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Sir James Young Simpson

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Abstract

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*Lithograph by Schenck after a drawing by J. Archer
By courtesy of The Wellcome Historical Medical Museum*

SIR JAMES YOUNG SIMPSON

By WILLIAM L. FORD



“He is the flower (such as it is) of our civilisation and when that stage of man is done with, and only remembered to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race.”

(From Preface to *Underwoods* by Robert Louis Stevenson)

Among the many eminent men who have been Members or Honorary Fellows of the Royal Medical Society a number have attained a place in world history; one such is Sir James Y. Simpson—physician, teacher, discoverer and philanthropist.

Most of us associate his name with the introduction of chloroform anaesthesia, and indeed seldom can a major advance in applied science have owed so much to one man; yet the story of Simpson’s life and deeds is so remarkable that, had he never discovered anything, he would still be remembered as a great man.

Dr Simpson joined the Society after graduating M.D. in 1832 at 21 years of age. Three years of active participation in the Society culminated in his election to the office of Senior President. A writer in *The Scotsman* some years later describes a visit to the Society at this time:

“The Presidentship of such a Society is naturally an object of laudable ambition for every advanced student or young practitioner and many of the most illustrious names that have adorned Science or Medicine have recorded their elevation to that post as among their earlier honours. On the evening referred to, the Chair was occupied by a young man whose appearance was striking and peculiar. As we entered the room his head was bent down to enable him, in his elevated position, to converse with someone on the floor of the apartment, and little was seen but a mass of long, tangled hair, partially concealing what appeared to be a head of a very large size. He raised his head and his countenance at once impressed us. A poet has described him as one of ‘leonine aspect.’ Not such do we remember him. A pale, large, rather flattish face, massive, bent brows, from under which shone eyes now piercing as it were to your inmost soul,

now melting into almost feminine tenderness, a coarseish nose, with dilated nostrils, a finely-chiselled mouth, which seemed the most expressive feature of his face, and capable of being made at will the exponent of every passion and emotion. Who could describe that smile? When even the sun has tried it, he has failed, and yet who can recall these features and not realise it as it played round the delicate lines of the upper lip, where firmness was strangely blended with other and apparently opposing qualities? Then his peculiar, rounded, soft body and limbs, as if he had retained the infantile form in adolescence, presented a *tout ensemble* which, even had we never seen it again, would have remained indelibly impressed on our memory. 'You are in luck to-night,' said our conductor, 'Simpson is President.'

Simpson had already begun to interest himself particularly in obstetrical medicine and he delivered the Presidential dissertation on "Diseases of the Placenta." To this he devoted a prodigious amount of work. For one night he went without sleep altogether; for many others he was in bed for only three or four hours. Simpson was thoroughly conditioned into the habits of hard work, for he entered the Faculty of Arts when only fourteen, and was supported for several years by the generosity of his older brothers.

To our knowledge this dissertation represented the first attempt in Britain to discuss placental disease. As Simpson pointed out in his opening remarks, the works of the great obstetricians, Smellie, Denman, Ramsbotham and others, contain no more than occasional observations on placental conditions. His references include many continental authors, chiefly French and German.

The great importance of this previously neglected organ is emphasised from the beginning and stress is laid on the need for careful observation and investigation. The author then proceeds, in fourteen thousand words, to give evidence of his own erudition and personal observation.

The bulk of the dissertation discusses firstly placental congestion and haemorrhage, and secondly inflammation or placentitis. It was not realised until many years later that what were thought to be chronic abscesses described by accoucheurs as "scirrhus of the placenta" were in fact areas of infarction. Despite this error in pathology, Simpson's clinical observations are as valid now as then; likewise his catalogue of causes—"Trauma, violent succussions, sudden movements, frights, emotions, all kinds of lively and profound sensations, and diseases of the mother."

A brief, lucid survey of other, less common, diseases of the placenta completes the dissertation.

The reading of this work must have taken nigh on two hours. Simpson concludes with an apology for its "great length and its great imperfections." We may concede the former, not so readily the latter. Indeed the dissertation was an outstanding success, and attracted widespread attention—mostly outside Edinburgh, however. Later it was translated into French, German and Italian.

