OUTCOME OF INTERNAL HEMIPELVECTOMY IN A PATIENT WITH MULTIPLE MYELOMA - CASE REPORT

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OUTCOME OF INTERNAL HEMIPELVECTOMY IN A PATIENT WITH MULTIPLE MYELOMA: CASE REPORT (Abstract). A patient treated for thyroid cancer was diagnosed with multiple myeloma in the context of trauma. After the pelvic tumor devascularization she underwent internal hemipelvectomy Type I + IIA Enneking Classification using polymerizing bioneutral gel embolization, "Glubran 2". The purpose of this case report is to demonstrate the importance of careful selection of treatment methods, together with adequate physical therapy in order to obtain favorable long-term results. **Keywords**: HEMIPELVECTOMY, MYELOMA, RECOVERY.

Internal hemipelvectomy is a surgical limb-sparing procedure used to treat malignant tumors of the pelvic ring. The most commonly used classification for hemipelvectomy is that by Enneking classification (1, 2), which distinguishes 4 types depending on the anatomical components removed, combinations of different types being also possible. We report the case of a female patient with multiple myeloma in association with multiple malignancies (3),who underwent Enneking Type I+IIA internal hemipelvectomy on January 21, 2008. The importance of adjuvant treatments and rehabilitation methods on patient outcome is discussed.

CASE REPORT

Patient E.G., 47-year-old female, was diagnosed on October 25, 2004 with nodular goiter and underwent surgical removal of the thyroid tumor. On April 13, 2007, the patient suffered an injury by falling from a height of about 1m with impact on the right hemipelvis. At physical and radiological examination a massive tumor involving the entire right iliac fossa was detected. The tumor was highly vascularized and its extra-compartmental component was displacing the iliac muscle together with the adjacent arteriovenous vascular groups.

On June 15, 2007 an angiography was performed. It detected a tumor occupying the right iliac fossa, highly vascularized, receiving blood supply from emerging vessels from right hypogastric artery and right lumbar artery IV. Tumor embolization was performed using Glubran 2, a bioneutral polymerizing gel,a total tumor devascularization being obtained (figs. 1, 2). On January 21, 2008, after a surgical biopsy was performed, the patient was diagnosed with myeloma. On the same day, the patient un-

derwent internal hemipelvectomy type I (iliac radical resection with gluteal muscles and sciatic nerve preservation) and IIA (excision of the whole acetabulum), according to Enneking classification (fig. 3).

The resection of the right hemipelvis was performed with the following margins 17x16x10 cm, together with the collection of a tumor mass measuring 11x10x9cm, which was consisting of translucent yellow-brown bulky tissue.

Macroscopically, the tumor occupied a part of the iliac fossa, expanding beyond the cortical component to the surrounding soft tissues and reaching the sacroiliac resection edge.

Microscopically, the osteomedullary tissue was infiltrated with a population of plasma cells. Rapid tests, together with immunohistochemistry studies confirmed the diagnosis of myeloma.

After surgery a rehabilitation program was initiated. After the removal of suture threads, 20 days after surgery, the patient was started on active and passive range-of-motion hip mobilization pool exercises. With the aid of two crutches, the patient resumed walking with left leg weight bearing and right leg in flexion up to 60 degrees, considering the possible risks of early right hip mobilization. A strengthening exercise program for gluteal and right thigh muscles was also started. Forty days after surgery, the patient began the progressive weight bearing on the affected limb. One year after surgery the patient started to walk without using any equipment. The patient presents a leg shortening of 8.7 cm together with a limitation of rotation movements. Up to now, the patient did not present any complication, did not require administration of analgesics, and has already exceeded the average survival rate, seven years after surgery.

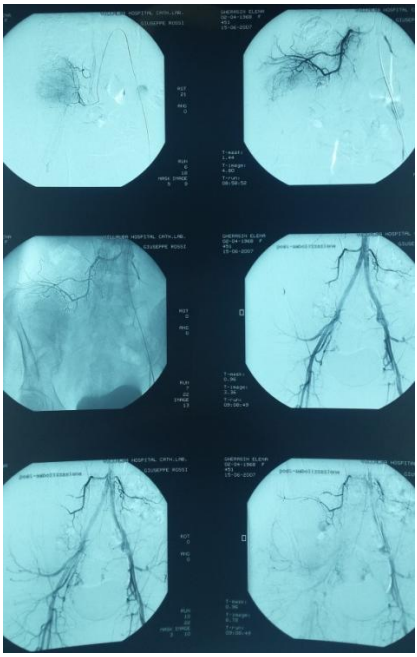

Fig 1- Angiography showing tumor blood supply

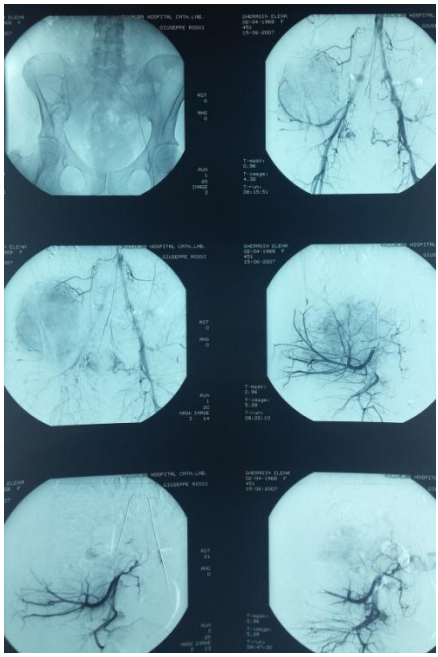

Fig 2 – Embolization using Glubran 2 gel

Fig. 3. Internal Hemipelvectomy type I+IIA Enneking

DISCUSSION

Oliveira et al. (1) state that with adequate physical therapy patients who undergo internal hemipelvectomy without further reconstruction may walk again after the pelvic fibrous plaque forms in about 1-3 months after surgery. Our patient did so 40 days after surgery. She showed no recurrences or complications, a satisfactory functional outcome and a favorable long-term prognosis, which demonstrated a pattern of myeloma evolution after internal hemipelvectomy similar to that of other types of malignancies reported in the literature (1, 2, 4, 5). The patient does not require any pain medication unlike the patients who undergo amputation, is in good psychological state and socially integrated, results in agreement with previous studies (2, 4, 5).

CONCLUSIONS

In our patient, internal hemipelvectomy was the treatment option that spared the affected limb and avoided amputation, which is a traumatic radical alternative. Our particular case demonstrates a good functional recovery, regaining the ability to walk independently. The lack of complications and recurrences confirms the appropriate therapeutic selection. Indications for reconstruction should be reconsidered and individualized in order to achieve a long-term survival at the cost of weaker functionality.

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