then there’s not going to be a lot of blood loss around that nail. There is likely to be some seepage, some oozing of blood around the nail but not a significant, large amount of blood, and you are certainly not going to get any sort of spurting of blood. That is really from artery damage. Veins are low pressure blood vessels, so there’s not going to be a lot of pressure, if a vein is damaged, to push the blood out. So, it would seep or ooze but with the nail in situ, there’s not going to be a lot of blood coming out.

PM: Matteo Borrini and Luigi Garlaschelli,<sup>5</sup> who are trying to discredit the Shroud, have shown that the blood flow down the forearm happened when the arm was vertical. Looking at the angle of the blood-flow down the forearm on the Shroud,<sup>6</sup> does their research seem plausible to you?



AH: Yes, it does sound plausible. Obviously, blood is going to flow with gravity, so if you have an arm out there (45 degrees) and there is seepage it would drip off the wrist. So, for it come down the arm, then in my opinion, then I think the arm needs to be vertical or near vertical, for the blood to flow.



PM: Can we just look at that blood flow? Great scientists like Robert Bucklin and others have said it points to the 45% angle of crucifixion. Is there any chance there could be another explanation for that blood flow coming out of the side of the hand?

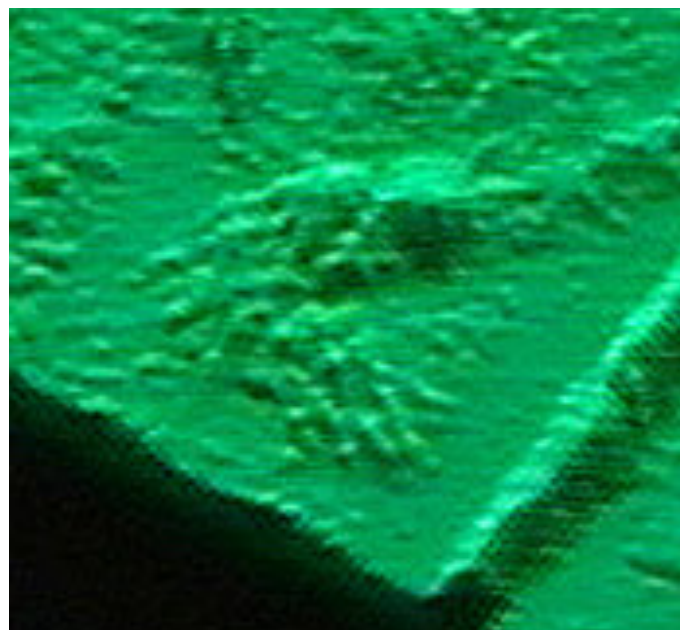
AH: Well, that's obviously a larger collection of blood,<sup>7</sup> and looking at it and the position of it, it is likely to be from the haematoma which would build up within the wound. So, while the nail is there and blood is oozing it could collect around the nail in the wound, but not a lot of it would come out. So that collection could be a haematoma and also there's also an idea that there is some flow away from the wound to the outer part of the hand. If a hand is prone, it is not completely flat because of the thumb. There is an angle, a slope to the outside, to the little finger, to the outside of the arm. So, if blood was seeping out of the haematoma, after the nail had also been taken out, then it would seep outwards rather than inwards, so you would see that sort of direction of flow. So, I would suggest that might represent the nails being taken out and there would be some oozing of blood from the wound, and it is oozing outwards and laterally toward the edge of the hand and the wrist.





PM: (In the 3D imagery taken by John Jackson and Eric Jumper,<sup>8</sup> there is a sizable haematoma on the back of the hand). If the back of the hand had been in close contact with the crossbeam of the cross, would a haematoma have formed?

AH: Haematomas will push where there is least resistance, or form where there is least resistance. So, if the back of the hand was against the beam, you are less likely to get a haematoma forming there. you are more likely to get it forming at the front of the wrist.



PM: The Bible might point to a yoke crucifixion? Could you examine that possibility?

AH: If there is a yoke crucifixion, then your wrists would be in this position<sup>9</sup> and the nail would go through the back of the wrist to pin the wrist the beam. So, there would be a lot of pressure at the front of the wrist so any blood collection would probably form at the back of the wrist. So, I think there is a possibility therefore that it was a yoke crucifixion and that would also mean the position of the arms was more likely to have been nearer to the vertical.



PM: So, when the nails were taken out and the blood flowed down the arm, it would be vertical?

AH: Yes

PM: It also fits with soldiers who tend to restrain people from the back not the front.

AH: Yes, it is possible

PM: We're not saying anything definitively here, we would just like to open the conversation.