Six years later came the climax of Simpson's academic achievement; he was elected to the Chair of Midwifery, at the age of 29, in the pursuit of which he overcame crippling disadvantages and bigoted opposition. Characteristically, he put his whole heart into obtaining the vacant chair—a goal which he had set himself at his graduation. No stone was left unturned in presenting his case to the University or in soliciting testimonials from his many acquaintances. At one sitting he wrote for more than seventy consecutive hours and, all in all, the campaign cost him almost two years' salary. His intellectual prowess was unquestionable but three factors were held against him—his youth, his humble birth (he was a "poor baker's son" from Bathgate), and his unmarried state. The first two of these were not in his power to alter, but a few weeks before the election he married a

distant cousin, rather sooner than he felt was justified by his economic circumstances. On the eve of his election he was very pessimistic about the outcome, and his pessimism was fully justified according to those who were best informed. The result was against all expectations and at that time few could have realised that it heralded such a brilliant phase in Edinburgh medicine.

His erudition and charm as a teacher, and kindly disposition and indisputable competence as a physician, caused the reputation of Simpson to grow and spread far beyond the city to which he gave his life. He had always abhorred human suffering, and had nearly abandoned medicine as a student, on witnessing the amputation of the breast on a poor Highland woman. Before becoming Professor the idea of painless operations was firmly established in his mind. He experimented with mesmerism with occasional success. However, in 1846, news came from America of the first trials of ether; this was enthusiastically welcomed by Simpson who quickly carried out experiments of his own design and was the first to use this anaesthetic on women in childbirth.

Simpson was so obsessed with ether that, for a time, he could think of nothing else. But he was not blind to its imperfections—the large quantity of it which was often required; the slowness of induction; its unpleasant, penetrating smell and its tendency to cause bronchial irritation. Without delay he set about trying to discover a substitute with fewer undesirable properties. He tested several volatile organic materials, always using himself as the experimental animal. Early in 1847 he inhaled from a tumbler the then rare “perchloride of formyle”—chloroform—which had been identified chemically fifteen years earlier by Soubeiran and Liebig. So rapidly did he become unconscious, that he straightaway arranged a more elaborate trial with his assistants Keith and Duncan. Again the effects were spectacular, and Simpson’s first words when he awoke were “This is far stronger and better than ether.”

Three operations were performed under chloroform at the Royal Infirmary and an epoch-making pamphlet on the unblemished success of chloroform published. It bore a motto from Bacon—“I esteem it the office of a Physician not only to restore health but to mitigate pain and dolours.”

However, very few of Simpson’s eminent associates in medicine were of anything approaching this opinion. Ceaseless vituperation and accusations of personal ineptitude were hurled upon his head. Simpson was faced with the fight of his life. He might have given up embittered, but he persevered. He fought bravely and he won.

Some of the arguments against chloroform, that it would interfere with other forms of treatment, and that it would lead to insanity might be produced to-day against the introduction of any new drug. But what could never be advanced to-day was the hysterical laudation of extreme and prolonged agonies. Suffering was held to be the best of tonics. Before Simpson’s time surgery was a horrid trade; a sordid, almost sinister side of human affairs. Yet those who had to administer the tortures, not to bear them, were satisfied enough. All except Simpson. Through anaesthesia the cruel knife has become the healing knife. Although he was certainly abreast of his time in science, he was a century ahead of his time in human values. For a mere 12,000 years, man has lived as a “civilised” creature, and civilised behaviour is not really deeply imbued in human nature. To-day we possess, as part of our culture, a certain amount of social conscience, and should we be magically transported back a hundred years, to a period which we often associate with gracious and elegant living, what

would surprise us most of all, and indeed terrify us, would be the callous acceptance of avoidable human suffering and misfortune.

This is illustrated in a letter to Simpson from Dr. George Wilson who signed himself "An Old Patient." As a telling vindication of chloroform it strongly bolstered Simpson's cause. Dr. Wilson recalls an experience two or three years before the introduction of chloroform:

"During the operation, in spite of the pain it occasioned, my senses were preternaturally acute, as I have been told they generally are in patients in such circumstances. I watched all that the surgeons did with a fascinated intensity. I still recall with unwelcome vividness the spreading out of the instruments, the twisting of the tourniquet, the first incision, the fingering of the sawed bone, the sponge pressed on the flap, the tying of the blood vessels, the stitching of the skin, and the bloody dismembered limb lying on the floor.

Of the agony it occasioned, I will say nothing. Suffering so great as I underwent cannot be expressed in words, and this fortunately cannot be recalled. The particular pangs are now forgotten; but the black whirlwind of emotion, the horror of great darkness, and the sense of desertion by God and man, bordering close upon despair, which swept through my mind and overwhelmed my heart, I can never forget, however gladly I would do so. Only the wish to save others some of my sufferings, makes me deliberately recall and confess the anguish and humiliation of such a personal experience; nor can I find language more sober or familiar than that I have used to express feelings which, happily for us all, are too rare as matters of general experience to have been shaped into household words.

