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RECTAL CARCINOMA PRESENTING AS FOURNIER'S GANGRENE: A RARE CASE REPORT

General Surgery

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ABSTRACT

Fournier's Gangrene is necrotising fasciitis of the perineum, external genitalia and perianal region. It is a polymicrobial infection of the soft tissues of the above mentioned areas. It is characterised by rapid onset gangrene with "***shameful exposure of scrotal contents***". Etiology is unknown in more than half of the cases. Rarely it has been found in association with rectal carcinoma, sometimes chemotherapy induced and at times in form of cryptic, undiagnosed cases.

We hereby report a case presenting to us as typical fournier's gangrene which on evaluation was found to have an undiagnosed rectal growth, later labelled as rectal carcinoma on tissue sampling studies.

KEYWORDS

fournier's gangrene, rectal carcinoma

INTRODUCTION:

Fournier's Gangrene is a synergistic polymicrobial necrotising fasciitis of the perineum and genitalia. It affects 5 fascial planes, namely:

A) Colle's fascia B) Dartos fascia C) Buck's fascia D) Camper's fascia E) Scarpa's fascia.

Etiology can be broadly grouped under:

1) Urogenital causes (urethritis, prostitis, insertion of penile prosthesis,etc)
2) Anorectal causes (ischiorectal or perianal abscesses, rectal perforation by foreign body, rectal carcinoma,etc)
3) Idiopathic (more than 50% of cases)

There is a mixed infection by aerobic and anaerobic bacteria which results in obliterative arteritis of the arterioles supplying scrotal skin resulting in gangrene of the part. The inflammation rapidly involves skin of penis, perineum and abdominal wall.

The condition is clinically characterised by sudden, severe scrotal pain associated with 3 P's (Pallor, Prostration, Pyrexia). Cellulitis spreads within hours with small necrotic islands of skin which ultimately coalesce to form a bigger necrotic territory causing "shameful exposure of testes" which are otherwise normal. It is often associated with crepitus and foul smelling exudate. The patients rapidly lands up into sepsis.

Fournier's Gangrene is a surgical emergency. Management includes fluid and electrolyte correction along with broad spectrum intravenous antibiotics. Urgent wide excision of necrotic tissue is the corner stone of management protocol. Urinary or fecal diversion may be warranted in some cases. Early post-operative review of wound is necessary to ascertain complete removal of infected, necrotic tissue. Once adequate debridement is achieved, regular dressings set in. Vacuum-assisted dressings may be helpful for the cause.

Once the wound is healthy, it may be primarily closed, if possible or may require grafting procedures for covering up the defect.

Despite the best therapies and even at the experienced centres, mortality rates for the disease approach 50 %.

CASE REPORT:

The patient, 52 year old male, resident of Afghanistan presented to our institute with the chief complaints of progressive swelling and pain of severe intensity in the scrotal region. The patient also complained of unsatisfactory bowel evacuation for few months. Patient's general condition was sick at presentation. On clinical evaluation, huge edematous swelling of the scrotum emitting foul smell with gangrenous changes was observed. On digital rectal examination, he was found to have rectal growth. A Primary diagnosis of Fournier's Gangrene was made. He was started on intravenous antibiotics and aggressive fluid therapy. After initial resuscitation, relevant investigations and written informed consent patient was taken up for the procedure. The patient underwent extensive debridement of the affected scrotal skin along with rectal biopsy under general anesthesia. Operative findings included gangrenous scrotal skin extending upto pubic area, foul smelling frank pus, bilateral testes were normal and circumferential constricting rectal growth. Histopathological findings of rectal biopsy were consistent with rectal adenocarcinoma. Serum CEA(carcino embryonic antigen) was 12.5ng/ml (normal = <4.1 ng/ml).

MRI abdomen and pelvis demonstrated circumferential enhancing lesion of size 6.7 cm involving distal rectum and mesorectal fascia; distal margin of growth was 4 cm from anal verge. Pre sacral, para rectal and para aortic lymph nodes were positive.Post operatively patient was managed with broad spectrum antibiotics and daily sterile dressings.

On POD-03, patient developed intestinal obstruction due to rectal growth which was managed with flatus tube.

Despite regular dressings patient started having purulent discharge from the posterior scrotal area.

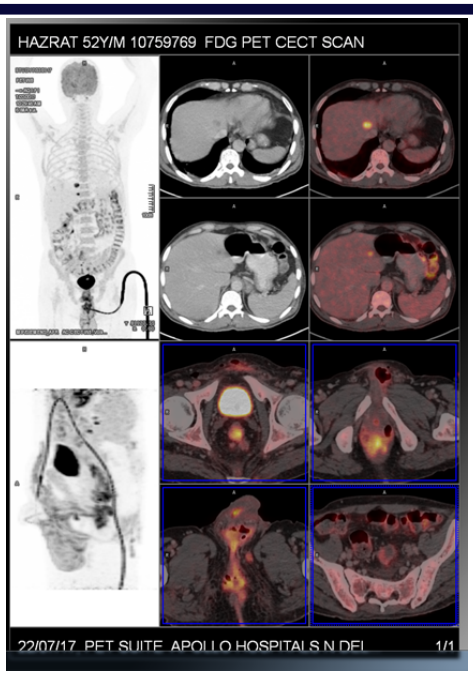
On strong suspicion of tract from rectum to the posterior scrotal area, PET-CT was done, which demonstrated FDG avid soft tissue mass lesion involving distal rectum and anal canal with direct infiltration into perineum. FDG avid perirectal and mesocolon nodes and pelvic peritoneal deposits were visualised. FDG avid liver and bilateral lung metastasis were noted.

Patient underwent sigmoid loop colostomy.

The discharge from posterior scrotal skin gradually reduced.

When the wound was healthy, patient underwent secondary suturing of the scrotal wound (approximately 3 weeks after first presentation).

Approximately 2 months after secondary suturing, patient was started on chemotherapy. At present, patient is in Afghanistan and without any evident complications.



PET-CT

DISCUSSION:

Historical aspects of Fournier's Gangrene are fogged up but what appears to be the first description of the condition was in a article by the famous Persian Physician, **Avicenna** in ***The Cannon of Medicine***.

There have been isolated case reports of Fournier's Gangrene being associated with Rectal Carcinoma. Although the bull's eye etiopathogenesis of the association is still elusive, various possible explanations have been put forward viz.

A) As a complication of chemotherapy for rectal carcinoma
B) As a complication of rectal carcinoma per se due to perforation of the affected segment
C) Due to fistulas developing from carcinomatous segments to the affected parts.
D) Due to obliterative arteritis of the scrotal arteries by emboli of tumour cells.

And many more..

The crux of the matter lies in the appreciation of the fact that this is an association of two diseases of the highest grade in terms of notoriety.

An early realisation of the association in a patient may be of high prognostic implication and may make or break the situation.

CONCLUSION:

This case report (and the doppelganger ones) emphasize on the fact that rectal carcinoma can be a not-so-rare cause of fournier's gangrene.

With rectal carcinoma on the increasing trend in epidemiological profiles of the modern population, we suggest "***Rectal Carcinoma should be ruled out as a possible cause in every case of fournier's gangrene by atleast a digital rectal examination on the first rendezvous with the patient***".

Fournier's Gangrene might be a sign of early rectal carcinoma, which can possibly help diagnose this notorious carcinoma before it zooms past the critical point of diagnosis and hence, have an impact on the prognostication.

Since the data pertaining to this association are unavailable at the hour; incidence, prevalence and association studies should be undertaken at the earliest for the disease diad this deadly prognostically.

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