hypertrophy of the adrenals, a positive Ponceau-fuchsin reaction, and clinical improvement following unilateral adrenalectomy. Sterone excretion was reduced following operation.

Perhaps these intersexual changes may be diagrammatized like this:

♀ + excessive or altered sterone → virilism
♂ + excessive or altered sterone → feminism

thus providing a further example of the bisexual properties of the sex hormones when acting on the different biological soils determined by the sex chromosomes.

My thanks are due to Mr. A. F. Goode, honorary surgeon, Loughborough General Hospital, for permission to publish this case, and to Prof. G. Haswell Wilson, University of Birmingham, for the pathological report.

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Medical Memoranda

Local Chemotherapy as a Curative Measure

The prophylactic value of the sulphonamide group of drugs when applied locally in potentially infected wounds is amply witnessed by the numerous accounts published. My experience in this direction has been small, but I have used local chemotherapy from a curative point of view in wounds already infected.

I first used sulphanilamide locally in two cases of tuberculous infection. One patient, a girl aged 14, exhibited a tuberculous osteitis of the third left metatarsal and a cold abscess on the ulnar border of the right hand. Both these lesions eventually gave rise to ulcers which defied treatment until a paste similar to bipp, but with sulphanilamide 5% in place of bismuth, was tried. The ulcer on the hand cleared up in about fourteen days, but that on the foot, although it became much smaller and cleaner, refused to heal completely, presumably because of the underlying osteitis. The second case was one of tuberculous adenitis, with cold abscess formation. This was opened, curetted, swabbed with 6% iodine, and sewn up. This procedure had proved successful in previous cases, but this one became secondarily infected and broke down. Fomentations were applied, and a surrounding crop of pustular eruptions developed. The whole area was treated with the sulphanilamide - iodoform paste, and it healed completely in seven days.

Following these two cases local chemotherapy was tried on a radical mastectomy wound that had become infected and had broken down, leaving a large suppurating area. The first application was a suspension of sulphanilamide 5% in 1 in 1,000 flavine, but it made very little impression on the infection. Since the predominating organism was a staphylococcus a paste of uleron 5%, with equal parts of zinc oxide and paraffin, was used. This cleaned up the wound sufficiently for a Thiersch graft to be made to close the defect.

A similar paste, with sulphanilamide in place of uleron, has been used on a large number of cases, of which the following are examples:

Case 1.—Infected burn over right eyebrow caused by molten aluminium. This had been treated by various applications for ten to twelve weeks without improvement. Daily dressings with the paste cleared it up in seven days.

Case 2.—A woman presented herself with a peculiar black eschar just above the right knee. This looked like a burn treated with tannic acid, but no history could be elicited. Fomentations were applied, and the eschar separated in fourteen days, leaving an ulcer resembling a syphilitic lesion. The Wassermann reaction was negative. The paste completely cleared up the area in seven days.

Case 3.—A case of osteomyelitis which had been operated upon had been in the wards for some time. The upper part of the wound had healed, but the lower part remained open and freely discharged. The paste cleaned it up, leaving healthy granulation tissue.

Several common lesions and small infected wounds have been successfully treated with the paste, and my colleagues at the hospital have used it on several occasions with equally satisfying results. Herpes vulgaris and impetigo seem to respond particularly well.

Following these cases an emulsion of sulphanilamide 5% in cod-liver oil was made up. This has been used as a routine dressing in the casualty department for the past three months, and no case of infection of primary suture of a wound has occurred. In addition, it is most useful where the cosmetic result is of importance. All wounds or incisions of the face and hands are sutured with gossamer silk and dressed daily with the emulsion. Sutures are removed in four to five days, and the wounds heal with only very faint scars. As a curative application the emulsion has surpassed the paste. An infected finger with necrosis of the phalanges was amputated at the metacarpophalangeal joint. The wound was dressed with glycerin and flavine, and when seen a week later it had broken down in three places, was discharging pus, and showed the sloughing end of an extensor tendon. The slough was removed and the wound treated with eusol dressings for five days. It was then clean, but the three sinuses were as large as ever. Sulphanilamide emulsion was used for the daily dressing, and the wound healed completely in ten days.

Several similar cases of grossly infected wounds have been treated with success. The following facts have emerged: (1) If there is free discharge of pus from the wound the emulsion or the paste is not very effective. If, however, the wound is treated with eusol dressings for a few days and then with the emulsion healing is rapid and permanent. (2) Resistant cases should be submitted to bacteriological examination, and the sulphonamide chosen to suit the infecting organism. (3) Many patients with infected burns have presented themselves. A large number had been treated elsewhere with tannic acid, and had arrived with the tan bathed in pus. In all such cases the burn was cleaned up, the coagulum removed, by eusol dressings if necessary, the surrounding skin painted with 1% gentian violet, and the emulsion applied daily. Healing takes place usually in ten to fourteen days. In no case have toxic symptoms appeared, although in several cases very large areas have been treated. It seems possible that the nature of the preparations used may be responsible for the absence of such manifestations.

The following preparations are in daily use at the hospital:

R Sulphanilamide powder 5%
Zinci oxid. .. .. } aa partes aeq.
Paraffin. liq. (sterile) .. .. .. }

Fiat pasta.

R Sulphanilamide powder 5%
Iodoform .. .. } aa partes aeq.
Paraffin. liq. (sterile) .. .. .. }

Fiat pasta.

(This is used chiefly for tuberculosis lesions, though it has been employed instead of bipp in a few cases of osteomyelitis.)

R Sulphanilamide powder .. .. gr. 175
Ol. morrhuae .. .. fl. oz. 4
Acid. oleic. .. .. m 36
Aq. calcis .. .. ad fl. oz. 8

Fiat emulsione.

I am indebted to the pharmacists of the hospital for their willing co-operation in making up the various preparations. I also wish to express my gratitude to Mr. J. Elgood, honorary surgeon to the hospital, for permission to publish these cases.

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Newport, Mon. House-surgeon, Royal Gwent Hospital.

Dr. Norman Manson has been appointed warden in succession to Lieut.-Colonel Sir John Strathearn of the St. John Ophthalmic Hospital, Jerusalem, who has resigned owing to ill-health after holding the office of warden for twenty-two years.