

ARTICLE II.

DID JESUS DIE OF A BROKEN HEART?

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FROM the days of the apostles to the present time, the closing scenes in the life of Christ have been keenly studied from every point of view by Christian scholars, many of whom have given to the world their theological interpretation of the events of the crucifixion, which constitute, or have entered into, the various doctrines of the Atonement. There has been much diversity of opinion and a vast amount of controversy over this subject, and it will probably continue until we have a much fuller knowledge than we now possess, of all the circumstances of the life and death of Christ, and of the depth and range of his mediatorial work. Concerning the actual facts of the crucifixion record in the Gospels, if we except the opinions of those who deny that our Lord really and truly died upon the cross, there has been comparatively little discussion and disagreement. In the early days of Christianity, the subject was treated with great reserve, principally because there was then an exalted sense of the divinity of Christ, and faith was joyous, the coming glories of the Messianic kingdom occupying a more prominent place in Christian thought, than the pains and sorrows of the earthly life of Jesus, tenderly as these were held in remembrance. He was the strong Son of God, who had triumphed over the powers of darkness, and who now possessed all power in earth and heaven. "And when I saw him, I fell at his feet

as one dead. And he laid his right hand upon me, saying, Fear not; I am the first and the last, and the Living One; and I was dead, and behold, I am alive for evermore." It was felt the battle had been fought and won: why dwell on the stress and wounds of the conflict? The religion of the early Christians, therefore, was full of hope and brightness; they acknowledged with love and gratitude the deliverance Christ had wrought for them upon the cross, they gloried in the cross, but they did not care to dwell with morbid particularity on the physical pains and mental anguish of the crucifixion. This reserve was not broken through until the sixth century, when, for the first time, there occurs a pictorial representation of the crucifixion, significant of the change taking place in Christian thought.

As we enter the moral darkness of the Middle Ages, religion becomes more stern and gloomy; men love to dwell on every item in the sufferings of Christ,—the agony and bloody sweat; the mocking, buffeting, and cruel scourging; each detail of the crucifixion from the time the nails were driven through the hands and feet, until the body was taken down from the cross. Every resource of art was employed to bring the scenes vividly before them, and the art faithfully reflected the theology of the period. Instead of indicating triumph, the material representations, as in the paintings of Velasquez and other artists, with their overwhelming pathos and darkness of desolation, are irresistibly suggestive of hopeless defeat. Since the Reformation the religious atmosphere has been somewhat clearer in this respect, though even to-day among Protestant writers of a certain school, there are found minute descriptions of the agonies of crucifixion and an emphasis upon them from the side of theology, it were wiser perhaps to avoid. This tendency finds its fullest expression in

the theory that Jesus died literally of a broken heart. In the present article, written solely with the purpose of refuting this theory, it will be necessary, unfortunately, to enter very fully into some of the details of the crucifixion, but it will be done as reverently as possible, and with the hope that it may help to a return to the way in which the event was regarded by the early Christians, whose physiological and pathological knowledge may have been less than ours, but not their religious faith, hope, and joy.

For a compressed and lurid description of the horrors of crucifixion, we need turn only to the writings of the late Dean Farrar, of which the following is a brief excerpt:—"A death by crucifixion seems to include all that death can have of the horrible and ghastly,—dizziness, cramp, thirst, starvation, sleeplessness, traumatic fever, tetanus, publicity of shame, long continuance of torment, horror of anticipation, mortification of untended wounds, all intensified just up to the point where they can be endured at all, but all just stopping short of the point which would give to the sufferer the relief of unconsciousness. The unnatural position made every movement painful; the lacerated veins and crushed tendons throbbed with incessant anguish; the wounds inflamed by exposure, gradually gangrened; the arteries, especially of the head and stomach, became swollen and oppressed with surcharged blood; and while each variety of misery went on gradually increasing, there was added to them the intolerable pang of a burning and raging thirst."

