The Deformity of Richard III

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The deformities of Richard of Gloucester have been a subject for dispute since Thomas More and Polydore Vergil first described him as a man of deformed body and warped mind, a description enthusiastically taken up by later Tudor chroniclers and made imperishable by Shakespeare. That he was not in fact deformed, at least not in any very noticeable fashion, is now generally accepted, but a recent article, Physical Deformity of Richard III, by Professor Philip Rhodes, and subsequent correspondence in the British Medical Journal has prompted this discussion of the evidence for his deformity, and an explanation in lay language of the conclusions to which Professor Rhodes came. Unfortunately he partly based his discussion on Shakespeare's description of Richard, which is not the most reliable of sources, so that it seemed best to begin this article with a summary of what is really known from contemporary sources of Richard’s bodily shape and health.

The earliest reference we have to Richard is contained in a metrical account of the family of the Duke of York, written during the Duke's life, and hence before Richard was eight. It says about him only that ‘Richard liveth yet.’ This has usually been interpreted to mean that Richard was a sickly child, a view which may be borne out by the remark of John Rous that he was ‘of small body and weak in strength’. Since Richard died when he was 32, and does not seem to have suffered from any serious illnesses, at least in his last few years, such weakness (and possibly consequential deformities) must have been congenital or caused early in life, but this tells us nothing about any deformity. Rous also says though that Richard had the right shoulder higher than the left. This is an important piece of evidence, since as the chronicler of the Earls of Warwick and chaplain at the Chapel of Guys Cliff near Warwick, Rous almost certainly knew Richard personally. That Richard did have uneven shoulders is borne out by Thomas More, who says that it was the left shoulder which was higher, and Polydore Vergil, who merely says that one shoulder was higher than the other. Additional proof of some kind of deformity is given by a citizen of York who, in a brawl in 1492, called Richard a crouchback. In the altercation which followed this charge was not apparently denied by those present, who had probably seen Richard), nor was it enlarged upon. The only impartial contemporary description of Richard that we have is that by Nicholas von Poppelau, a Silesian nobleman, who met him and spent eight days at his court in 1484. Von Poppelau says that Richard was lean, with delicate arms and legs, and three fingers taller than himself. There is no word at all of any deformity. Nor can we find any trace of one from the surviving portraits. None of them are contemporary of course, the earliest probably dates from not less than 25 years after his death, and one does show signs of over-painting to give an impression of uneven shoulders, i.e. the picture of the King that the artist was copying showed no unevenness.
It may thus be taken as established that Richard of Gloucester was probably a slight man, with a very slight deformity of some kind, which made one shoulder look higher than the other. This is the point at which we may take up Professor Rhodes' article. In this four possible causes for Richard's deformity are considered. One, kyphoscoliosis, a backwards and sideways curvature of the spine, is dismissed immediately, since although it would explain a hunchback, Professor Rhodes has to admit that there is no real contemporary evidence to suppose that Richard had one. The next two which are discussed, Klumpke's Paralysis and Erb's Palsy, are both introduced because they are caused by nerve injuries affecting an arm. Since Richard was an eleventh child he may have been a large baby. Such a baby might have a difficult birth as it could be lying in an abnormal position 'in utero', and the traction to arms or head which might have to be applied to effect the birth could cause injury to the nerves of the brachial plexus. These nerves leave the spinal cord at the neck level, and are responsible for muscle movements and sensation in the shoulder, arm and hand. There is evidence, although only from More, that Richard's might have been a breech birth, when damage to these nerves by over-stretching and tearing, can easily occur. If the damage is to the lower nerves of the plexus Klumpke's Paralysis occurs, when a wasting and paralysis of the hand muscles results; if to a higher group of nerves, paralysis of the upper part of the arm occurs, and Erb's Palsy results. In the case of Erb's Palsy, which is the commoner of the two, the effect of the paralysis and wasting of the muscles would be that the arm would appear withered, and would hang limply by the side; and the shoulders would appear to be uneven. Erb's Palsy can also occur in later life as the result of a heavy fall onto the side of the head and the shoulder, or of a heavy weight falling on the shoulder. Similarly Klumpke's Paralysis can also occur in later life if, for example, there is severe traction to the outstretched arm as would occur when falling from a galloping horse with one arm tangled in the reins, with consequent damage to the appropriate nerves. Either of these conditions could have been caused in Richard by an injury at weapon practice or in battle, or a fall from a horse, and result in a withered arm, i.e. an arm with wasted muscles. However since someone suffering from either condition shows typical arm postures and has some degree of restriction in arm movements, a contemporary comment on such obvious deformities would have inevitably occurred, which, as we have seen, did not happen. Klumpke's Paralysis would only affect the hands, of which there is no sign in the existing portraits. If there had been, the hand would appear claw-like, although such a phenomenon might have been suppressed by the original artist. Response to a minor degree of either paralysis might of course have been a determination to overcome the difficulty, resulting in much exercise and an unusual degree of muscle development in those muscles not affected by damaged nerves, visible to a bystander, and emphasising an already present inequality.

