Paraphimosis Leading to Fournier’s Gangrene

Sir,

Fournier’s Gangrene (FG) is a fulminating form of infective necrotizing fasciitis of the perineal, genital or perianal areas. It is a synergistic infection caused by aerobic and anaerobic bacteria. FG may rapidly cause multiple organ failure leading to death. It is prudent to diagnose this condition as early as possible in order to decrease morbidity or prevent death. Broad spectrum antibiotics and aggressive debridement have been broadly accepted as the standard treatment.

An 85-year-old man was brought with history of swelling and ‘cellulitis’ around the penis with urinary retention. Past medical history featured Alzheimer’s dementia, benign prostatic hypertrophy and urinary incontinence. Previously, he had been on long-term urinary catheterization for urinary incontinence. Two weeks earlier an attempt was made to change his urinary catheter, which was unsuccessful, and the care-providers in the residential home were managing his urinary incontinence with pads.

Clinically, he was in septic shock. Genital examination revealed gangrene of the penis with a band of paraphimosis causing oedema of the penis (Figure 1). Abdominal examination demonstrated a distended urinary bladder and a suprapubic catheter was inserted. A diagnosis of Fournier’s gangrene was made. Broad spectrum antibiotic were commenced and the patient was promptly taken to the operating theatre for debridement. The paraphimosis band and necrotic tissues were debrided and washed with hydrogen peroxide. The histopathology confirmed FG. Unfortunately, the patient died despite aggressive management.

The paraphimosis caused venous congestion leading to arterial obstruction, thus resulting in FG. This is in keeping with the patient’s history and the fact that the foreskin was not pulled forward following attempted catheterization.

FG encompasses all necrotizing fasciitis involving the genital, perianal and perineal regions. It can occur at any age and is more common in males.1 It may be associated with other systemic disorders, namely Diabetes (40-60%), chronic alcoholism (25-50%) and immunosuppression.1 It is caused by either polymicrobial (Type 1), organisms including Entero-bacteria, Bacteroides, Streptococci or Monomicrobial (Type 2) caused by Group A Streptococcal infections. The source of infection may be urogenital (45%), anorectal (33%) or cutaneous (22%).

Diagnosis is based on clinical signs and symptoms. Clinically, it has an insidious onset with the classical triad of pain, swelling and systemic sepsis.2 An important feature is the presence of bullae, with or without crepitus, and skin induration, which should raise the suspicion of FG.3 The mainstay of treatment is three-fold – haemodynamic support, broad spectrum antibiotics and urgent surgical debridement. FG is associated with a high mortality despite prompt treatment.

It is essential that the foreskin of glans is returned to its natural position following an attempted catheterization, otherwise serious complications may ensue as illustrated in this case.

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Elastography and its Role in Breast Cancer Screening

Sir,

Breast cancer is the leading cause of women mortality and cancer-related morbidity across the world. Pakistani women are no exception. This disease alone is accountable for about a third of all the cancers in females. Approximately one in every 9 Pakistani women is likely to suffer from breast cancer, which is one of the highest incidence rates in Asia.1
Because mortality from this disease is stage-dependent, early detection is the key to survival. The value of screening mammography has been well-established, yet this technique has well-known limitations. For instance, the sensitivity and specificity of mammography are decreased substantially in women with radiographically dense breasts. Some women will avoid getting a mammogram just because they are so uncomfortable with its procedure. These limitations have prompted investigators to examine the value of other imaging modalities such as sonography.2

The Breast Imaging Reporting and Data System for Ultrasound, (BI-RADS) has been instituted to standardize the criteria for interpretation and reporting. These developments, along with advances in instrumentation, have made the role for breast ultrasound more important and necessary in the breast imaging evaluation. Its use allows more thorough and immediate evaluation of suspected breast abnormalities, which can speed diagnosis.3

Ultrasound elastography is a non-invasive medical imaging technique that detects tumours, based on their stiffness (elasticity), compared to normal tissue. Cancerous breast tissue tends to be many times stiffer than normal tissue and give undercompression on elastography, so different degrees of stiffness of lumps give different shades of compression and from the color scale the benign and malignant nature of tumour is detected.

Elastography uses ultrasonic imaging to compare the shapes of the tissue under examination before and after it is compressed. The extent of compression is very small, usually only 0.2–0.6 mm. An image in which different degrees of stiffness show as different shades of light and dark is called an elastogram.4 A malignant tumour produces a blue image while a benign tumour produces green image depending on degree of elasticity as shown in Figure 1 and 2.

Pakistan lacks a national screening program for breast cancer that is the most common malignancy of Pakistani females.5 What needs to be adopted is an organized strategy directed towards the screening, early detection and salvage surgery in a disease that rarely undergoes spontaneous regression and dormant metastatic foci may awaken decades later.1 Elastography is a newly developed dynamic technique that uses ultrasound to provide an estimation of tissue stiffness. Elastography has been studied in the laboratory since the mid-1990s. It is now being considered as a possible substitute for a breast biopsy, which is an invasive surgical procedure that removes a sample of tissue for pathological examination.4 Elastography provides an effective, comprehensive and affordable treatment and should be used in the tertiary health care centers of Pakistan for screening and early diagnosis of breast cancer to allow patients the best chance for a cure.

REFERENCES


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