PM: To conclude from a biblical perspective; we have heard the following scripture so often at Christmas, but consider it for Easter:

[Isaiah 9: 2-7 extracts NIV translation<sup>10</sup>]

The people walking in darkness have seen a great light; on those living in the land of deep darkness a light has dawned....

[Paolo di Lazzaro suggesting the Shroud was created by light<sup>11</sup>]

For as in the day of Midian's defeat, you have shattered the yoke that burdens them,  
the bar across their shoulders, the rod of their oppressor.

[Jesus said learn from me, "take my yoke," because my "yoke is easy and my burden is light"  
because He has broken the yoke of sin and death]

Every warrior's boot used in battle and every garment rolled in blood  
[the Shroud has been rolled in blood]

will be destined for burning,

will be fuel for the fire.

[It's been in at least two fires<sup>12</sup>; three is you count 1998]

For to us a child is born, to us a son is given,

and the government will be on his shoulders.

And he will be called

Wonderful Counselor, Mighty God,

Everlasting Father, Prince of Peace.

Of the greatness of his government and peace there will be no end.

## Appendix: Extracts from an email correspondence between Hugh Farey and Dr. Andrew Husslebee.

---

**From:** Hugh Farey **Sent:** 30 July 2022

Dear Dr Husselbee,

A film of your recent interview by Pam Moon has been posted on YouTube, and I was interested in your remarks on several levels.

Perhaps, before I go on, I should say that, although I have no medical training, I have been a biology teacher for forty years, and have a basic knowledge of anatomy. I should also say that I am a proponent of the 'medievalist' school of Sindonology, and do not think the Shroud is the authentic burial cloth of Christ.

The interview began with your explanation of the effect of median nerve damage, which at the level of the wrist, does nothing to draw the thumb across the palm, as frequently suggested in Shroud literature. You will, probably, be familiar with the work of Pierre Barbet, a battlefield surgeon in World War One, who experimented several times with driving nails into the wrists of freshly amputated arms. He wrote:

*"...on the first occasion, and regularly from then onwards, that at the moment when the nail went through the soft anterior parts, the palm being upwards, the thumb would bend sharply and would be exactly facing the palm by the contraction of the thenar muscles..."*

Dr Bucklin, a forensic pathologist, concurred when he examined the Shroud:

*"...As he examines the fingers, he notes that both the right and left hands have left imprints of only four fingers. The thumbs are not clearly obvious. This would suggest to the pathologist that there has been some damage to a nerve which would result in flexion of the thumb toward the palm."*

On the other hand, Dr Zugibe, another forensic pathologist, disagreed quite vehemently with both of them, and agreed with you:

*"Barbet indicated that each time the nail was driven through Destot's space, the median nerve was severed either halfway or two-thirds of the way causing the thumb to be drawn into the palm. This of course is untenable because as we demonstrated above, the median nerve does not pass through Destot's space but runs along the opposite side (thumb or radial side) of the wrist. Even if the median nerve was injured causing, mechanical stimulation as Barbet claimed, this would still not cause the thumb to be*

*drawn into the palm of the hand. Dr. Ernest Lampe, one of world's leading hand surgeons who in discussing injuries to the median nerve, relates in his book, Surgical Anatomy of the Hand, that in severance of the **median nerve**..... "THERE IS INABILITY TO FLEX THE THUMB, INDEX AND MIDDLE FINGERS". This was confirmed to me by several hand reconstruction surgeons." I(emphasis his).*

My first question to you, if I may, is to ask whether you can think of any damage to the wrist which does result in drawing the thumb across the palm? Barbet may have been wrong in his explanation, but, unless he was lying, he was surely correct in his observations.

The second part of the interview examined the alleged blood flow from the nail wound. You explain that blood would be blocked from flowing from such a wound as long as the nail was in position, and suggested a haematoma building up on the side of the hand that wasn't pressed against the cross. This could result in severe bleeding if the nail was removed, which is why First Aid courses always insist on embedded objects being left in place.

My second question, however, asks what the difference would be if the victim dies in an upright position, with his arm raised above the horizontal. Presumably most of the blood of the arm, and the head for that matter, drains back towards the torso before coagulating. No blood would exude from wounds as long they were above the drainage level, and if they were lowered, and blood did flow back, it would trickle down over the fingers, not up along the arm. I would be interested in your opinion on that.

Best wishes,  
Hugh Farey

**From:** Andrew Husselbee **Sent:** 4 August 2022

Dear Hugh,

I was aware of Pierre Barbet's work and whilst not denying his observations I do question their validity in relation to what happens when the median nerve is damaged or severed in a live person within hours of death. The experiment should have involved driving nails into the wrist before amputation rather than after. Also how long after amputation were the nails put through the wrist, immediately or after a few hours when rigor mortis might have begun to set in. Obviously it's a study that is not going to be repeated so cannot be verified!



