Non-Clostridial Gas Gangrene Without Wound Caused by *Escherichia Coli*: A Case Report

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INTRODUCTION
Gas gangrene is characterized by muscular necrosis and gas formation and is most commonly caused by *Clostridium perfringens* bacterium. Non-clostridial gas gangrene is a relatively uncommon1. This article describes a rare case of non-clostridial gas gangrene of a diabetic lower limb without wound.

CASE REPORT
A 30-year-old female with type II diabetes mellitus presented with right lower limb swelling and pain. On examination, patient was found to be tachycardic, blood pressure of 140/69 and febrile. No wound was seen. The entire right lower limb was tender and was having crepitation. Laboratory investigation of the patient showed haemoglobin of 7.8g/dL, total white blood cell count of 32900, platelet count of 603, C-reactive protein of 304.06 mg/L, erythrocyte sedimentation rate of 115mm/hr. X-ray of the right tibia/fibula and right femur showed presence of gas extending from the calf up to the hip joint. The patient underwent extensive wound debridement of the right lower limb. Intra-operative findings noted pus from proximal lateral shin to medial thigh. Unhealthy fascia and necrotic tissue was also detected. Pus, tissue and swab culture sent intra-operatively showed a heavy growth of *Escherichia coli* sensitive to Tazocin (piperacillin and tazobactam) which was started upon diagnosis.

DISCUSSION
Gas gangrene caused by non-clostridial organism is quite rare in clinical practice. Non-traumatic infection may occur, which is a common feature in diabetes. Symptoms like local pain and swelling are less marked compared to clostridial gas gangrene3. Signs of systemic toxicity develop rapidly, and many patients present with septic shock at the time of initial presentation. Gas is a prominent feature detected clinically or radiologically. Surgical debridement of all the gangrenous tissues, along with broad-spectrum antibiotics, is crucial in preventing the extension of the infection.

CONCLUSION
Non-clostridial gas gangrene is rarely mentioned in literature and its spontaneous occurrence in diabetic lower limbs is rare. Urgent radical amputation is required to save the patient's life2.

REFERENCES