Whether such a description is overdrawn or not, it certainly impresses on the mind every painful symptom of this lingering form of death. This is but an example of the literature which has been brought before the minds of men for hundreds of years. It is remarkable, then, considering this

general familiarity with crucifixion, that there has been so little discussion concerning certain of the physical facts connected with the death of Christ, of which there is no satisfactory natural explanation. From the standpoint of ordinary human experience, how was it that Jesus, a young man in perfect health of body and mind, died so quickly upon the cross after only a few hours' suffering, when other victims of crucifixion usually lingered for two or more days? To account for this, many commentators, from Tertullian onward, believe that Jesus did not die from the effects of the crucifixion itself, but that he voluntarily surrendered his life, relying upon his own words: "I lay down my life that I may take it again. No man taketh it from me, but I lay it down, of myself. I have power to lay it down, and I have power to take it again" (John x. 17).

As Tertullian tersely states it, Christ, "when crucified, spontaneously dismissed his spirit with a word, thus preventing the office of the executioner." Calvin and others like minded ascribe the death, rapid beyond all expectation, to the secret counsels of God. The naturalistic explanations are that our Lord, immediately prior to the crucifixion, was reduced to such a state of extreme weakness as to cause his early death upon the cross; or else, that the spear wound was inflicted before death and was therefore the immediate cause of his death. The former theory has never met with much general acceptance, as the strength of body and mind exhibited by Jesus on the cross disproves it. The latter has the support of some of the most important MSS.,¹ but opposed to it is the clear statement in the Johannean Gospel: "The soldiers therefore came, and brake the legs of the first, and of the other which was crucified with him: but when they came

¹ See Matt. xxvii. 49 (Rev. Vers. margin).

to Jesus, *and saw that he was dead already*, they brake not his legs: howbeit one of the soldiers with a spear pierced his side, and straightway there came out blood and water." Rejecting these naturalistic explanations, nearly all Christian writers agree in holding that the death of Christ was, to some extent at least, supernatural; it was not wholly due to the crucifixion.

The phenomenon of the flow of blood and water following the spear wound in the side after death, is another perplexing occurrence. Except for the conjecture that disease of the enveloping membranes of the heart and lungs may have caused it, there have been few attempts to explain it on physical grounds, most commentators resting content with mystical interpretations.

So matters stood until the middle of the last century, when there appeared a work by an English physician named Stroud, on "The Physical Cause of the Death of Christ." This sought to harmonize all the perplexing facts of the crucifixion and to add to their theological significance, by advancing the theory that Christ died literally from a broken or ruptured heart, and that the effusion of blood through the rupture into the membrane surrounding the heart, and its separation there into clots and serum, would account both for the early death, and the subsequent flow of blood and water from the wound in the side. So highly did the author estimate his discovery, and the reasoning upon which it is founded, that he compares it to a sounding-line let down into the ocean of time, that from the depth of eighteen hundred years has brought to the surface a pearl of great price. The book made quite a stir in the religious world, and its theories, theological as well as medical, were widely accepted. Devotionally considered, it was felt there was a deeper pathos in the death of Christ if he literally died from a broken heart, and that the appeal to human love

and gratitude became all the more affecting and persuasive; intellectually, the orthodox theologian, though his zeal in defense of the miraculous did not abate one jot, yet gave a sigh of relief at this natural and touching explanation of events, he had been compelled formerly to regard as supernatural. All sections of the Christian church welcomed the work. A Roman Catholic reviewer, for once acknowledging that some good thing had come out of Protestant Nazareth, went so far as to urge his readers to requite their obligations to the author, by a *Pater* and an *Ave*, that the reward of the good Cornelius might be his.¹

Nevertheless, as so often happens to these reconciliations of religion with science, Stroud's work has not stood the test of time. Advancing and more accurate knowledge has undermined its main position, and it no longer receives the same support from Christian scholars as heretofore. Thus the learned Bishop Westcott, in his commentary on St. John's Gospel, referring to Stroud's theory, says: "But it appears that both this and the other naturalistic explanations of the sign are not only inadequate, but also inconsistent with the real facts. There is not sufficient evidence to show that such a flow of blood and water as is described would occur under the circumstances supposed." Another recent writer rejects the whole theory somewhat contemptuously, and offers, instead, the suggestion that the spear may have opened a large bleb or blister of the skin, the discharge of its contents being the flow of blood and water.² It may be observed incidentally, that it is most difficult to see how this can be an adequate explanation of the facts recorded. Why should the evangelist lay so much emphasis upon such a trivial lesion? If the wound

¹ *Dublin Review* (1847), xxii. 44.

