Congenital polypoid mass protruding from vagina

Sir,

Any polypoid mass from vagina must be regarded as malignant until proved otherwise. The diagnosis should be confirmed by biopsy of the tumor. A 3-month-old female child presented with slow growing mass protruding from the vaginal orifice since birth. On examination, a soft, pinkish, grape like polypoid mass was protruding from the vagina without bleeding. There was no history of hematuria, urinary retention and constipation. Rest of the systemic examination was within the normal limits. Renal function test, hematological profile, urinary examination, chest X-ray, ultrasound abdomen and kidneys, ureters, bladder were normal. Wide local excision of the mass was done. Intra-operatively the mass was found to be arising from the posterior vaginal wall. Histology [Figure 1] revealed stratified squamous epithelium (vaginal mucosa), with sub-epithelial tumor cells in a background of fairly dense myxomatous stroma. The individual tumor cells are round to oval along with few spindle cells. Immunohistochemical stain showed strap cells immunopositive for desmin. All the margins of the excised mass were negative for the tumor cells. A diagnosis of Stage I, Group I sarcoma botryoides was made. Post-operative, 12 courses of combination chemotherapy, i.e. vincristine, actinomycin D and cyclophosphamide was given. Radiotherapy was not used. The child was followed-up regularly. Local examination of perineum was done every monthly for first 6 months and then every 3 monthly. Ultrasound abdomen, pelvis and X-ray chest was done every 3 monthly for 1st year and then every 6 monthly. She was well at last follow-up at the age of 3 years.

Sarcoma botryoides is a rare, but most frequent malignant tumor of the uterus or vagina in children. Common presentation includes an asymptomatic mass protruding per vagina with or without painless bleeding. Characteristic polypoid edematous mass distends the vagina and projects externally like a cluster of white grapes. They often mimic vaginal polyps by their gross as well as histopathological appearance. The histologic diagnosis of former is based upon the presence of primitive neoplastic mesenchymal cells, a subepithelial “cambium” cell layer, invasion of the epithelium by neoplastic cells and rhabdomyoblasts, none of which are found in vaginal polyps. Treatment includes surgical resection and chemotherapy. New multidrug chemotherapy regimens with or without radiation therapy are now used in combination with less radical surgery with good results, although outcome data are not yet available. Benign cervico-vaginal polyps in early childhood are extremely rare and any polypoid mass must be regarded as sarcoma botryoides until disproved. The initial innocent clinical features along with benign histological appearance should not be misleading. The tumor is highly malignant, with a marked tendency to recur locally after excision and to invade adjacent organs. The diagnosis must be confirmed by biopsy of the tumor and treatment includes wide local excision (margin free from the tumor) and chemotherapy with or without radiotherapy.

Shasanka Shekhar Panda, Rashmi Ranjan Das¹, Pankaj Kumar Mohanty², Saumyaranjan Mallick³
Departments of Pediatric Surgery, and ³Pathology, All India Institute of Medical Sciences, New Delhi, ¹Department of Pediatrics, All India Institute of Medical Sciences, Bhubaneswar, Odisha, ²Department of Neonatology, Manipal Hospital, Bengaluru, Karnataka, India

Correspondence to: Dr. Rashmi Ranjan Das, Department of Paediatrics, All India Institute of Medical Sciences, Bhubaneswar - 751 019, Odisha, India. E-mail: rrdas05@gmail.com

REFERENCES
2. Matsuura Y, Kashimura M, Hatanaka K, Toki N, Sugihara K. Sarcoma...
Letters to the Editor


Sir,

Recently, I read a review article “volumetric intensity modulated arc therapy in lung cancer: Current literature review” [1] published in Clinical Cancer Investigation Journal. The article does an excellent job on summarizing the latest techniques for the lung cancer treatment in the field of radiation therapy. The review article mentions that treatment planning results from different studies may not have common agreement; however, volumetric modulated arc therapy (VMAT) has a shorter treatment delivery time than the intensity modulated radiation therapy (IMRT). Shorter treatment time with the VMAT will make it more patient friendly when compared to the treatment with the IMRT.

The majority of the studies summarized in the review article [1] included the treatment plans computed by the convolution/superposition algorithms. Since lung treatment plan typically involves the low-density tissue, it is necessary to have accurate dose calculation algorithms, which will take into tissue heterogeneity corrections. However, due to the limitation in the beam modeling, it has been reported that convolution/superposition algorithms could produce errors when there is an involvement of low-density medium in the beam path. [2-4]

If the tissue heterogeneity is not accounted properly, then there is a possibility of delivering either more dose to the normal tissues or less dose to the tumor. Such conditions could lead to undesired patient treatment outcome, and that would defeat the purpose of radiation therapy for cancer.

An ideal dose calculation algorithm for the lung plans would be Monte Carlo (MC); however, due to their long computing time, it is not feasible to use the MC for the dose calculations on a daily basis in the clinic. With an aim of improving the accuracy of dose calculations along with the faster computing power, a new algorithm called Acuros XB, which is based on MC approach, has been made commercially available in radiation therapy. [3,4]

Researchers have found that Acuros XB is more appropriate for dose calculations that other convolution/superposition algorithms such as analytical anisotropic algorithm, collapsed cone convolution superposition, and pencil beam convolution. [3,4]

Since more advanced dose calculation algorithm like Acuros XB is now available, one should try to limit the use of inaccurate dose calculation algorithms for the dose calculations in the lung treatment plans in order to ensure the patient safety and improve the accuracy of radiation therapy. In addition to optimizing the plans using dose-volume parameters, one should also try to include the radiobiological modeling in the treatment optimization, [5]

Tamu Syed
Post Graduate Studies, Technical University of Malaysia, Melaka, Malacca, Malaysia.

Correspondence to:
Mr. Tamu Syed, Universiti Teknikal Malaysia Melaka, Malacca, Malaysia.
E‑mail: tms29@hotmail.com

REFERENCES