Those are not pleasant remembrances. For a long time they haunted me, and even now they are easily resuscitated; and though they cannot bring back the suffering attending the events which gave them a place in my memory, they can occasion a suffering of their own, and be a cause of a disquiet which favours neither mental nor bodily health. From memories of this kind, those subjects of operations who receive chloroform are of course free; and could I, even now, by some Lethean draught erase the remembrances I speak of, I would drink it, for they are easily brought back, and they are never welcome."

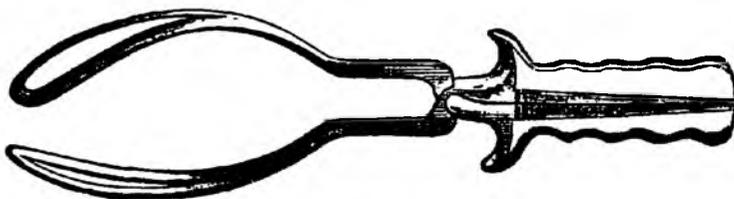
The sales of chloroform snowballed from 1850; familiarity vanquished fear, and in 1853 Queen Victoria insisted on having chloroform administered during the birth of her eighth child, Prince Leopold, Duke of Albany.

Simpson's achievement brought him world-wide fame and unaccustomed prosperity. The city and the University shone in the light of his reflected glory.

Although chloroform anaesthesia was the climax of his life's work, his restless genius was productive to the end. In 1859 he perfected and introduced acupressure—a method of haemostasis by which bleeding vessels are compressed between a long needle, which is later removed, and solid tissues. Previously the ligatures used in surgery invariably gave rise to sepsis. Acupressure was first adopted in Aberdeen and spread throughout the world. The Edinburgh surgeons, led by the amazing Professor Syme, violently resented what they considered an intrusion into their private field. Whilst delivering a lecture, Syme tore up Simpson's pamphlet answering objections to acupressure without a single argument against it—a demonstration that his opposition was governed by emotion and not by reason. As it became universally adopted, acupressure saved many lives until it was superseded by the introduction of antiseptic techniques and superior ligatures.

In Simpson's day quantitative arguments were seldom applied to medical

problems. However, in several investigations he went to great lengths to collect results from far and wide and to draw rational conclusions from them. In the early days of chloroform it was suggested that the drug had been responsible for a number of deaths; Simpson showed that not only did chloroform avoid indescribable agony but by doing so it clearly saved lives. In the last twenty years of his life he devoted much energy to the problem of the high mortality of surgical cases in city hospitals. He produced several papers on the subject, and in one investigation of over 4000 cases showed that death followed amputation of a limb four times more



SIMPSON'S LONG FORCEPS

From Johnstone and Kellar's *Text-book of Midwifery*
by courtesy of Messrs A. & C. Black.

frequently in the large city hospitals than in the smaller country hospitals. He strongly advocated hospital reform on the lines of small, well ventilated hospital units preferably sited in the country. Lister showed us why overcrowded hospitals were so sinister but until his theories were accepted Simpson's work was a telling force for the better.

In all his enterprises Simpson had laboured in the midst of controversy. Many men are controversialists by choice but he must have hated it all. He was a man of peace and benevolence but his inexorable honesty never allowed him to compromise with the many (like Syme) whose intellectual genius was unmatched by moral vision. Moreover, forgiveness was never withheld from the most bitter adversary.

The legend of the "lad o' pairts" is beautifully exemplified by Simpson. He rose from extremes of poverty and obscurity not by shrewdness nor by popularity nor by fortune's favour, but entirely by honest, hard work and a marvellous ability.

The transcendent feature of Simpson's personality was his overwhelming compassion for any human being in agony or distress. For him to be kind was a necessity. He knew himself great pain and frequent grief. As a youth he endured migraine and during his last years angina was his constant companion. He was orphaned when still a child, and of his beloved family of nine, five predeceased him.

He had a simple faith in Christian teaching and a deep love of his native land—"That most sweet of all sweet countries, old Scotland"—as he put it.

It might be thought that the baronetcy conferred in 1866 was one of the highlights of Simpson's career. In fact he hardly noticed it. His deeds alone ennobled him and he preferred his reward in the gratitude of his patients. When he died in 1870, aged 58, burial in Westminster Abbey was offered, and declined by his family. He had chosen to rest in Edinburgh. Thirty thousand people from all classes and of every age attended the funeral procession. It is said to have been the largest and most moving the city has ever known.