

VIII. *Observations on the Treatment of Gun-shot Wounds. Communicated in a Letter to Dr. Simmons by Robert Jackson, M. D. Physician at Stockton, in the County of Durham.*

**I**F the following observations on the treatment of gun-shot wounds should appear to be of such importance as to deserve the notice of the Public, I shall beg the favour of you to insert them in the London Medical Journal.

I am aware that the custom of dilating wounds made by fire arms is so generally adopted by practitioners, and so formidably supported by great authorities, that it requires no small share of courage to raise doubts concerning its propriety, or even its necessity. I am also aware that I am ill qualified to illustrate the subject in a regular and systematic discussion. I have little acquaintance with surgical writers, and cannot boast a very extensive range of experience: but I hope to be indulged with the liberty of relating a few facts which occurred to me during the late war in America, and which seem to prove that the customary dilatation of wounds may be frequently omitted,

not only without detriment, but even with obvious benefit to the patient.

In the year 1779 a party of the Loyal American militia, who had attacked a post of the enemy in the back parts of the province of Georgia, were obliged to retire without effecting their purpose. A considerable number of them were wounded; and as their distance from the army precluded them from surgical assistance, their wounds were only bound over with a bit of rag. Such was the fact: the consequence was not what might have been expected; for among the number of wounds which I afterwards saw there were several which we should have expected to be troublesome and tedious in cure, if treated according to the common rules of surgery, but in reality they healed speedily and well. Another action was fought, some time after, at Briar Creek. The greater number of the wounded were conveyed to the hospital, and furnished with proper accommodations and surgical assistance; but there were also some of the militia who remained in the woods, and paid no other attention to their wounds than simply to bind them up. The contrast in point of treatment was obvious in the present case, and the difference of effect

was not less remarkable ; for in as far as I could judge, from those examples which I had an opportunity of comparing, the progress towards healing was not less advanced in three weeks, where there was not any thing done, than in five, where art and skill were employed. There occurred likewise several accidental instances during the following campaigns, where the usual formality of surgical treatment did not appear to be attended with conspicuous advantage ; but the fairest comparative trial which has yet fallen under my observation was after the action at Cowpenn, in South Carolina, in January, 1781. The scene of this action was near the mountains, in a district of country almost uninhabited. Not fewer than an hundred and twenty men lay wounded on the field, or dispersed themselves in the neighbourhood, where they accidentally found the shelter of a hut. As I was the only professional person who remained on the spot after the defeat, it was not in my power to visit every one ; neither did I find out, till after several days, the abodes to which many had retired. I may observe, that I dilated freely, and treated according to the usual methods of surgeons, the wounds of such as I saw early ; but there was probably  
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near a fifth of the whole to whom, from their remote situation, immediate help could not be given. Other surgeons were afterwards sent from the army by Lord Cornwallis, and such accommodations were provided for the wounded as a desolate country could afford. I still continued my assistance, and remained on this duty near six weeks, during which time I had the opportunity of observing, that those wounds to which little or nothing had been done generally healed more rapidly, and were seldom attended with so much pain and inflammation as where dilatation, poulticing, &c. had been freely employed.

It appears, then, that we may safely conclude from the above facts, that the indiscriminate dilatation of gun-shot wounds is not a measure of necessity. I will even add, that it often gives rise to pain, inflammation, and many troublesome symptoms, which are not merely the effects of the wound. I shall mention an observation in this place, which I have often seen verified, and which I should suppose can scarcely be overlooked by any one, viz. that the pain and inflammation are greater, and consequently that the cure is slower in simple flesh wounds, where the surgeon has recourse to dilatation,

dilatation, than where the knife is not employed. This perhaps will be reckoned a small inconvenience; but I will add farther, that the effects of dilatation are peculiarly pernicious in wounds of the joints. It is well known that the access of air, which is favoured by an enlargement of the orifice, is particularly hurtful in wounds which penetrate into cavities. In the joints, after being thus exposed, the growth of fungous excrescences is scarcely to be restrained, and anchylosis is the least bad effect to be expected.

But though it appears that the dilatation of gun-shot wounds is hurtful or superfluous in the cases which I have mentioned, there are certainly others in which it is both necessary and proper. If, for instance, a ball, or the fragment of a bone, can be extracted by means of an enlargement of the orifice, no person will pretend to say that such enlargement ought not to be made. It is likewise proper, where wounds run superficially under the skin, that they be laid open through the whole of their length; and in many cases where inflammation comes upon a wounded limb, the muscles of which are covered by a tendinous expansion, and, as it were, girded by it, a deep and free dilatation

dilatation is then of obvious and great service. Such dilatations, however, ought to be deferred till the occasion requires them.

Such, as far as my observation goes, are the advantages and disadvantages of dilating gun-shot wounds. There are also other practices employed by surgeons, which, instead of being productive of benefit, often occasion no small share of harm. It appears to be an axiom in surgery, that a warm poultice, in the first stages of gun-shot wounds, is an application not to be dispensed with. I do not deny that in cold climates, where the fibre is tense and rigid, they often alleviate pain and promote digestion; but I am also of opinion, that, in the tropical climates, or even in the southern provinces of North America, they are not only unnecessary, but sometimes actually the cause of very troublesome complaints. I have observed, in numerous instances, that pain and inflammation were obviously increased by the use of warm poultices, and even that suppurations, independent of the suppuration of the wounds, were sometimes produced merely from the heat and relaxation which that application occasioned. Besides poultices are inconvenient and unpleasant in warm weather, and may be reckoned

koned among the causes which promote the generation of maggots. I might, therefore, I believe, safely advise, that the practice be discontinued in the above-mentioned climates. I might even add, that I am sufficiently warranted to recommend a contrary one. Thus I have often found benefit from the application of bandages wet with laudanum or spirituous liquors, and, above all, from the pouring of cold water upon the wounded limb. The good effects of these, in disposing the wounds to heal, were very remarkable.

To the above observations I shall beg leave to add another, which I believe is not commonly attended to. Rest and quiet are uniformly supposed to be proper in the treatment of wounds. Where wounds penetrate into the cavities of the body, motion would often be dangerous; and where the legs or thighs are broken, it cannot be attempted unless with great caution: but in the ordinary circumstances of flesh wounds the advantages of moving about, even of travelling, or continuing to march, are great and obvious. Not to adduce the American militia only as a proof of this opinion, I shall mention, that after the action of Guildford, in North Carolina, every

man who was capable of being conveyed either in litter, waggon, or on horseback, was carried with the army. The healing progress was rapid while we were upon the march; I imagined that it proceeded more slowly when we halted for a few days at Crosscreek; and when we came to fix our station at Wilmington it was, in some degree, retrograde: but this was probably owing to the soldiers having access to spirituous liquors.

Stockton,  
October 29, 1790.

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IX. *Case of Fracture of the Scull. Communicated in a Letter to Dr. Simmons, F. R. S. by Mr. George Wilkinson, Surgeon at Sunderland, Member of the Royal College of Surgeons, and honorary Member of the Chirurgo-physical Society of Edinburgh.*

ON Monday, the 19th of August last, I was sent for to John Goddard, a boy six years of age, who had been kicked immediately above the orbit of the left eye by the heel of a horse's shoe. The wound was transverse,