A Case of Amelanotic Malignant Melanoma of the Female Urethra

KIMIO SUGAYA, M.D., TSUNETADA YAZAKI, M.D., SATORU ISHIKAWA, M.D. AND SHORI KANOH, M.D.
Department of Urology, Institute of Clinical Medicine,
the University of Tsukuba, Ibaraki

Abstract

We report a case of amelanotic malignant melanoma of the female urethra. The clinical course was unusually long and complicated by asynchronous resectable metastases to the lung and the brain. The patient died of generalized metastasis in spite of successful resection of the metastatic lesions and post-operative chemotherapy, two years and five months after the first presentation. To the best of our knowledge this is the second reported case of amelanotic melanoma in the female urethra.

Introduction

Primary malignant melanoma of the female urethra is a rare entity. Amelanotic malignant melanoma is also a very rare type of malignant melanoma comprising approximately only 2% of all malignant melanoma combined (Huvos et al., 1972; Ariel, 1981). We report a case of amelanotic malignant melanoma of the female urethra having an unusually long clinical course, two years and five months from the first presentation to death during the third hospitalization.

Case Report

First Admission

A 53-year-old female was referred by a gynecologist on March 22, 1977, because of a urethral mass which had been noted a month before her presentation. Her past history was non-contributory. A pinkish, smooth and painless mass, approximately the size of the tip of the little finger, was seen in the right lateral wall of the external meatus (Fig. 1). Two painless nodules were palpated in the right inguinal region. Laboratory examination revealed a slightly accelerated erythrocyte sedimentation rate (ESR) and a moderately decreased red cell count. Urinalysis was unremarkable. An excretory urogram (IVP) was normal. After blood replacement, resection of the urethral tumor and lymph node biopsy in the right groin were performed on April 5.

Pathologically, the tumor was diffusely infiltrating into the dermis. The neoplastic cells were arranged in an alveolar fashion in some areas and had large ovoid nuclei but had no granules in the cytoplasm. There were some giant cells containing nuclei with abundant multilobulated hyperchromatin (Fig. 2). Some neoplastic cells which were shown by Masson-Fortanna’s staining technique to contain pigment were suspected of being melanocyte (Fig. 3). Similar histological findings were seen in the resected lymph nodes. Consequently amelanotic malignant melanoma of the urethra (epithelioid cell type) with lymph node metastasis was di-
March of 1979. Vaginal examination revealed a fixed mass, more than a fist in size, in the right pelvic wall. The patient was admitted again on May 7. Routine examination on admission revealed no marked change. Computed tomography scan was performed because a slight degree of disturbance of consciousness was noted. Brain metastasis in the left occipital region was suspected. Craniotomy and removal of a mass was carried out on June 14. The resected tumor was yellowish gray, partly necrotic and fragile. The pathological finding was amelanotic melanoma.

Postoperative Ga scan revealed abnormally high uptake of the injected isotope in the left lobe of the liver and the right pelvic region, indicating metastasis. Gradually the condition of the patient deteriorated with the presence of ascites and oliguria. The patient died of generalized metastasis, including metastasis to the liver and the pelvic region, on August 21, 2 yr and 5 mo after the first visit to this department.

Discussion

Yoshimoto et al. (1979) collected 41 cases of primary urethral melanoma in females from the world literature. Only three of them were from the Japanese literature. Godec et al. (1981) reported the 42nd case, in which the presence of melanin could be detected in the primary lesion by microscopy; however a modicum of melanin was seen in the metastatic nodes by electron microscopy.

Amelanotic melanoma is said to be present when the lesion is neither black nor dark gray (Ishihara, 1979). We think the case reported by Godec et al., although there was no macroscopic description of the lesion, was the first reported case of amelanotic melanoma of the female urethra. Our case was diagnosed as amelanotic melanoma by inspection and histology. Therefore ours is thought to be the second case.

Regarding the procedures for diagnosing amelanotic malignant melanoma, Shah (1975) suggested the necessity for prompt biopsy of the lesion when there is either an elevated pinkish papule, non-pigmented progressive induration or a nonhealing ulcer in the primary lesion. These macroscopic findings are said to be characteristic of amelanotic melanoma. Biopsy of the melanoma is usually contraindicated because of the acceleration of the metastasis. When amelanotic melanoma is diagnosed by biopsy, surgery should be instituted promptly.

Godec et al. (1981) stated that electron microscopic examination is indispensable because the lesion is taken for an undifferentiated malignant tumor when melanin granules cannot be found microscopically. Electron microscopy of amelanotic melanoma reveals a well-developed Golgi apparatus and a rough endoplasmic reticulum but no typical melanin granules (Takahashi et al., 1980). There are also abundant vacuoles with a non-cyclic helical membrane structure near the Golgi apparatus and premelanosomes in an early stage. Microscopic examination of the specimen from our case revealed a few melanin granules. To our regret, however, electron microscopic examination was not performed.

The therapy for the amelanotic type of melanoma is the same as for pigmented melanoma. According to Huvos et al. (1972), the prognosis for the amelanotic type in terms of 5-yr-survival rate is similar to that for the pigmented type (71% for amelanotic type) in stage I disease, whereas the prognosis is different (15% for amelanotic type and 42% for pigmented type) in stage II disease. The reasons for the different survival rates in stage II disease are that the amelanotic type is much less differentiated and has a tendency toward much more pronounced proliferation and that it is difficult to diagnose accurately in its early stage because of its uncharacteristic appearance. The following study also shows that malignant melanoma can metastasize to any organs in its early stage. The metastatic sites in 17 autopsy cases of malignant melanoma (Ishi-
hara, 1979) were regional nodes 100%, lung 82%, liver and bone 70.5% each, heart 64.5%, adrenals 59%, kidney 47%, brain 43% and less frequently other organs.

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References