² *Encyclopaedia Biblica*, art. "Cross."

in the side was so very superficial, how are we to understand the declaration of Thomas, "Except I . . . put my hand into his side, I will not believe," and the permission of the Lord, "Reach hither thy hand, and put it into my side, and be not faithless but believing"? This explanation is less satisfactory than the theory rejected.

As the work of Stroud is still often referred to as an authority, a brief examination of its arguments, with the exposure of their weakness, may not be uncalled for; but the writer sincerely hopes that nothing here said will disturb the composure of those who have found spiritual help in them. It is hardly necessary to plead that no part of the Christian faith is inseparably bound up with any materialistic explanation of the events recorded in the Gospels.

In the first place, it might be urged, if it were worth while, that there is nothing in the Gospel records to indicate it was the left side that was wounded, and not the right. If there is any value in rather late Christian tradition, the wound was on the right side.¹ Even at the present time, as the writer ascertained by personal inquiry, nearly all the pictures, statues, and crucifixes of the Roman Catholic Church have the wound on the right side. It is said the soldiers would preferably pierce the left side so as to wound the heart, and so insure immediate death; but any deeply penetrating wound of the chest on either side would be apt to cause speedy death from shock and internal hemorrhage, and not all wounds of the heart are so immediately fatal as we imagine; not even commonly so, for out of twenty-nine collected cases of injury to the heart, only two were fatal within forty-eight hours.² The

¹ The earliest known representation of the crucifixion is in the Syrian Bible of the monk Rabbula, of the sixth century. In it the soldier is represented as piercing the right side with his spear.

² See *British Medical Journal*, November 14, 1896, p. 1440; *The Lancet* (Engl.), October 8, 1881.

soldiers, therefore, may have been indifferent in the matter. But as this is a point not to be conclusively settled either way, it may be waived.

I.

It is affirmed by Dr. Stroud, that profound grief and mental perturbation caused rupture of the walls of the heart; in all probability, rupture of the wall of the left ventricle, to be more anatomically exact. The main objection to this theory lies in the unanimous opinion of all recent medical authorities, that spontaneous rupture of the walls of the heart never takes place unless its tissues have been previously weakened by disease. We may, perhaps, be permitted to explain that by "spontaneous rupture" is meant every rupture of the heart not occasioned by the infliction of external injury. "We can now lay down the rule with certainty, that spontaneous rupture does not occur in a heart whose muscular tissue is sound, and in all those cases where the opposite was maintained, the investigation could not have been made with sufficient care and accuracy";¹ "Rupture of the heart is a rare condition, occurring chiefly in patients past middle life, and only in those having previous degeneration of the myocardium";² "Spontaneous rupture never occurs in a healthy heart";³ "Rupture of the walls may be said never to occur when the heart is healthy. . . . Spontaneous rupture occurs in the heart when it is seriously diseased."⁴ Without quoting further authorities, it is doubtful if a single medical writer would, in these days, support the contention of Stroud, that rupture of the healthy heart may be caused by mental emotion. As it is expressly admit-

¹ Ziemssen, *Cycl. of Practice of Medicine*, vi. 261.

² W. Gilman Thompson, *Practical Medicine*, p. 618.

³ Russell, *System of Medicine*, iv. 786.

⁴ Quain, *Dictionary of Medicine*, i. 840.

ted by him that our Lord was in perfect bodily health at the time of the crucifixion, this objection is fatal to his whole theory, and it falls to the ground without further argument.

But there remain other weighty objections, which may as well be stated, in order to make the refutation complete.

II.

The Gospel narratives of the death of Christ do not support the theory under examination, for they do not record the usual and unmistakable symptoms of a complete rupture of the heart.

