

Clinical application of penicillin

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Doctor of Medicine (M.D.)

1949

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HAND INFECTIONS TREATED WITH PENICILLIN

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THE choice of method of using penicillin is at present largely conditioned by very short supplies, a state of affairs which is likely to continue for a long time. There can be little doubt that the best way of attacking susceptible pyogenic organisms with penicillin is to bring it to the infected tissues by the blood-stream. This, however, demands a great expenditure of penicillin compared with that necessary for local application.

It has already been shown that chronic pyogenic infections can be successfully treated by appropriate local application, and a few more acute suppurative lesions have been treated with good results (Florey and Florey 1943). Clark, Colebrook and others (1943) and Bodenham (1943) have shown that pyogenic cocci can be removed from infected burns. Pulvertaft (1943) has demonstrated that some chronically infected war wounds can be freed from streptococci and staphylococci by local application.

It appeared desirable to ascertain more fully the possibilities of using penicillin in acute pyogenic infections. Acute infections of the hand were chosen, because they are common in industry and cause much permanent disability, or at best considerable loss of working time. The number of cases available allowed a comparison between those treated with penicillin and those treated by routine methods. The complicated structure of the hand permitted observation of the effects of penicillin application on skin, areolar tissue, blood-vessels, nerves, muscles, tendons, synovial membranes of tendon sheaths and joints, and bone. The results of healing of wounds have in the last analysis to be judged by return of function, and the hand afforded an admirable structure for observations on this important point.

Special attention was paid to: (1) the arrest of sepsis and bacterial infection; (2) the after-effects attributable to arrest or persistence of sepsis; and, in the penicillin cases, (3) possible deleterious effects of the drug; and (4) the most suitable methods of administration.

