Selective arterial embolization in case of bleeding in advanced cervical cancer

The cervical cancer is accessible to screening and early assessment. The clinical aspects depend on the size of the tumor, its histopathological type and the stage at the moment of the diagnosis. In some cases the symptoms may be absent or very mild. This slow development of the tumors enables us to normally have a correct management plan within a multidisciplinary team (1). Screening for cervical cancer is less frequently performed in developing countries (1). Some tumors are locally advanced and may be responsible of profound hemorrhage, resulting in hypovolemia and hypotension requiring immediate intervention and blood transfusion. The bleeding originating from a large exophytic cervical lesion is usually stopped by a large gauze pad which tamponades the tumor. It is then followed by a flash of external radiotherapy (2). But instead of treating with radiotherapy lesions without a histological confirmation in cases of emergencies, we can propose intra-arterial selective catheterization as a solution to this abrupt onset of profound hemorrhage.

Case reports

Case 1

A 47 year old, married since 17 years, gravida 4, para 4, with no medical history, having a persisting bleeding since two years. She was admitted through the emergency with a frank hemorrhage and hypotensive shock. The examination showed an exophytic bleeding tumor (8 Cm in diameter), acute anemia with hemoglobin to 5 g/dl. A biopsy of the tumor was done followed by a packing and vigorous resuscitation and blood transfusion with 5 units of blood. The patient was taken directly to the radiology suite to undergo arteriography. Emergent aortogram and selective arteriogram of right and left obturator arteries showed irregular tumor vessels at the lateral border of the pelvic (figures 1 a, c). Endovascular management of the irregular tumor vessels was attempted to stop the bleeding. The procedures were performed in the division of radiology of Charles Nicolle hospital in Tunis which is 10 minutes away from the oncology division. The patient was alert at the admission, and had intact mental function. Arterial access was gained by seldinger puncture of the femoral artery .To allow selective access to bleeding vessels 5 French catheters were used (Terumo Europe NV). Pelvic angiography was performed and the tumor bleeding vessels were detected. The embolization was performed with the Gelfoam (curamedical B.V) cut into small segments (approximately 2-3mm) mixed with contrast agents. The Gelfoam emboli were injected and progressive vascular occlusion was monitored fluoroscopically and with control angiography. The post-stenting angiogram showed successful obliteration of right and left obturator arteries: tumor vessels are no longer visible (figures 1 b, d). The procedure,

Figure 1 : (a,c) selective arteriogram of right and left obturator arteries : irregular tumor vessels are seen at the lateral border of the pelvic tumor. (b,d) control angiogram after embolization of right and left obturator arteries: tumor vessels are no longer visible.

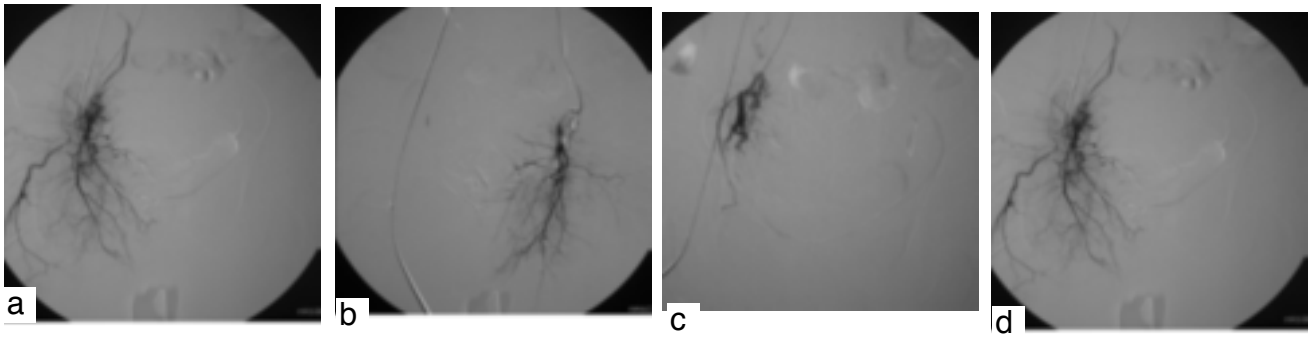
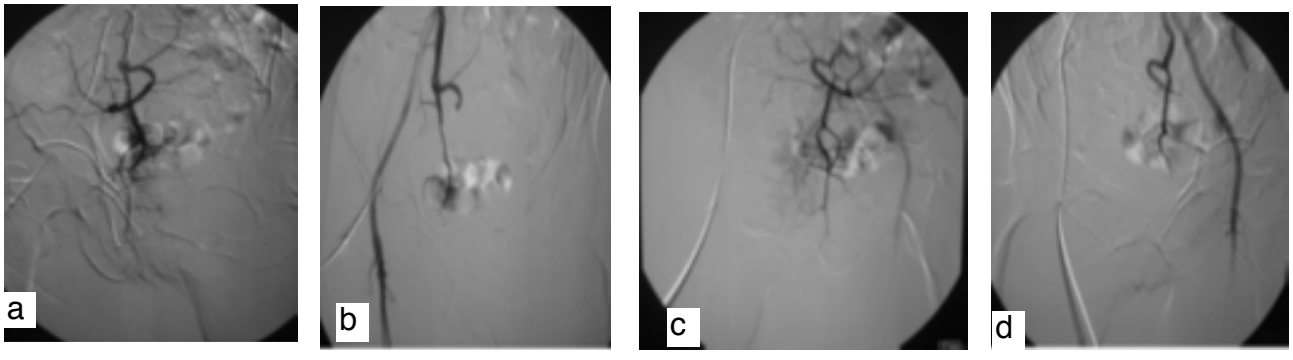


Figure 2 : (a,c) right and left internal arteriogram: note marked staining of the tumor which is fed by both cervicovaginal arteries. (b,d) post embolization angiogram of right and left internal arteries : note the disappearance of stain and tumor vessels



including the diagnostic angiography and stenting, took 1 hour and 15 minutes. The cervical bleeding stopped immediately after stenting, and the patient's hemodynamics became stable. No specific complication related to endovascular covered stent placement could be identified The patient was then readmitted in the oncology division .The histological exam confirmed the cervical squamous cell carcinoma. After an examination under general anesthesia and magnetic resonance imaging, the tumor was classified stage III A (FIGO) with invasion of the lower third of the vagina. The patient received external radiotherapy.