Death from this cause usually occurs without any warning. In a few cases there have been premonitory symptoms, such as breathlessness on exertion, palpitation, irregularity of the pulse, and faintness, but these are entirely due to the disease of the heart. Where it is normal, as it was in Jesus, no premonitory symptoms could be expected, even if it be granted that a rupture occurred.

The special symptoms of the actual rupture vary with its extent and depth. "In the majority of cases, rupture of the heart if actually complete, at all extensive and instantaneous, kills instantaneously. The hand is suddenly carried to the front of the chest, a piercing shriek uttered, some convulsive twitches occur, and the patient expires; or sudden loss of consciousness from which recovery never takes place marks the event."¹ The following is a recent example:—An old

¹ Walshe, *Diseases of the Heart* (4th ed., 1873), p. 413. Certain theological writers, as Geikie in his "Life of Christ, assume that the loud cry of Jesus when he surrendered his spirit, was the equivalent of the piercing shriek, and that he would have moved his hand in the manner described had it not been nailed to the cross. But there is this dilemma. The requirements of Dr. Stroud's theory make it necessary that the rupture should occur during the actual stress of mental conflict, and so he makes the

woman, aged seventy-two, while sitting in her chair one afternoon quietly engaged in needlework, suddenly threw up her arms, uttered a loud cry, and fell forwards quite dead upon the floor. The autopsy showed there had been a rupture of the heart.¹ In most of the cases, consciousness is lost before any manifestation of pain can be made. The person falls, pallid and unconscious, a few breaths are drawn, and he is dead. In seventy out of one hundred cases, death was thus rapid. In the classical case of the English king, George II., who died from rupture of the right ventricle, it is stated that he rose at his usual hour of six, drank his chocolate, inquired how the wind was, being anxious for the arrival of the mails, and then suddenly fell, uttered a groan and expired.

If the rupture is incomplete, the symptoms are those of collapse,—rapid, feeble pulse, restlessness, faintness, pallor, cold skin, vomiting, dyspnoea, and perhaps convulsions. Death may not take place for several hours. The following is an illustrative case:—

The patient "was seized with a syncopal attack at 11.15 A. M., and was seen by me [the physician] within three minutes. He was then unconscious and very pale, and the skin was cold; there was no pulse at the wrists, and the heart sounds were inaudible, while the breathing was rapid, noisy, and shallow. He had been sitting quietly in an invalid chair at the time of the attack. He was carefully lifted on to a bed, rupture synchronous with the cry: "My God! My God! Why hast thou forsaken me?" In that case neither death nor unconsciousness immediately followed, as invariably happens when the rupture is complete. On the other hand, if the rupture occurred when he uttered the loud cry with which he surrendered his spirit, then the cries immediately preceding, of "I thirst," "It is finished," and "Father, into thy hands I commend my spirit," are not indicative of mental conflict.

¹ *British Medical Journal*, March 16, 1895.

and the usual restoratives were applied, but he died in twenty-five minutes." At the autopsy there was found a rupture of the posterior walls of the ventricle.¹

According to the theory under examination, the rupture of the heart of Christ was "rapid and extensive," "the rent was large and sudden," and it was synchronous with his exclamation, "My God! My God! Why hast thou forsaken me?" It is difficult to believe that in an ordinary case of complete rupture of the heart, a person would be in such a state of mental clearness as to utter, not an involuntary, spasmodic cry or shriek, but familiar words of Scripture applicable to his particular condition, and be able to finish the sentence completely. But the Gospels require still more. Instead of passing into a state of collapse, and unconsciousness or death, as ordinarily happens when the rupture is complete, Jesus, knowing that all things were now accomplished, that the Scripture might be fulfilled, exclaimed, "I thirst." The soldiers filled a sponge with vinegar, put it upon hyssop, and put it to his mouth. How long they were in doing this we do not know, but it must have taken some minutes, to say the least. When Jesus had received the vinegar, he said: "It is finished," and then, after an uncertain interval, as he bowed his head and surrendered his spirit, he uttered the final words: "Father, into thy hands I commend my spirit." Such quiet and perfect intelligence would not ordinarily exist between complete rupture of the heart and dissolution. The examples cited by Stroud (pp. 131, 132), to prove there may be mental and physical activity after rupture of the heart, were not those of spontaneous rupture of a diseased heart, but of traumatic rupture of a healthy heart, and in this respect there is a great difference between them.

