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Necrotising Fasciitis Of Uterus After Suction Evacuation For Termination Of Pregnancy: A Rare Case

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I. Introduction

Necrotizing fasciitis is a serious soft tissue infection that can lead to significant morbidity and mortality. It was first described anecdotally in the 1870s, but remained unnamed until 1952when Wilson described the entity in a case series and coined the phrase ‘‘necrotizing fasciitis.’’[1] Necrotising fasciitis is a rapidly progressive soft-tissue infection that involves the superficial anddeep fascia, leading to thrombosis of the cutaneous vessels and gangrene of the underlyingtissues (Hancevic et al., 1998). The lack of clear boundaries and late involvement of theoverlying skin masks an early diagnosis. Risk factors include compromised immune state,diabetes mellitus, malnutrition, obesity, advancing age, renal impairment, malignancy, trauma (Rouse et al., 1982) and the use of steroids and NSAIDS (van Ammers et al., 1982) or presence of peripheral vascular disease. Although this is seen relatively commonly in general surgical practice, it is a rare complication in obstetrics and when it occurs it frequently presents as a fulminatingdisease. Although it is generally caused by group A streptococcus, it is often associated with polymicrobial infection in the setting of caesarean delivery.[2]

With an incidence of 2 per 1000caesarean deliveries, necrotizing fasciitisof pelvis is relatively uncommon; however, when it occurs, themortality rate can reach 30%– 60%, even with use of antibiotics[3]. Our case of necrotising fasciitis of uterus emphasizes theimportance of early surgical intervention, and the need to inspect the uterus and hysterectomysite at the time of initial wound debridement. Over the past decade, there has been an increasein awareness of infections associated with pregnancy and delivery.[4] Each of these infectionshas the potential to progress to severe sepsis and septic shock [5-7], highlighting the need foradequate measures to prevent andtreat pregnancyassociated and postpartuminfections. The most significant risk factor for postpartum infection is caesarean section, which is frequently associated with wound infection, endometritis or urinary tract infection [8]; post-operative incidence of infection is estimated at 20-25%.[9] For this reason evidence reviews and guidelines recommend the routine administration of prophylactic antibiotics to women undergoing caesarean section.[9-10] Based on a meta-analysisof 95 randomised controlled trials, enrolling over 15,000 women, the administration of prophylactic antibiotics has been estimated to reduce the risk of infectious complications after caesarean section by 60-70%.[9] Forceps or vacuum foroperative vaginal delivery (OVD) are used in 12.6-13.1% of deliveries in the United Kingdom[11]and are also associated with an increased risk of infection.

The use of instruments can introducemicro-organisms into the genital tract, leading to endometritis and more severeascending infection. Furthermore, OVD often follows a longer labour, and is also associated withmultiple vaginal examinations and bladder catheterisation which provide additional routes for infection.[12] The increased risk of vaginal lacerations, and the use of episiotomy during delivery,alongside the challenge of maintaining a clean environment with perineal wounds can createfurther potential entry routes for micro-organisms.

II. Case Report

A 29 year old lady (G2P1L1A1) presented with lower abdominal pain since a week with high grade fever and white discharge per vaginum. She had history of suction and evacuation done in local rural clinic one week ago for abortion. Followed by which she developed lower abdominal pain and fever with chills & rigor with few episodes of vomiting. On examination, lower abdomen was distended, there was tenderness in lower abdomen with redness. Further routine blood investigations were done which revealed high leucocyte count

which was 14400/mm3, all other tests were grossly normal. On USG it showed collection in uterine walls suggesting infective foci. Initially resuscitation was done and IV antibiotics were started. The patient was then planned for exploratory laparotomy. Intraoperative findings revealed gangrene of uterine walls suggesting necrotising lesion (as shown in the figure 1 & 2). Following which hysterectomy was done with placement of drain in pelvic region. Patient was given antibiotic support. Patient was discharged after ten days when she was clinically and vitally stable. On follow-up she was fine with no complains.