Pam Moon's thoughts however were to provide a different explanation to the absence of thumbs on the Shroud. The binding of the hands together to keep the arms and hands on top of the body rather than lying at the side is common practice today among morticians preparing bodies for funerals. This I think would provide a quite reasonable explanation. There is then no need to even consider the effects of nerve damage and in answer to your first question there is no nerve damage I know which inflicted within hours of death would lead to the thumb lying across the palm. Limb and digit contractures can develop due to nerve damage but this takes place over months and years rather than hours.

Regarding the blood patterns, Pam Moon was interested to know my opinion as to whether a yoke crucifixion with arms in a vertical or near vertical position could explain the blood patterns. The blood which appears to have trickled down both arms in a similar pattern appears to be small in quantity and could have arisen from the wrist wounds before death. The nail would stop significant blood loss but there would still be some blood loss in my opinion and enough to explain the blood pattern on the Shroud. The haematoma would have been mainly clotted blood, blood clots in about 5-6 mins, but when the nail was removed there could have been some blood not fully clotted which could have flowed from the wound down the outside of the hand and given the blood pattern seen.

Blood which is within the tissues rather than the blood vessels, i.e. a haematoma, tends to stay in the area where it has leaked although some will eventually descend with gravity. A bruise in the upper leg can appear gradually lower down the leg and even in the feet but that takes several days.

Just to reiterate I think the only blood to leave the wrists after death was from the haematoma in the tissues. What happens to blood within blood vessels after death is therefore not relevant.

I hope those explanations answer your questions.

Obviously you find the Shroud just as fascinating as those who are on the other side of the argument. It is a wonderful mystery. I will be interested to see if David Rolfe eventually gets a response from the British Museum to his recent challenge.

Kind regards,

Andrew Husselbee

## References

- 
- <sup>1</sup> Image Median nerve damage; Ape hand deformity Emily Barrett - I (Eeb11288 (talk) Wikipedia: [https://en.wikipedia.org/wiki/Ape\\_hand\\_deformity](https://en.wikipedia.org/wiki/Ape_hand_deformity)
- <sup>2</sup> Salvator Mundi, Leonard da Vinci
- <sup>3</sup> Holy Blood of Bruges; Image: <https://www.seasonsforcake.com/2015/03/eating-and-seeing-in-bruges/>
- <sup>4</sup> Shroud image: ©1978 Barrie M. Schwartz Collection, STERA, Inc: <https://www.shroud.com/>
- <sup>5</sup> Matteo Borrini and Luigi Garlaschelli: A BPA Approach to the Shroud of Turin: A Preliminary Examination of the Left: <https://www.youtube.com/watch?v=zdBb84TminU>
- <sup>6</sup> Shroud image: ©1978 Barrie M. Schwartz Collection, STERA, Inc: <https://www.shroud.com/>
- <sup>7</sup> ibid
- <sup>8</sup> John Jackson, Eric Jumper, 3D image: ©1978 Barrie M. Schwartz Collection, STERA, Inc: <https://www.shroud.com/>
- <sup>9</sup> Stations of the Cross Lodwar Cathedral, Kenya; Image: <http://www.wischik.com/irene/cross/>
- <sup>10</sup> New International Version®, NIV®. Copyright © 1973, 1978, 1984, 2011 by Biblica, Inc.™
- <sup>11</sup> Why Shroud of Turin's secret's continue to elude science: National Geographic; Available online: <https://www.nationalgeographic.com/history/article/150417-shroud-turin-relics-jesus-catholic-church-religion-science>
- <sup>12</sup> The Shroud was burnt by incense ?1036  
[[https://www.academia.edu/42642715/Three\\_Treasures\\_of\\_Constantinople\\_The\\_Holy\\_Blood\\_of\\_Bruges\\_a\\_relic\\_the\\_Limburg\\_Staurotheke\\_a\\_reliquary\\_and\\_the\\_Madrid\\_Skylitzes\\_an\\_illustrated\\_manuscript\\_all\\_provide\\_historical\\_evidence\\_that\\_the\\_Shroud\\_of\\_Turin\\_is](https://www.academia.edu/42642715/Three_Treasures_of_Constantinople_The_Holy_Blood_of_Bruges_a_relic_the_Limburg_Staurotheke_a_reliquary_and_the_Madrid_Skylitzes_an_illustrated_manuscript_all_provide_historical_evidence_that_the_Shroud_of_Turin_is)]; and fire in 1532