Case 2

An 83 year old patient, married since 50 years, gravida 8, para 8, with no medical history, was admitted through the emergency with a frank hemorrhage and hypotensive shock and a profound anemia with hemoglobin at 4g/dl. The examination showed an exophytic bleeding tumor (6 Cm in diameter). A biopsy of the tumor was done followed by a packing and transfusions with 7 blood units to maintain her hematocrit to a correct level. The patient was taken directly to the radiology suite to undergo arteriography. The angiography was performed and an extravasation from the right uterine artery was noted. Embolization was carried out and the bleeding stopped completely. The patient's hemodynamics became stable. Arterial access was gained by seldinger puncture of the femoral artery .To allow selective access to bleeding vessels 5 French catheters were used (Terumo Europe NV). Pelvic angiography was performed and the tumor bleeding vessels were detected. The embolization was performed with the Gelfoam (curamedical B.V) cut into small segments (approximately 2-3mm) mixed with contrast agents. The Gelfoam emboli were injected and progressive vascular occlusion was monitored fluoroscopically and with control angiography. The procedure, including the diagnostic angiography and stenting, took 1 hour. The biopsy, concluded 3 days later to an adenocarcinoma.
After an examination under general anesthesia and magnetic resonance imaging, the tumor was classified stage II B (FIGO). The patient received concurrent chemoradiation, and then salvage total abdominal hysterectomy with bilateral salpingo-oophorectomie was performed due to persistent disease.

Case 3

A 58 year old patient, gravida 6, para 6, having diabetes since 7 years, was admitted to explore post menopausal bleeding. The examination of the cervix showed an exophytic lesion (6 Cm in diameter) which was biopsied. The histological result was an infiltrant epidermoid carcinoma. The carcinoma was classified III B with invasion of the pelvic wall by magnetic resonance imaging and an examination under general anesthesia. Two weeks after the patient was admitted in emergency for heavy bleeding. Although cardiopulmonary resuscitation and massive blood transfusion with 10 units of whole blood were given, the patient remained unconscious and in a state of shock. An emergent angiography was performed and an extravasation from both cervico vaginal vessels was noted (Figures 2 a, c) and embolization was indicated immediately. The post-stenting angiogram notes the disappearance of stain and tumor vessels (figures 2 b, d). Arterial access was gained by seldinger puncture of the femoral artery .To allow selective access to bleeding vessels 5 French catheters were used (Terumo Europe NV). Pelvic angiography was performed and the tumor bleeding vessels were detected. The embolization was performed with the Gelfoam (curamedical B.V) cut into small segments (approximately 2-3mm) mixed with contrast agents. The Gelfoam emboli were injected and progressive vascular occlusion was monitored fluoroscopically and with control angiography. The whole procedure, including the diagnostic angiography and stenting, took 1 hour and 45 minutes. The cervical bleeding stopped after stenting, and the patient's hemodynamics became stable. She was extubated after 2 days. No specific complication related to endovascular covered stent placement could be identified. The patient was sent for radiotherapy after stabilization of her status.

Conclusion

Trans catheter arterial embolization of pelvic vessels is an effective method to decrease or cease heavy bleeding due to advanced cervical cancers. Hemorrhage can be controlled using local anesthesia with minimal morbidity particularly when dealing with terminal patients. It has been also suggested to control pain and in reducing tumor vascularity prior to surgery.

References

(1) P.O. Witteveen, M.J. Verhaar, I.M. Jurgenliemk-Schulz, M.A. van Eijkeren. Update on the treatment of advanced cervical cancer. Oncol Hematol. 2002;43: 245–56.
(2) P. Sobiczewski, M. Bidzinski, P. Derlatka. Laparoscopic Ligature of the Hypogastric Artery in the Case of Bleeding in Advanced Cervical Cancer. Gynecol Oncol. 2002; 84:344–48.

Zeghal Souki Dorra, Touhami Omar*, Rajhi Hatem**, Ben Hmid Rim*, Zouari faouzia*, Mnif Nejla**, Mahjoub Sami**

** University Tunis El Manar, Faculty of Medicine of Tunis, Center of maternity and neonatology, Department « C » of obstetrics and gynecology, Tunis, Tunisia*
*** University Tunis El Manar, Faculty of Medicine of Tunis, Charles Nicolle Hospital, Department of radiology, Tunis, Tunisia*

Traitement endovasculaire d'un anévrisme de l'aorte abdominale secondaire à la maladie de Behcet

Les anévrismes aortiques représentent la complication la plus grave et la plus létale au cours de la maladie de Behçet. Leur traitement est classiquement chirurgical et repose sur la résection anévrismale avec interposition d'un tube prothétique [1]. La mortalité opératoire reste toutefois élevée et varie de 10% à 30% [2]. La morbidité est dominée par les complications anastomotiques (lâchage précoce des sutures et les faux anévrismes anastomotiques) qui sont rapportés avec des taux variant de 30% à 50% des cas malgré les différentes précautions péri opératoires [3] et l'association d'un traitement médical à base de corticoïdes et d'immunosuppresseurs. Avec le