

vessels, bone, the sutures must be removed quickly and freely, and the collected pus allowed instant issue, otherwise it penetrates the newly divided tissues, dips down between the muscles, between their fibres, along the periosteum, and even between it and the bone, inflaming them all, and requiring weeks and months, perhaps, of an exhausting suppuration to be cleansed again. Abscesses in a stump are very different from other abscesses. In most cases they are between the aponeurosis and the skin, and the aponeurosis being a fibrous tissue, and of low vascularity, resists absorption better than the skin. In the cut parts of a stump it is otherwise. But this is a part of the subject into which it is not my purpose to enter, further than to say that, as our every effort in this second instance is to cleanse the wound of pus and debris, it was, or should have been, in the first instance our endeavor to cleanse the wound of material giving rise to the formation of pus. For suppuration, as Richard states, ever commences around a foreign body, and indicates its presence though that foreign body may be a point in the organism where life is extinct or in peril.

When, then, the liquor sanguinis has lost its physical qualities; when the wound begins to purge (to use a pregnant word); when the surface becomes soiled and stained, and the secretions foul and bearing their burden of dying and dead tissue, though minutely divided, the course of treatment hitherto pursued must be changed. This is the period of greatest anxiety as it is the period of greatest malignity, when the wound must be thoroughly cleansed and kept clean till little red elevations appear on the surface, harbingers of a return to a forward movement, which, though tardily, conducts to union. It is not the pus during this anxious period (the third to the eighth or ninth day) which is to be dreaded. Pus has not the malignity which is ascribed to it. Changed and turbid plasma, it is but the vehicle for a variety of substances to find their way out of the body—foreign bodies in the wound or of the wound, and those imponderable immeasurable elements of malignancy which we term virus.

This is the period when antiseptics are of greatest value: sulphate of alumina, alcohol, salicylic acid, and more than all, and better than

all, carbolic acid diluted with warm water and used freely.

It has been contended, and very generally believed, that in the healing of wounds a new force is generated, to wit the *reparative force*. The reparative force is not at all a *new* force. It is a new force so far as our vision is concerned, but the reparative force is but the continuation, now visible through the divided structures, of that force which obtains at every instant of our existence; that perpetual action of the liquor sanguinis through the walls of the vessels, and chiefly of the capillaries, by which the whole organism is constantly undergoing change and renewal. It may, and undoubtedly does happen, that the reparative force, after an injury, is called into greater activity than before. The stimulus to the part when the wound was created would alone be sufficient to increase the activity of that already existing force. But *before* the creation of the wound, the force existed. *Before* the creation of the wound liquor sanguinis transuded through the walls of the capillaries to repair the incessant waste; and *after* the creation of the wound liquor sanguinis transudes through the walls of the capillaries with greater activity to repair a greater waste, and to form a newer but a like fabric. It is not the blood poured out from the cut ends which agglutinates; and it is not the blood from the cut ends which repairs and renews. The blood from the cut ends of arteries, veins, or capillaries interferes, and interferes most seriously, with the reparative force. Binding up a wound in its own blood is therefore a mistake, unless the binding process presses out from the wound all the blood which is external to the vessels. Healing, uniting, agglutinating the surfaces of a wound is a forward movement: the plasma bathes the divided parts, and is elaborated from the transuded fluid, and the new tissue becomes organized. But when circumstances are not favorable to this forward movement,—this movement towards organization—the movement is retrograde. It is now a movement not to deposit and build up, but to liquify, absorb and take away. A movement a fine towards supuration. In a living body there is no rest: there must ever be a forward or a backward movement, although both these movements may coexist. But how differently appears the plasma in the forward and in the backward