In the correspondence which followed Professor Rhodes' original article one letter, by a Dr Mansfield, suggested a variant of these two conditions. Dr Mansfield thought that a likely explanation of one shoulder seeming to be higher than the other could be an injury of the cervical plexus. This is just
above the brachial plexus previously mentioned, and controls the muscles of the scapula and shoulder, and in the case of the sternomastoid muscle some movements of the head. These muscles maintain the level and poise of the shoulder during use of the arm.\textsuperscript{13} If an injury occurs and they become useless the shoulder on the side of the injury becomes depressed. The other shoulder thus appears higher. There might also be twisting of the neck and an unnatural position of the head.\textsuperscript{14} Use of weapons would probably be out of the question, or would be severely limited, depending on the degree of nerve damage.

The final cause considered by Professor Rhodes is Sprengel's Deformity. All things considered, this is perhaps the most likely actual pathological condition for Richard to have suffered from (although it is very rare), since it does not necessarily cause very obvious deformity. It is a rare congenital condition in which the scapula (or shoulder blade) on one side, or occasionally both sides, is smaller than normal and fixed higher up. The muscles around the scapula are deficient, and may be composed partly of bone, cartilage and fibrous tissue. The person suffering from the condition is thus unable to raise the arm straight out from their side to a greater or lesser extent. Other movements of the arm may not be unduly restricted however, and a person suffering from it would not necessarily be prevented from becoming a competent fighter, as Richard appears to have been. The interesting thing about Sprengel's Deformity is that the shoulder on the side of the non-developed scapula appears, particularly from behind, to be higher than the other, and the neck may appear shorter on the affected side.\textsuperscript{15} This might well lead to the sufferer being labelled a crookback.

Other possibilities were considered in the correspondence following the article, but the evidence for these was all drawn from Shakespeare's play. They are thus of no immediate interest with regard to the historical facts. They included coeliac disease, an uncommon disease of the digestive system, which may affect bones and cause deformities and a failure to thrive in infancy.\textsuperscript{16}

It therefore appears that if Richard of Gloucester was deformed, to the extent of having one shoulder higher than the other (and there is contemporary evidence for this), that there are several known medical conditions from which he could have suffered. For practical reasons it may be thought that only Sprengel's Deformity is at all likely, and this occurs extremely rarely, although it is interesting to note that Klumpke's Paralysis and Erb's Palsy can occur as the result of injury, which may be thought to be a strong possibility for Richard. The evidence is unfortunately inconclusive, but the whole discussion does open out new possibilities which may doubtless be followed up.

NOTES AND REFERENCES


16. Dr. Gordon Dale, the author of the letter on this disease has subsequently maintained (in private correspondence) that there is some evidence to show that the historical Richard could have suffered from it. There will be a note on this in the September *Ricardian*, together with some data from Shakespeare on Richard's alleged deformity.

**Coats of Arms of Some Ricardian Contemporaries**

**LAWRENCE T. GREENSMITH**

**BEAULIEU ABBEY**

The Cistercian Abbey (originally Bellus Locus Regis), situated in Hampshire, has an ancient foundation deriving from King John in 1204. Completed by 1246, it was dedicated in the presence of his son Henry III, who was its great benefactor. In his time it came to cover 10,000 acres.

For us, its only historical interest is in its right of sanctuary. Among the prominent seekers of it, three are named in the modern leaflet issued there: Queen Margaret, the Countess of Warwick and Perkin Warbeck. All three come within our period. Anne of Warwick went there after Barnet.

Much on the site is in ruins, but much also is not: all is worth seeing.

The arms are simple and attractive: Red, a golden crozier in pale enfiled with a regal crown, all within a black border billety of gold.

To find pastoral staves (they have several names) on ecclesiastical arms is frequent but the enfiled staff is less common. The only other example I can find is that of Beverley Abbey (better known as Minster) in Yorkshire. Except for the main tincture, the two arms are similar but that Beverley's border is bezanty (i.e. with golden discs representing coins).

Billets, not necessarily tiny or of silver or gold, are upright rectangles representing letters (which is obvious) but there can be billets of wood or metal or even stone.

The conventional number of charges on a border is eight, but other figures can be specified.