

of Dr. Kingston, of Everett, to hurry the operation over, I am thankful to say that, so far, there have been no ill effects. The quantity of urine has materially increased since operation; specific gravity is 1030, and otherwise normal. The only trouble we have had has been from a very nasty complication of intestinal flatus which resisted everything we tried until we used an enema of $\frac{3}{4}$ ss Tr. Assaf. in a pint of warm water. The shock of operation was pretty severe for an hour or two, combatted this with hot bottles, hypos. of morph., strych. and whiskey. The highest temperature and pulse since day of operation have been 101.1-5 and 102 respectively. Note.—Feb. 12, patient convalescent.

ACUTE TRAUMATIC GANGRENE.*

By W. E. STRUTHERS, M.D., Huntsville.

Acute traumatic gangrene is a disease so rarely seen nowadays that I hope a few words about the disease and a report of a case that entered the General Hospital, Huntsville, in December last, will prove interesting to you. The specific organisms producing the disease are supposed from experimental evidence based on the study of organisms producing similar processes in the lower animals to be anærobic bacilli, and closely allied to the bacillus of malignant œdema. It is specially noticed to develop in wounds that have been soiled with either earth or dung. The organisms spread into the tissues with remarkable rapidity, and the rapid sinking and death which so quickly follows is due to the powerful toxins which they produce, assisted possibly by the violent inflammation and extensive stasis set up. The course of the disease is very rapid, averaging about three days before the death of the patient. This form of gangrene is almost always of the moist variety, and the streptococcus, staphylococcus, bacillus of malignant œdema, and other organisms have been formed in the wound. The shock of the traumatism may continue, or the patient may feel better for a few hours. Then the patient becomes uneasy, restless, loquacious and frightened, the pulse irregular, the wound painful and tense. The part becomes hard, shining, œdematous tense and white, but within 24 hours becoming mottled, with spreading shades of dusky brown, green, blue and black, and color streaks extending up the limb. These tints may appear like the effects of ecchymoses, and afford the earliest and best sign of the progress towards death or the return to a more perfect life. Becoming darker and duller with a browner red is the sure precursor of death; brightening and assuming a more florid hue is as sure a sign they are more actively alive. Doubtless the varieties of color indicate the stagnation and the movement of the blood in the parts which thus situated may, according to the progress of the inflammation, be added to the dead or become the apparatus of repair. A remarkable and striking feature is the formation of large quantities of gases, mostly hydrogen, carburated hydrogen, ammonia, sulphuretted hydrogen, sulphide of ammonia and volatile fatty acids. The gases may even be seen extending up the limb, crepitation becomes very marked and the part even resonant on percussion. Bullæ, full of serous or blood-colored fluids, form at the most injured parts. The parts become soft, cold and insensible, and a thin brownish, stinking fluid issues from the wound. The tissues soften as in inflammation but to a greater extreme, becoming

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