

## Short Communication

# Emergency pelvic packing to control intraoperative bleeding after a Piver type-3 procedure. An unusual way to control gynaecological hemorrhage

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### Summary

We report a case of gynaecologic haemorrhage after a Piver type-3 procedure treated by a packing technique. The postoperative course was uneventful and the packs were removed after six days.

Intra-abdominal packing should be familiar to both obstetricians and gynecologists because when any other attempt to provide hemostasis fails, it can be the last successful way to control a life-threatening haemorrhage.

*Key words:* Pelvic packing; Intraoperative bleeding; Piver type-3 procedure.

To control massive intraoperative bleeding occurring during gynaecological interventions complicated by DIC, the literature suggests packing the operative wound tightly with several laparotomy packs under pressure and then to close the abdomen. Once the patient has become stable in the intensive care unit and blood volume replacement has occurred, the patient may be returned to the operating room and the packs removed sequentially.

We report a case of P.A., a 72-year-old woman who underwent a Piver 3-type [1] intervention for a Stage IIa (preoperative FIGO stage) cervical cancer in the Gynecology Department of Fatebenefratelli Isola Tiberina Hospital on February 13, 2002.

The intervention took two hours and 20 minutes and was difficult to perform because of continuous bleeding which occurred from the removal of some internal iliac lymph nodes. Time was needed to control the intraoperative haemorrhage and the overall blood loss was 1200 ml.

After five hours the patient's clinical condition appeared to be progressively worsening and intra-abdominal bleeding was suspected: red blood cells (RBC), platelets (PLTS) and hemoglobin (Hgb) were dramatically decreased, the coagulation frame was significantly altered and a pelvic ultrasound scan detected a great amount of blood in the peritoneum. The patient was immediately returned to the operating room where the senior author (E.C.) again checked all the previous ligatures. DIC occurred and haemorrhage was massive and prolonged, coming from everywhere. The more we tried to control it (with sutures and clips) the more the blood increased in the operative field.

Blood replacement was undertaken with eight fresh units intraoperatively and with plasma and anti-thrombin administration.

Bilateral hypogastric ligation was performed but, despite that procedure, haemorrhage did not seem to decrease.

After 1.5 hours of attempts, five large laparotomy sponges were left packed in the abdomen, covering the pelvis and the iliac vessels under pressure. After packing was performed and the abdominal wall closed, the patient was returned to the intensive care unit where another five units of blood were replaced in five days.

The patient's hemodynamic pattern was progressively more stable and six days later the packs were removed sequentially with a new intervention. The residual bleeding sources were visible and closed with clips.

Cervical epidermoidal cancer was postoperatively diagnosed in FIGO Stage III (T3b-N1-G2), with both the internal iliac lymph-node chains affected by metastases.

The patient was discharged from the hospital 12 days after the first operation.

The use of temporary packing to obtain hemostasis has been proposed for traumatic surgical procedures in the upper abdominal area to control haemorrhage resulting from hepatic injuries [2], and also after penetrating trauma [3] or after pelvic ring disruption.

Few reports are available in the literature regarding the effectiveness of packing during gynaecological operations. Gyamfi *et al.* recently identified 12 cases of intra-abdominal packing at the time of celiotomy for gynaecological or obstetrical pathology. All had DIC. The sponges (from 8 to 13) remained in the abdomen for a maximum of 59 days. The mortality rate was 1/6 [4].

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Packing has also been proposed to treat bleeding occurring after sacro-spinous vaginal vault fixation [5]. We are aware of several unpublished cases in which ligation of the internal iliac vessels did not provide a reduction of the haemorrhage. Previously two packing procedures were performed (by E. C.) as an extreme lifesaving measure to treat bleeding due to obstetric difficulties (post-delivery hysterectomies).

In an unstable patient with coagulopathy and diffuse capillary bleeding, packing may be the easiest way to control intra-abdominal bleeding through the simple effect of pressure and tamponade. The patient can be re-explored after a period of stabilization, when a more definitive control of hemostasis can be undertaken by several methods. The source of bleeding can be visible once the packs are removed and the injured portion of the vessels can be detected and isolated. Hemostasis is achieved by surgical ligation, by clips or by selective arterial catheterization and intraluminal embolization if ready access to a fluoroscopy suite is available.

Intra-abdominal packing should be familiar to both obstetricians and gynecologists because when any other attempt to provide hemostasis fails, it can be the last successful way to control a life-threatening haemorrhage.

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