

tion; insignificant wounds might cause fatal results if untreated and severely infected.

5. Early treatment was most important in the prevention of gas gangrene.

6. Vascular lesions were an important factor when due to injury; as a remedial measure, such as ligature of great vessels, they were not important; 22 cases with vascular lesions were followed by gangrene in six only.

7. Sixty per cent. of gas infected cases had fractures, and 71 per cent. of those of gas gangrene.

8. Wounds of the calf, trunk, or hip joint were specially dangerous.

9. Tissue injury had an important influence. Gas abscesses were frequently seen in gas infections at the site of subcutaneous injections or near simple fractures in the same case.

10. Intramuscular tension from within or without was a potent aid in the production of gangrene.

11. Joint injuries occurred in 13 per cent. of gas infections and in 20 per cent. of gas gangrene. They increased the gravity of cases, and damaged joints were difficult to immobilize without pressure.

The flora of gas gangrene was usually multiple: *B. perfringens* was present in nearly every case, *B. sporogenes* in 41 cases, *vibrion septique* in 6 cases (several fatal); *B. histolyticus*, *B. hibler* ix, and *B. oedematiens* were all reported, but less frequently. Streptococci of a virulent type were present in 59 cases, and added to the gravity of the infection. Tetanus occurred in 15 cases, and was demonstrated bacteriologically in 7. Marked and latent forms of tetanus were described. Intrathecal administration of serum c.cm. at a dose, together with subcutaneous injections up to 30 or 40 c.cm. a day, proved successful.

Seven clinical forms of gas gangrene were noted:

1. Classic form (Weinberg).
2. Toxic or oedematous type.
3. Mixed forms.
4. Local gas abscess.
5. Superficial and deep-seated gas phlegmon.
6. Chronic and latent infections.
7. Gas septicaemia or pyaemia.

Of 464 cases of gas infection 42 were fatal, 25 dying from gas gangrene, 4 with tetanus, and the remainder with severe fractures, brain or abdominal injuries.

Amputation was considered necessary in advanced cases of gangrene, and performed 65 times, with 48 recoveries, by the open method with lateral incisions. When gangrene was limited to groups of muscles