EJGO European Journal of Gynaecological Oncology

Case Report

The endoscopic therapy of infant vaginal embryonal rhabdomyosarcoma: a case report

Y.H. Wang[1,2], J.M. Gong[2,3], Q. Tian[2,3], G. Shi[1,2], J.Y. Ruan[1,2]

[1]Department of Obstetrics and Gynecology, West China Second Hospital, Sichuan University, Renmin South Road,Chengdu,
[2]Key Laboratory of Birth defects and Related Diseases of Women and Children (Sichuan University), Ministry of Education, Chengdu
[3]Department of Operating Room, West China Second Hospital, Sichuan University, Renmin South Road, Chengdu (China)

Summary

A two-year-old girl was admitted because of vaginal embryonal rhabdomyosarcoma (RMS) II. After five cycles of chemotherapy, the authors completely resected the tumor in the vagina by endoscopic surgery.

Key words: Vaginal embryonal rhabdomyosarcoma; Treatment; Infant.

Introduction

Rhabdomyosarcoma (RMS) is malignant tumor which originates from embryonic mesenchymal tissue. The surgical treatment of infant vaginal embryonal RMS is usually difficult because of the narrow area. The endoscope is a good instrument to resect the tumor in the vagina of infant.

Case Report

A two-year-old girl was admitted to West China Second Hospital, Sichuan University because of vaginal bleeding. Physical exam showed there was a botryoid tumor in the vagina (Figure 1). CT image showed that the diameter of the tumor was about 6 cm. Biopsy confirmed a botryoid sarcoma (embryonal RMS). The diagnosis was vaginal embryonal RMS II. Because the tumor was large, five cycles of chemotherapy were given to the patient. After chemotherapy, the tumor became smaller. CT image showed that the diameter of the tumor was about 1 cm. Then the authors decided to resect the vaginal tumor by hysteroscope. After general anesthesia, the authors began to explore the vagina. There was a botryoid tumor of about 0.5 cm at the top of the vagina and another one of about 1 cm at the left side of vagina (Figures 2, 3). The authors used bipolar electric loop to resect the tumor completely (Figure 4). Postoperatively, there was no residual tumor (Figure 5). The operation lasted 40 minutes and bleeding amounted to 20 ml. At one month postoperatively, the patient accepted a sixth cycle of chemotherapy. Follow up at six months confirmed that there was no recurrence of the tumor in the vagina.

Discussion

The most common lesion location of RMS is head and neck. The next is urogenital system, limbs, and retroperitoneum [1]. Treatment of RMS is a comprehensive system which includes operation, chemotherapy, and radiotherapy. The five-year survival rate has been improved obviously with the development of treatment and technology [2]. Operation played a very important role in the local control. The radical remove of primary tumor can improve the survival rate [3].

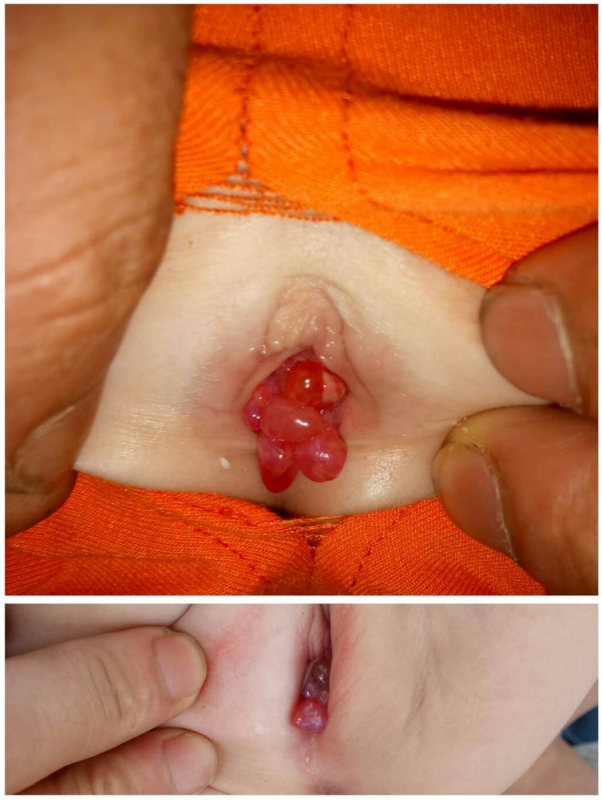

Figure 1. — The tumor in the vagina before treatment.

Published: 15 February 2020

Eur. J. Gynaecol. Oncol. - ISSN: 0392-2936
XLI , n. 1, 2020
doi: 10.31083/j.ejgo.2020.01.4867

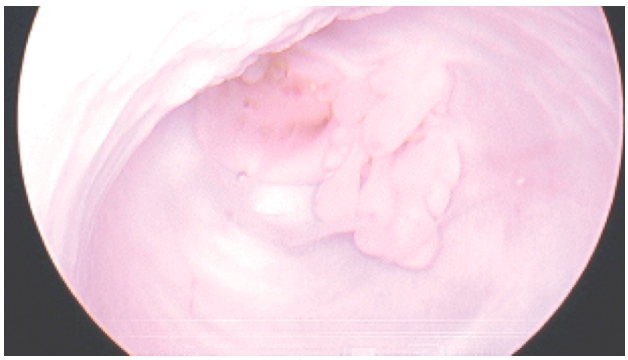

Figure 2. — The tumor at the top of the vagina.

