CLINICAL BUBO AND ITS TREATMENT.

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RECENT research has focused attention on this troublesome condition, so well known to military medical officers who have served in the great seaport cities of the East. Though much has been written on the pathology of the disease, the treatment of the complaint has not received the same amount of attention, and the standard textbooks on tropical diseases dismiss the subject very briefly.

My excuse for publishing this paper is the hope that my experience in the treatment of the condition may be helpful to other officers, especially those to whom the disease is a novelty.

PATHOLOGY.

Climatic bubo has been definitely identified as being the same condition as that described by Durand, Nicolas and Favre in 1913 as lymphogranuloma inguinale in temperate climates. We are indebted to the researches of Frei in 1928, Hellerstrom and Wassen in 1930, and Marshall Findlay and Levaditi in 1932 for establishing this identity.

The organism is ultra-microscopic and filtrable, and the infection can be passaged in monkeys and guinea-pigs. The serum of convalescent patients is protective for both conditions. Frei has elaborated an intradermal test by which the condition can be diagnosed, and which gives positive results in both conditions. By this reaction he has also proved that the affection known as "Chronic Elephantiasis and Ulceration of the Vulva" and other similar cases with associated infection of the rectum and anus, causing a chronic inflammatory stricture (the "Esthiomene" of Hugier), are manifestations of the same disease.

The portal of infection is usually in the genital area, and the disease is definitely a venereal disease, though doubtless it may sometimes be contracted innocently in the same way as syphilis. Extra genital infection with enlargement of glands in the drainage area of the primary lesion has been described.

The histology is as follows: Section of the glands in the early state of invasion shows clumps of macrophage cells and a few giant cells. Later these cell clumps necrose, are invaded by migratory cells forming microabscesses, which coalesce into larger ones.

At a later stage the normal glandular tissues are entirely replaced by inflammatory tissues consisting of young fibroblasts and a polymorphic cellular infiltration, which is replaced in the final stages by fibroid tissue.
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Symptoms and Clinical Cause.

The patient usually presents himself with a rubbery indurated enlargement of the inguinal or crural glands. The swelling is not particularly painful and there may be little tenderness. The primary lesion is not usually apparent, but occasionally there may be a slight frenular tear, small papule, herpetiform patch, abrasion, or even a definite ulcer, usually in the coronal sulcus, and I have frequently obtained a discharge containing pus cells on prostatic massage. A venereal history is not always obtained, as disciplinary measures tend to make the soldier secretive on this point unless he is cornered with one of the officially recognized "bad disorders."

As a rule, in my experience, there are no constitutional symptoms, but in about one case in seven in China there is an irregular fever, suggestive of a mild paratyphoid infection, and the resemblance is further increased by the mild leucopenia with occasional splenic enlargement and bronchitis which is present. Incidentally I note that Nicolau describes a mild leucocytosis, but I certainly have not found this to be the case when fever is present. If the fever lasts for any length of time a well-marked anaemia is apparent.

This type of indurated enlargement may progress no further, and if untreated may last for many weeks or months. It is usual, however, for untreated cases to progress to suppuration, and here my experience is again opposed to the textbook descriptions which state that suppuration is not the rule. If the abscess is inadequately opened or allowed to burst, especially if it is opened by an incision parallel with the fold of the groin giving inadequate drainage, extensive undermining of the skin and soft tissues results, with fistulous tracts and typical bridges of soft tissue entirely surrounded by skin.

The infection may also spread to the deeper groups of glands and deep abscesses result. Occasionally extensive phagedenic ulceration is encountered. I well remember a case sent home from the West Indies in which an extensive, foul phagedenic ulcer had involved nearly all the skin of the abdominal wall and had tracked into the perineum opening the scrotal sac on one side.

The ultimate prognosis of the disease is good; I have never encountered a death from this condition, though, doubtless, some of the complications may be fatal. The complaint has been a cause of prolonged hospitalization in the past, however, and it still presents a problem.

Treatment.

The treatment varies according to the stage in which the disease is encountered and will be described accordingly.

(a) Stage of Indurated Enlargement without Suppuration.

It was formerly the custom to excise the glands when encountered at this stage. Primary union is by no means always attained, however, and the infection occasionally spreads into the deeper glands following this
procedure. Troublesome oedema of the legs also results when the lymphatic chain is too radically dealt with. For these reasons, I consider that this method of treatment should be discarded.

