

## Gas Gangrene – How High Do We Amputate?

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### INTRODUCTION

Different types of skin infections exist which are caused by different organisms and which occur at different fascial planes or anatomical levels of the skin. Severe skin infections lead to vascular occlusion, ischaemia and eventually tissue necrosis. Gas gangrene or *clostridial myonecrosis* is a rapid spreading and deadly disease with a specific clinical sign of gas formation which can and may lead to death if not diagnosed and managed early. Early management with intravenous antibiotics as well as amputation are indicated. As such we wish to investigate what are the lifesaving emergency amputations that bring more benefit to the patient than none.

### MATERIALS AND METHODS

This study is based on nineteen (19) patients who were admitted at our centre for treatment due to gas gangrene of the lower limbs during the period from 2015 to 2016 and were reviewed retrospectively.

### RESULTS:

Patients were divided into healthy persons which have no known medical illness previously and had an acute presentation of the disease (2 patients) and others which have underlying history of diabetes mellitus, hypertension, cardiac related illness (ischaemic heart disease) and/or renal related illness (chronic kidney disease or end-stage renal failure) (17 patients).

One (1) patient underwent emergency ray amputation of the 1<sup>st</sup> to 3<sup>rd</sup> toes, eight (8) or 42.1% of all patients admitted underwent emergency below knee amputations (BKA), another 8 (42.1%) underwent emergency above knee amputations (AKA) and the remaining two (2) or 10.5% underwent hip disarticulation. In one of the cases a bilateral AKA was done. In 6 of the 8 patients who underwent a BKA they needed to undergo a subsequent operation either to debride the stump that was done or an amputation of higher level (Syme's foot amputation, AKA or disarticulation of the hip). The mortality rate of the patients who underwent a BKA was higher than those who

underwent an AKA which is 62.5% compared to 40%.



**Figure 1: Gas gangrene of the foot**



**Figure 2: X-ray of the ankle showing gas shadows**

### DISCUSSION

All the patients that were admitted at our centre presented in sepsis or severe sepsis. Other clinical signs were darkish discoloration of the affected lower limb, poor circulation, reduced sensation, purulent discharge and crepitus upon palpation which indicates gaseous formation beneath the skin. *Clostridium perfringens* which is the main organism in gas gangrene is usually present in decaying matter. Most of the patients with this disease mostly have poor hygiene and are also immunocompromised hence allowing the very rapid spread of the disease causing multi organ system failure. Therefore a swift and effective management is needed.

### CONCLUSION:

In view of the higher mortality rate in post BKA patients, it will be more beneficial to proceed with AKA in all gas gangrene cases.

### REFERENCES:

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