Figure 1

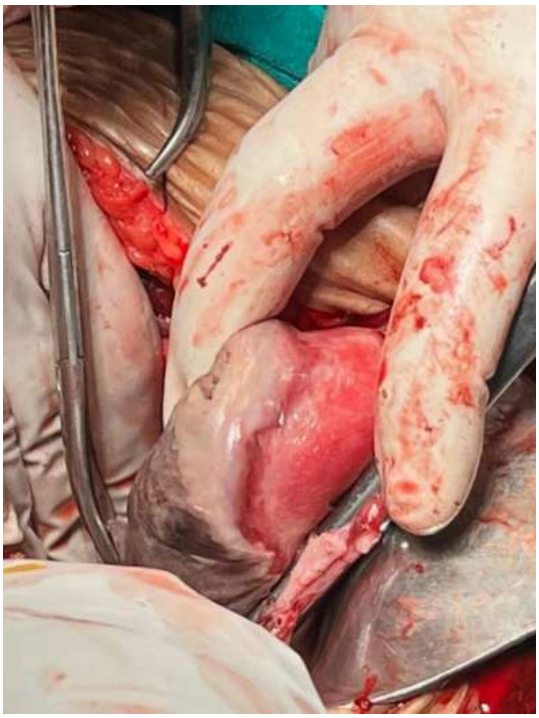

Figure 2

III. Discussion

NF is a rare, rapidly progressive and frequently fatal condition in obstetric and gynaecologicalpractice.[13-19]Failure to make an early diagnosis and delay initiating appropriate treatment mayresult in significant morbidity and mortality.[17,20] The underlying pathogenic processes involveproduction of destructive enzymes and toxins by bacteria, resulting in rapid tissue necrosis andspread of bacteria.Majority of cases result frompolymicrobial infections with a mixture of Gram-positive, Gram-negative, aerobic andanaerobicbacteria. In an analysis of wound cultures, a singleorganism, multiple organismsand no organismfound at the percentages of 53%, 23% and 23%, respectively.[21] Regardingmonomicrobial infections,Streptococcus spp. (especially group A), S. aureus, V. vulnificus,A. hydrophila, Enterobacteriaceae(E. coli, Pseudomonas spp., Klebsiella spp. AndEnterococcus spp.), Clostridium perfringens andanaerobic streptococcus are common.[22] However, to our knowledge this is the firstreported case of NF caused by Enterococcus spp.following caesarean delivery.

The aetiology of NF is not fully apprehended, and sometimes no individualfactor can be found.[23] Diabetes mellitus, age over 50 years, peripheral vascular disease,surgery,muscle injuries, drug use and immunosuppression are the most common factors and associatedwith even greater morbidity and a higher mortality.[20,24] In our caseinstrumentationi.e. Suction and evacuation done at local rural clinic may have been aetiological factor, which might have led tothe infective foci causing the necrotising fasciitis of uterus.

NF is difficult to diagnose in the earlystage because of nonspecific signs such as tenderness, swelling, erythema, and pain at the affected site that mimic lesssevere soft tissue infection.[22] Severe pain and systemic toxicityshould raise the suspicion of NF in advanced patients.[23] Radiologic studies are only consideredas adjunct measures for doubtful cases and cannot be used to exclude NF.[25] A gas on plain wasrevealed only in 35%ofradiographic studies.[26]

IV. Conclusion

NF is a surgical emergency requiring prompt surgical exploration and administration of intravenous broad-spectrum antibiotics.[16,20,23] Surgical aggressive and extensive debridement isthe mainstay of treatment. The uterus is rarely involved in NF but, the abdominal wall, rectus sheath, omentum and limbs are common site

of NF. If uterus is involved, hysterectomyis required for extensive treatment, however in some casespreservation of uterus has been reported.[27,28]

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