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Original Research Article.

Fournier's Gangrene: A Study in Our Clinical Practice

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ABSTRACT

Background: Fournier's gangrene is an idiopathic gangrene of scrotum. The purpose of this study was to monitor the surgical outcome of the condition.

Materials and Methods: In our study, 45 cases of Fournier's gangrene were included. Study was done in surgery department of Government Hospital Sikar from January 2014 to December 2016. Thorough examination, investigations and surgeries were performed. Our study group included only males.

Results: The average age group was 54 years. Most common related condition was diabetes. Five patients were treated with antibiotics and other 40 patients treated by surgical debridement followed by course of antibiotics. Fifteen patients required skin grafting. All patients recovered after surgery. Average hospital stay was twenty days. No mortality was there.

Conclusions: All the cases of Fournier's gangrene responded excellent to treatment.

Keywords: Fournier's Gangrene, Diabetes.

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INTRODUCTION

Fournier's gangrene is kind of vascular gangrene of infective origin caused by haemolytic streptococci, E. coli, Cl. Welchi and Bacteroids fragilis. Fournier's gangrene is the abrupt onset of fulminant gangrene of the external genitalia and perineum, first reported by Baurienne in 1764 and then describe by Jean Alfred Fournier, a French dermatologist and venereologist in 1883, in a series of five cases with no obvious cause.[1] It mainly affects males (90% of cases), in an apparently healthy condition and there have been descriptions in women and even in children as young as 2 months. It is most common in elder men (peak incidence in the 5th and 6th decades), but the incidence is growing, most likely due to It is reported like a rare condition, with an incidence of the disease of 1.6 cases per 100000 person-years, although mortality is high (20%–30%, on average according to recent series).[2] The infection is often polymicrobial and synergistic with several aerobic, or anaerobic microorganisms including Escherichia coli, Klebsiella, Staphylococcus, Streptococcus, Proteus, and Pseudomonas species. Risk factors include increased age, ethanol abuse, immunosuppressive conditions such as diabetes mellitus (DM), malnutrition, steroid usage, malignancies, etc.[3] Chronic renal failure, pre hospital delay time, extent of the affected area, serum-blood urea nitrogen and creatinine level are some of the factors that affect the prognosis of the disease.[4] It is linked with a mortality rate of 9-43%. Patients presents with pain in scrotum, fever, severe toxicity, extensive skin sloughing occurs leaving normal testis exposed. Aggressive teamwork is the key to the victorious treatment of these patients with complex problems.[5] The use of a multidisciplinary approach using the skilled team is critical to the management.[6] The aim of this study is to report our experience with the management of Fournier's gangrene.

MATERIALS AND METHODS

In our study, 45 cases of Fournier's gangrene were incorporated. Study was done in surgery department of Government hospital Sikar from January 2014 to December 2016.Thorough examination, investigations and surgeries were performed. This group included only males. Age, sex, predisposing factors, duration of hospital reside and outcome of treatment was noted. The data collection done in a particularly designed Performa were process and subjected to relevant statistical analysis.

RESULTS

Five patients were treated with antibiotics and other 40 ptients treated by surgical debridement followed by antibiotics. Fifteen patients required skin grafting. Schedule laboratory tests, blood and urine analysis were performed. Biochemical tests showed a

rise in leucocytes (hyperleukocytosis> 10,000/mm3) and moderate anemia. During the examination of the patients we found a site of infection was perianal area, on the genitalia and on the perineal skin. The most common site of infectious origin was the scrotum. All patients recovered well after surgery. Average hospital stay was 20 days. No mortality.

Table 1: The average age group was 54 years.

Age group	n
40-45	5
46-50	4
51-55	25
56-60	7
61-65	4

Table 2: Most common associated condition was diabetes

Predisposing Factors	n
Diabetes Mellitus	34
Scrotal Abscess	2
Idiopathic	7
Trauma	2

Table 3: Showing Mode of treatment

Mode of treatment	n
Antibiotics	5
Surgical debridement	27
Surgical debridement with skin grafting	13

DISCUSSION

Fournier's gangrene is a life threatening condition and a medical emergency. Fournier's gangrene begins as a local infection that is caused by bacteria inhabiting the lower gastrointestinal tract or the perineum. It occurs next to the portal of entry, which is often tough to identify.[7] The infection progress to an inflammatory response that spreads to the fascia, with ensuing obliterative endarteritis, thrombosis of the cutaneous and subcutaneous vessels, and tissue necrosis.[8] The synergistic action of aerobic and anaerobic organisms plays a chief role in the progressive course of the infection. Like other studies we found that the principal predisposing factor diabetes mellitus of type II and other predisposing factors are variable.[9] A projected explanation for association with DM is the high levels of sugar in blood decreasing phagocytic and intracellular bactericidal activity and formation of neutrophil dysfunction thus leaving the patient immunocompromised.[10] All patients received routine empirical antibiotic treatment with gentamicin (160 mg/d), ceftriaxone (2 g/d) and metronidazole (500 mg/8 h). Average length of hospital stay was overall 20 days. In spite of advancement in management, mortality rates are still high. In some series, it ranges from 14-45%. However, in this study, our mortality was 0%.[11]

CONCLUSION

Fournier's gangrene which is a quickly progressive, fulminant polymicrobial synergistic infection of the perineum and genitals, is now altering pattern. Extensive surgical debridement and broad spectrum intravenous antibiotics remains the basis of treatment in order to diminish the morbidity and mortality.

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