

The Sudarium of Oviedo and the Man on the Shroud's ponytail

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General coincidences

According to tradition, both the Sudarium of Oviedo and the Shroud of Turin are relics of Christ. A series of determining coincidences have been discovered in various specialities of scientific research. Both cloths were used on a man with a beard, moustache and long hair. The correspondence between various anatomical aspects of the two faces is good, such as the nose and the nostrils, the eyebrows, the size of the mouth and chin and even the shape of the beard (Figure 1).

Both the Shroud and the Sudarium clearly show death by crucifixion, and in the case of the Sudarium the subject died in an upright position after torture that caused a pulmonary oedema, perfectly compatible with crucifixion, as both hanging and being impaled on a stake can be eliminated. Both subjects bled through the nose and mouth. The blood is postmortem and lifeblood in the same areas on both cloths. Both subjects underwent torture that is recognisable as being crowned with thorns, leaving lifeblood flows on the nape of the neck. When a photograph of the Sudarium is superimposed on the nape area of the Shroud the geometric coincidence between the stains is 75%. Possible discrepancies are due to the fact that the Shroud is not creased in this area while the Sudarium is. The blood group on both is the scarce AB. The chances of the blood group coinciding is approximately one in a thousand ... and it does coincide.

There are other signs too that the Sudarium of Oviedo was used on the Man on the Shroud. The Man's hair on the Shroud remains next to the cheeks in spite of the horizontal position of the body, and this is explained by the fixative effect the Sudarium had, holding the hair in that position for over two hours of use.

The ponytail on the Shroud

We would like to add to these coincidences the presence of the matted hair tied up in a ponytail on the Man of the Shroud.

It is easy to see the back of the hair on the Shroud image. If we look carefully and use the reinforced negative image, we can clearly see long hair falling from the bottom of the nape of the neck to the space between the shoulder blades (Figure 2). The

hair looks very much like a ponytail and yet we cannot see anything that is holding it in such a position.

The hairstyle has often been attributed to a typically Jewish style in the time of Christ¹. However, it would seem unlikely that the subject's hair would remain in place after the torture suffered. Furthermore, there is no evidence of anything holding the ponytail in position. How could it have held thus? We believe there is a simpler and more probable solution that comes from the use of the Sudarium of Oviedo on the Man on the Shroud's head; the so-called "ponytail" is the result of the Sudarium being placed and sewn around the hair on the back of the head to hold it in place. Such is what we will attempt to show in this article.

The ponytail on the Sudarium

There is a stain in the lower left corner of the obverse of the Sudarium that looks like the silhouette of a butterfly (Figure 3). It is just below the stain dots on the nape of the neck and can be reproduced in the laboratory when bloodstained cotton is wrapped in linen and pressure is applied to it (Figure 4). The cotton is like a lock of compressed hair and the butterfly stain corresponds to the ponytail.

The presence of this unique lock of hair is indeed a point of coincidence between the two cloths, but its origin lies precisely in the way the Sudarium of Oviedo was used on the victim.

We shall now recreate in detail the way the Sudarium of Oviedo was used on the back of the head².

The most likely sequence of use begins by placing the edge of the cloth on the right of the nape of the neck with the lower corner slightly below the cervical vertebrae, thus covering the back of the neck and the top of the head. The rest of the Sudarium covered the left ear, the nose and mouth and reached the right cheek. It was then folded back again on the nose and mouth. The right ear was left uncovered in the first phase.

In order to hold the cloth in this position it was sewn with linen thread (some is still left) to the hair on the back of the head. This can be deduced by sets of two holes relatively parallel from the bloodstains to the butterfly stain (Figure 5). The sewing holes do not only cover the area between the stains but the stains themselves and then

¹ Wilson, I & Schwartz, B: *The Turin Shroud* p. 42; Stevenson, K & Habermas, G: *Report on the Shroud* p. 49.

² For an introduction to the Sudarium of Oviedo see Rodríguez Almenar, Jorge M: *El Sudario de Oviedo*, Pamplona (2000) Eunsa and Guscini, Mark: *The Oviedo Cloth*, Cambridge, Lutterworth Press 1998.

they go a few centimetres further on each side. The holes are conical and we can thus deduce where the needle went in and where it came out again. There was a matted lock of hair between the linen and the stitches for approximately two hours³. The recreation can be seen in Figure 6. Dirty hair impregnated with blood and sweat held in this position for two hours would leave it firmly in place. The author has carried out various experiments of the process of what happened to Jesus' hair during the passion. Volunteers' hair was covered with serum, dust and blood and it was seen that it became firm when the blood originally from the thorns dried (Figure 7).