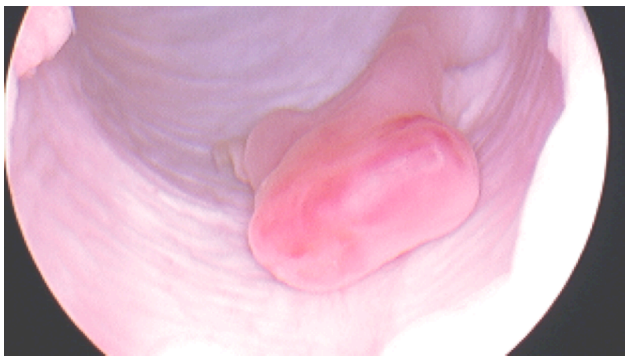

Figure 3. — The tumor at the left side of vagina.

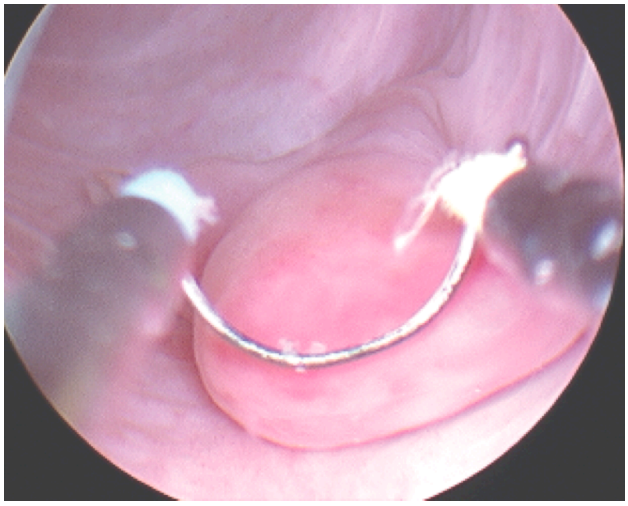

Figure 4. — The bipolar electric loop is used to remove the tumor.

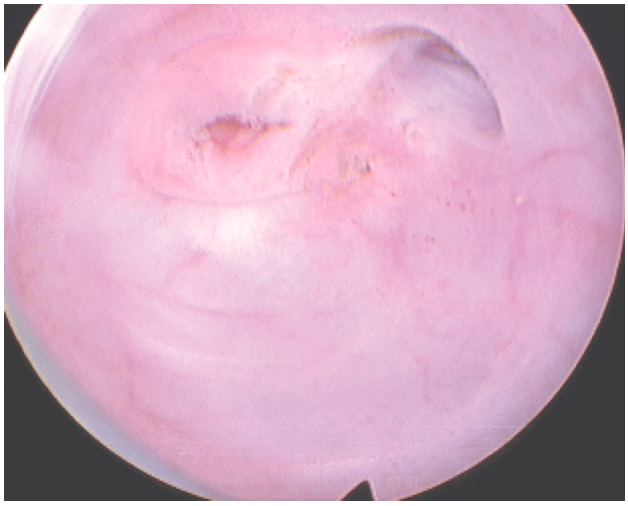

Figure 5. — The tumor in the vagina is completely resected.

The survival rate is closely related to the residual tumor [4, 5]. The prognosis of the patient whose tumor can be completely removed is better than the prognosis of the patient whose tumor cannot be completely removed, but if the tumor is too large, surgical excision will increase the disability and recurrence rates. Chemotherapy and radiotherapy before the operation can improve the resection rate and decrease disability, recurrence, and metastasis rates. This comprehensive treatment will improve the prognosis. Because the vagina of infant was very narrow, it was difficult to resect the tumor. Endoscopic surgery is minimally invasive and visible and includes a resection and electric coagulation function. Therefore, the tumor in the vagina can be resected accurately, completely, and quickly. The risk of injury is greatly decreased. Endoscopic surgery has an obvious advantage in resecting vaginal embryonal RMS in infants.

References

[1] Raney RB, Anderson JR, Barr FG, Donaldson SS, Pappo AS, Qualman SJ, et al: Rhabdomyosarcoma and undifferentiated sarcoma in the first two decades of life: a selective review of intergroup rhabdomyosarcoma study group experience and rationale for Intergroup Rhabdomyosarcoma Study V. *J. Pediatr. Hematol. Oncol.* 2001, *23*, 215-220.

[2] Malempati S, Hawkins DS: Rhabdomyosarcoma: review of the Children's Oncology Group (COG) Soft-Tissue Sarcoma Committee experience and rationale for current COG studies. *Pediatr. Blood. Cancer.* 2012, *59*. 5-10.

[3] Leaphart C, Rodeberg D: Pediatric surgical oncology: management of rhabdomyosarcoma. *Surg. Oncol.* 2007, *16*, 173-185.

[4] Daya H, Chan HS, Sirkin W, Forte V: Pediatric rhabdomyosarcoma of the head and neck: is there a place for surgical management? *Arch. Otolaryngol. Head. Neck. Surg.* 2000, *126*, 468-472.

[5] Maurer HM, Gehan EA, Beltangady M, ,Crist W, Dickman PS, Donaldson SS, Fryer C, Hammond D, Hays DM, Herrmann J, et al.: The Intergroup Rhabdomyosarcoma Study-II. *Cancer.* 1993, *71,* 1904-1922.

Corresponding Author:
JIAYING RUAN M.D.
Department of Obstetrics and Gynecology,
West China Second Hospital, Sichuan University
Renmin South Road
Chengdu, 610041 (China)
e-mail: 13980079129@163.com