The treatment which I adopt is by protein shock with intravenous diluted T.A.B. vaccine, a treatment first practised by Hanschell. The vaccine prepared in the laboratories of the Royal Army Medical College is diluted to give 300 million organisms per cubic centimetre. The course is started with 150 million organisms in the apyrexial cases, and 75 million in those with definite pyrexia. Injections are given at intervals of four days, and the dose is increased according to the febrile reaction obtained, a temperature of 101° to 103° F. being aimed at.

I supplement this treatment by occasional gland puncture. A ten cubic centimetre or twenty cubic centimetre record syringe is used and the needle is thrust through the long axis of the mass of swollen glands and withdrawn, strong suction being maintained meanwhile. By this means, a small quantity of blood-stained serum is aspirated and this has the effect of lowering the tension in the gland capsule and limiting the spread of necrotic areas. The response to this treatment is frequently remarkable. I have seen the adenitis completely resolve in ten days and it is usual for the fever to be aborted after one puncture. Other cases are more resistant and I usually find that in those cases in which fever has been present the adenitis takes longer to resolve.

(b) Stage of Periglandular Suppuration.

Treatment by protein shock is continued, but is supplemented by repeated aspiration of the pus and injection of ten per cent iodoform emulsion. In some cases where the abscess is on the point of bursting, it pays to open it, scrape away the obviously necrotic areas of glandular tissue, purify it with pure carbolic acid, and pack the resulting wound with B.I.P.P. ribbon, which is renewed at five-day intervals until healing takes place. If the abscess is opened in this way, it is essential that the incision should be made at right angles to the fold of the groin to ensure free drainage, otherwise sinus formation may result. Healing of the wound with resolution of the glandular enlargement takes place in about three to five weeks.

(c) State of Sinus Formation and Spreading Ulceration.

When sinus formation has taken place, a thorough revision operation must be undertaken. All bridges of soft tissues and undermined skin are excised, the old abscess cavity is laid thoroughly open, the main incision being planned at right angles to the groin, unhealthy granulation tissue is scraped away, pure carbolic acid is applied and the wound is packed widely open with B.I.P.P. ribbon.

My experience of the extensive phagedenic cases is limited to the case noted above. The liberal application of pure carbolic acid was probably
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advisable to stay the ulcerative process, and, after various other applications had been tried, the application of a solution of ten per cent ichthyol in glycerine, finally placed him on the high road to recovery, after which he was invalided from the Service and I lost sight of him.

Average Duration of Treatment in Cases Treated by Protein Shock With or Without Aspiration.

The average duration of a series of cases treated by these methods at the British Military Hospital, Hong Kong, was forty-four days. This may be regarded as an advance on previous methods so far as China is concerned. In my experience the disease is severer and more resistant to treatment in China than in India. I treated a large number of cases contracted in Calcutta and Rangoon from 1924 to 1930, and noted that early suppuration was the rule and febrile cases were very rare indeed: These cases were treated by the incision and B.I.P.P. method and early resolution and healing was always attained. The Indian cases thus presented a contrast with the late suppuration and frequent general symptoms of the Chinese cases. I have little doubt that large numbers of these Indian cases would have been aborted at an early stage if protein shock methods had been practised.

Specific Treatment.

Recently, cases of lymphogranuloma inguinale have been treated with success by injections of the serum of convalescents. Kalz and Saghel in Prague describe the treatment of thirty cases by this means. The average duration of treatment was six weeks, the serum being given at four-day intervals in average doses of ten cubic centimetres, and total doses being 60 to 150 cubic centimetres. I have no experience of this treatment, and it seems impracticable and hardly justifiable to obtain serum from convalescents when almost equally good results are obtained by other means. There is a case, however, for research into the production of a suitable animal serum.

A promising line of treatment by the intravenous injection of pus antigen, diluted 1 : 4 with saline and sterilized by heating at 60°C for one hour on three successive days, is described by Gay-Priesto. The dose is 0.2 cubic centimetre to 1.6 cubic centimetres at two to four day intervals according to reaction. Major W. E. Tyndall, M.C., D.A.D.P., China Command, is kindly preparing this antigen for me, and I hope to try this method of treatment shortly.

The account of the recent researches into the pathology and treatment of climatic bubo has been largely extracted from synopses published in the Tropical Diseases Bulletin and British Medical Journal.

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