¹ *British Medical Journal*, December 12, 1896.

III.

Even in those cases where the heart is diseased, and rupture occurs from the stress of mental emotion, seldom, if ever, is the rupture due to the depressing emotion of grief. It is more apt to be caused by the invigorating passions; thus several cases are on record where the transports of joy have apparently induced it. The explanation is simple. The excitement of joy produces an exaltation of all the bodily functions, the heart consequently beats more rapidly and strongly, its weakened walls are unable to stand the additional strain, and so they rupture. On the other hand, under the influence of mental and spiritual depression, the heart beats languidly, and there is really less strain upon its tissues than if the patient were in a normal frame of mind. As Stroud himself observes, "to collect instances of rupture of the heart from agony of the mind is a difficult task: partly because such instances are, it may reasonably be supposed, of rare occurrence; and partly, because few of those which do occur are either verified or recorded." It may be added, that in support of his opinions he does not mention a single unequivocal instance of the kind. The examples brought forward by him will be collated, and, in estimating their evidential value, the words of Sir James Simpson, in his introductory essay to the work of Dr. Stroud, are worth noting: "No medical jurist would, in a court of law, venture to assert from the mere symptoms preceding death, that a person had certainly died from rupture of the heart. To obtain positive proof that rupture of the heart was the cause of death, a post-mortem examination of the chest would be necessary." The following are the cases cited by Dr. Stroud in which it is assumed there was rupture of a healthy heart from sudden or long-continued grief:—

1. Mrs. Chiswell, who "was so extremely affected with sorrow at the departure of her son for Turkey, that she expired the very moment she was about to withdraw her hand from a parting farewell."—No further particulars are given, nor is mention made of any post-mortem examination. It is mere conjecture to say that this lady died of a broken heart. Many morbid conditions are liable to cause sudden death.

2. An actor of the eighteenth century, who suddenly expired on the stage during a performance in which he was taking a prominent part. He had been in great grief for some days over the loss of his wife and a favorite son.—As no examination of the body was made, no one can say positively that he died of a broken heart. It is quite likely, as some of the physicians supposed at the time, that he died of apoplexy.

3. A young lady who, on hearing the tolling of the church bell which announced the death of her lover, screamed out that her heart was burst, and expired some moments after.—The young minister from whom these particulars were obtained, inserted in the church register that each of the lovers had died of love, and they were buried in the same grave, March 15, 1714. In quoting this touching story, which seems to have furnished the basis of fact for various pathetic ballads, Dr. Stroud is obliged to add: "In this case, also, as in many others, the circumstantial evidence is extremely strong, but the positive proof which might have been furnished by an examination after death, is irrevocably lost." In all probability she had grave organic disease of the heart, in which any sudden reflex influence or emotion is apt to snap the thread of life.

4. A laborer, aged fifty-six, who had generally enjoyed good health, but for ten years had suffered great despondency of mind, owing to the unfaithfulness of his wife. About six months before his death, he was troubled with a severe cough, which came on at night and early in the morning. After a coughing fit of this kind one morning, he was found dead. On examination the lungs were seen to be diseased, and there was also a rupture of the heart.—Nothing is said as to the condition of the walls of the heart, which must have been diseased, and probably ruptured under the strain of the paroxysm of coughing. The immediate cause of the rupture cannot possibly have been the grief which had lasted for ten years.

5. A stout, muscular working-man, who had labored for many years under great mental anxiety, was attacked with severe cardiac symptoms, and after great agony of body and mind died four days later. A rupture of the heart was found on examination.—

Again it must be said, that mental anxiety which has lasted for many years cannot have been the exciting cause of the rupture, even if the heart were healthy, and of this there is no proof.

