Could Pfannenstiel Incision for Emergency Caesarean Section be Associated with the Development of Uretero-Vaginal Fistula?

Sir,

We made an unusual observation of the occurrence of uretero-vaginal fistula following emergency cesarean section in four consecutive patients, in whom Pfannenstiel incision was employed to gain access to the uterus. All the cesarean sections were done in rural hospitals and apparently by inexperienced surgeons. In all the patients [Figures 1a-d], the incision scar was ragged and ugly, indicating healing by secondary intention, thus defeating the major goal of the incision, which is cosmesis. None of these patients had concurrent vesico-vaginal fistula (VVF).

Pfannenstiel incision (described by Hermann Johannes Pfannenstiel in 1900) is a low transverse abdominal skin crease surgical incision about 2-3 cm above the pubic symphysis. The rectus abdominis muscles are separated along the linea alba and retracted laterally without cutting.[1,2] It produces an aesthetically more pleasing "bikini-line" scar, thus it is often also called a "bikini-line incision. It is employed to access the pelvic organs including the uterus. Its main advantage is the cosmetic scar it produces which is desirable generally by women. It offers large view of central pelvis but limits exposure to the lateral extent of the pelvis and upper abdomen, a factor that limits its usefulness in gynecologic oncology surgery.[3] The limited access Pfannenstiel incision offers makes it difficult to perform certain pelvic surgeries including emergency cesarean section, especially if the situation is complicated by obstructed labor. In obstructed labor, the fetal head is deep in the pelvis, thus there may be the need to employ a wider incision in the lower segment of the uterus to deliver the fetal head. This may, in the hands of the inexperienced surgeons, poor operative field lighting and inadequate instruments, lead to inadvertent injury to the uterine vessels. In the surgeon's desperate attempt to secure hemostasis, deep stitches are applied blindly with resultant injury or ligation of the pelvic ureter and subsequent development of uretero-vaginal fistula.[4-6] This was probably the case in these patients.

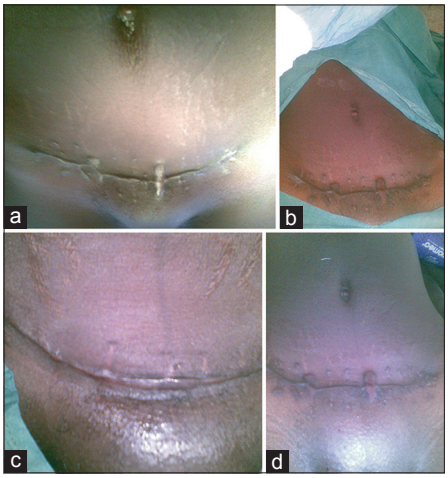

Figure 1: (a-d) Show ragged scars of Pfannenstiel incisions for the four patients

This observation questions the validity of using Pfannenstiel incision for emergency cesarean Section especially in the hands of the less experienced surgeon, as it may increase the risk of ureteric injury and subsequent development of uretero-vaginal fistula. There was no obvious obstetric cause because none of the patients had VVF.

We call for caution in using Pfannenstiel incision as a routine in emergency cesarean section; surgeons should consider safety over aesthetics in choosing the appropriate incision. This is particularly so if the surgeon has limited experience and is working with an inexperienced assistant in a suboptimal operating theatre setting. Training and retraining of medical officers and surgeons must be emphasized to avert this preventable complication.

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