IMMOBILIZATION IN THE TREATMENT OF SUPPURATION

BY

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Broadly speaking, the treatment of acute and of chronic inflammation have been different for generations, heat being used in the former case and immobilization in the latter. There is nothing or little to say against heat, but a great deal to say for immobilization.

Rationale

Except in cases like acute septic infection of the hand immobilization has not been used for the treatment of acute inflammation unless the motive has been primarily to relieve pain, as in the case of acute septic arthritis, when fixation and extension are applied. In these two groups of cases in which the inflammation is affecting parts of the body where the prime function is movement, recovery without immobilization is very incomplete and function is permanently impaired or even destroyed.

Immobilization should, however, be utilized in all cases of acute inflammation, whether concerned with movement as a function or otherwise. It is essential to procure stillness of (a) the inflamed tissues, and (b) the surrounding tissues in order to (1) localize the inflammation, and (2) relieve pain.

What service does pain render to the organism? Primarily to draw attention to the trouble, be it injury or disease; finally to demand, peremptorily and pitilessly, immobilization. How do we endeavour to ease pain? (1) By immobilization; (2) by heat; (3) by cold; (4) by analgesic drugs. All these influences act through the nerves; immobilization producing a beneficial trophic effect by the easing of pain; heat and cold by the agency of counter-irritation, which is a reflex trophic activation, stimulated by the message sent from the cutaneous nerves which are receiving the heat or cold in the form of poultices or compresses, or are being influenced by rubbing or stroking. How striking is the effect of a sinapism or a leech on the pain of pleurisy, or the relief to the burning tightness of acute tracheitis of a sinapism over the sternum.

Heat is said to relieve pain by reducing tension. But does it? Can it? Are there not present in the inflamed tissues already both heat and dilatation of blood vessels? Cold certainly does not relieve tension, yet its effect upon pain is immediate. Analgesic drugs do their work by their direct effect upon the nerves, and possibly may have a deleterious effect by interfering with normal trophism.

Over and above the benefit it procures by the relief of pain, immobilization prevents the spread of toxic products and inflammation, acting upon the cellular structures and the lymphatics. Every day in his consulting room the general practitioner sees cases of inflammation going on to suppuration demanding his intelligent care, which does not begin and end with instructions to "go home and poultice it." This branch of our daily work is lifted out of the boredom of much of such work if we practise the method which I will endeavour to describe—this treatment by immobilization rather than by heat. To enumerate a few of such troubles, we meet, daily, boils, carbuncles, suppurating sebaceous cysts, inflamed infected glands in armpit, groin, and neck, lymphangitis, poisoned finger, whitlow, and so on.

Method of Treatment

I always try to immobilize the skin overlying and/or surrounding the inflamed area, and also the tissues (muscular) underlying it. The former is fixed by zinc oxide rubber plaster, the latter by splinting (best by a

plaster-of-Paris light cast or splint). Before applying the rubber plaster the skin must be shaved and painted with tincture of iodine. The rubber plaster should be made to adopt perfect and even contact, by cutting radial incisions in its border with scissors which cut away, by a horizontal movement parallel to the plane of the skin, all folds in it. This plaster is removed daily or on alternate days, according to the amount of discharge, and the part cleansed with ether (which readily removes any sticky zinc oxide rubber which has not come away with the fabric), wiped with methylated spirit, painted on alternate days with tincture of iodine, and then fresh plaster applied.

I will venture to give further details in describing the treatment of a carbuncle of the forearm, and of suppurating glands in the neck from impetigo of the scalp.

Carbuncle of the Forearm.—The immobilization of the skin is carried out as described above. The underlying layer of muscles is put at rest by the application of a light plaster-of-Paris slab to the side of the limb away from the carbuncle. If desired, a small round hole may be left in the centre of the strapping, through which the centre of the carbuncle points, and a paste dressing, such as antiphlogistine, can be applied warm, and changed night and morning. If this be done the strapping can be left undisturbed for days. The plaster-of-Paris splint should extend to the finger-tips, and the arm should be carried in a sling.

Suppurating Glands in the Posterior Triangle of the Neck.—The child who has been suffering from impetigo should have a diet free from sugar and starch. In a very bad case rest in bed with the maximum amount of fixation of the neck is desirable. The skin and scalp should be shaved to allow the application of a large circle of zinc oxide strapping over the area of the enlarged glands. Every day the area of inflammatory oedema will diminish in size, until there is felt a small central swelling, the resistance, swelling, and tenderness of the peripheral portion of the area having subsided. On removing the plaster, if a small, fluctuating area is felt, this should be aspirated and the plaster reapplied. Aspiration may have to be repeated, and more than once, but it is very rarely that one has to incise such abscesses thus treated. Tuberculous glands treated in this way run a very favourable course also, but a slower one, naturally, than the acutely infected glands. The needle for aspirating needs to be one of fair calibre, but the tiny area of skin through which it passes should be anaesthetized with eudrenine inserted with a No. 20 needle. The same syringe will serve for anaesthetizing and for aspiration. It should be of 5 c.cm. volume. After several aspirations the contents of the cavity will be found to be more blood than pus, and then success is well within sight. Absolute asepsis is essential, and this is so simply attained by the avoidance of water and lotions and the use of ether and spirit and iodine.

Of course one cannot overemphasize the importance and urgency of completely immobilizing the hand in its entirety and always immediately in suppuration which, by its spread, might involve the tendon sheaths. This immediate immobilization is startling in its efficacy in localizing the trouble. And the application of the zinc oxide strapping helps here too.

The well-known German periodical *Die dermatologische Wochenschrift*, published by J. A. Barth of Leipzig, has just entered upon its hundredth volume. For more than fifty years it has been prominent as a weekly exposition of dermatology, containing accounts of original research work, discussion of debatable principles and hypotheses, and current news and opinions. Its editorial board includes many prominent dermatologists.