6. An old gentleman sixty-eight years old is said to furnish a good example of rupture of the heart occasioned by the slow operation of continued grief over business affairs. While out walking one day he was suddenly seized with severe pain, which he supposed was cramp of the stomach. Death took place four days later, and, on examination, the heart was found ruptured.—The long-continued grief here mentioned could not possibly so affect the healthy heart as suddenly to occasion rupture. It lies with him who asserts the heart is healthy in the case of a man so advanced in years, to prove it, the presumption being all the other way. The most that can be said in favor of the opinion that grief may cause death, is, that "it is a reasonable surmise that some deterioration of the nerves or their centers, due to prolonged mental distress, might be followed by degeneration of the cardiac muscle"; or that grief may so interfere with the functions of the system as to alter the character of the blood, and thus the tissues of the heart might become weakened or diseased because of impaired nutrition.

7. The last instance adduced is not that of a broken heart at all. We quote it in full, because it serves to illustrate the effects of prolonged grief on the bodily functions, and it is a good example of what poets and the world at large mean by a "broken heart," in the figurative, not in the literal sense. E. C. was a young lady about twenty-eight years of age, an interesting creature whose unfortunate situation excited much sympathy, for her tenderest affections had been cruelly and shamefully treated. "When admitted into the hospital she was in a state of extreme emaciation and debility. Her lips and cheeks were of a bluish color, indicating an imperfect oxygenation of the blood. The action of the heart was labored and the pulse languid. She never uttered a complaint, seldom spoke, was never known to laugh, nor seen to smile. She did not, although as patient as patience on a monument, even smile at grief. Nothing appeared to excite the slightest emotion, except when any allusion was made to her removal. She would then raise her dark blue eyes, and throw an imploring look into her countenance, the meaning of which it was impossible to mistake. Neither physician nor visitor ever ordered her discharge from the hospital, where she continued for eighteen months, and then sank rapidly."—The only morbid appearances met with after death were dilatation of the heart, and a large quantity of blood in its cavities which had separated into clot and serum. There was no

rupture. The bearing of a case of this kind on the matter in consideration is very remote.

The remaining evidence in support of the assertion that grief may rupture the walls of a healthy heart, consists of the "sagacious conjectures" of poets and moralists, habitually engaged in the study of human passions and their influence on the human frame, and of the revelations of St. Bridgit. From the hard, scientific point of view, these conjectures and revelations are worth very little. It must surely be confessed that, after the ransacking of all ancient and modern literature, the instances here mentioned do not furnish a very strong foundation for the opinion that grief may cause the rupture of a healthy heart.

IV.

Hitherto we have referred only to rupture of the walls of the heart. There remains another contingency, not mentioned by Dr. Stroud, which at first sight would seem to furnish some basis for his theory. While rupture of the walls of the heart never occurs except where the heart is seriously diseased, it is possible for the valves of a healthy heart to be ruptured, though it is an exceedingly rare occurrence, and always appears to be the result either of violent effort or external injury. When the accident occurs, there is no piercing shriek, but the patient has pain in the region of the heart, feels as if something had given way within the chest, and suddenly becomes breathless and oppressed. It is by no means always fatal, though it inevitably leads to heart disease, the clinical symptoms of which do not, as a rule, manifest themselves until some time after the injury, probably on account of the reserve power of the heart. Of mental emotion apart from some physical strain or external injury causing the rupture of the valves of a healthy heart, the writer can find no record.

It might plausibly be alleged that when the soldiers and others struck and buffeted Jesus, some particularly brutal blow over the heart may have caused the rupture, even though the ribs were not broken; or that the effort of carrying the cross before Simon of Cyrene was compelled to bear it for him, may have caused it, as the accident generally does happen when people are lifting some heavy and unaccustomed weight. In either case the rupture would not be due to mental anguish, but to physical violence. Even if it be granted that rupture of the valves was the immediate cause of the death of our Lord, inasmuch as there would be no effusion of blood into the pericardial sac, and separation there into clot and serum, there would be no flow of blood and water following a wound of the body after death. When the valves only are ruptured, the blood remains within the heart and blood-vessels, coagulation does not take place for several hours (at least four, but generally from six to eight, or even more), and neither in the heart itself nor in the pericardial sac would there ever be found clots and serum to such an extent as to account for the flow of blood and water.

[TO BE CONCLUDED.]