A series of stains were produced in the corner of the Sudarium in this position that we shall now describe. A series of small bloodstains can be seen towards the lower left corner of the reverse side, which were produced by small sharp objects that could very well correspond to a crown of thorns, as mentioned in the gospels. These stains consist of lifeblood, i.e. the blood was shed while the subject was still alive, it stained the hair and before drying soaked the part of the Sudarium that was placed over the nape of the neck. The blood soaked through the cloth and can also be seen on the right hand side of the obverse. The stains correspond to those in the same area of the Shroud in size, number, shape and blood type. We thus have a reference point to compare the adjacent zones on both cloths. The butterfly stain is about 10cm below the stains on the nape of the neck on the Sudarium. In spite of its being close to the lifeblood on the nape of the neck, this stain consists of *post mortem* blood. The different nature of the two fluids is evident when they are illuminated with infrared light. The butterfly stain disappears while those on the nape of the neck are still visible (Figure 8). Invisibility under infrared light is a characteristic that the butterfly stain shares with the main central stains, which could suggest a common origin. It could be the same mixture of pulmonary oedema fluid and blood that flowed out of the nose and mouth when the body was lying face up. In that position the fluid came out of the right of the mouth and ran down to the lower part of the jaw, the right of the neck and dripped down onto the lowest point of the cervical area. This became the central part of the butterfly stain on the Sudarium⁴. A small stain is visible on the same area of the Shroud, whose nature has not been defined and it could correspond to the point where the oedema fluid passed through the matted hair (Figure 9).

³ For a detailed study see Viillalaín, J.D: *Naturaleza y formación de las manchas*, in Actas del I Congreso Internacional del Sudario de Oviedo, 1994, pp. 131-176.

⁴ This could have happened during movement when the body was taken down or carried.

We conclude that the hair was pulled back and sewn to the Sudarium on the back of the head. When the Sudarium was removed the ponytail shape would remain as the hair was not washed. When the dead body was placed inside the Shroud, the ponytail was recorded by the image formation process. The lock of hair defined by the use of the Sudarium could therefore be the Shroud's ponytail.

This explanation was unexpectedly confirmed while overlaying the stains on the nape of the neck on the two cloths. We had to turn the Sudarium 19°, and in this position the stained corner of the Sudarium lies just over the sideways movement in the ponytail on the Shroud. As can be seen in Figure 10, the hair falls down from the left of the head towards the centre of the back and just where the edge of the Sudarium would be the ponytail moves sideways to fall vertically. The Oviedo cloth would have held the hair sideways and from that point the hair was free to fall straight. This also explains the shape of the ponytail on the Shroud.

Conclusion

The presence of the peculiar lock of hair on the dorsal image of the Shroud is further proof of the use of the Sudarium of Oviedo on the head of the Man of the Shroud.

Figure 1 – Superimposition of the Sudarium stains on the Shroud face

Figure 2 – Dorsal image on the Shroud. The long hair falling from the nape of the neck to the space between the shoulder blades is visible. It is a "loose ponytail" with nothing to hold it in place

Figure 3 – In the lower part of the nape of the neck on the Sudarium there is a stain that looks like "butterfly wings", corresponding to hair gathered into a ponytail

Figure 4 – The "butterfly wings" stain can be reproduced in the laboratory when the linen is pressed against cotton acting as matted and bloodstained hair

Figure 5 – Amplification of the area with needle holes around the ponytail

Figure 6 – Reconstruction of how the Sudarium was sewn to the hair

Figure 7 – Simulation of what happened to the hair during the passion. The volunteer's hair was impregnated with serum, dust and blood and when the blood dried the hair was rigid.

Figure 8 – The infrared photograph of the nape of the neck area shows the different natures of the “crown of thorns” stains and the butterfly stain, which practically disappears under infrared light

Figure 9 – In the area on the Shroud that corresponds to the butterfly stain on the Sudarium a small stain can be seen that is even clearer than the flagrum bloodstains

Figure 10 – When the stains on the nape of the neck on both cloths are superimposed, the edge of the Sudarium falls on the change of direction on the ponytail on the Shroud