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LETTER TO THE EDITOR

Reply: mixed germ cell sex cord-stromal tumors of the testis and ovary

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Dear Editor:

We read with interest the article by Michal et al. [1] describing seven cases of "mixed germ cell sex cord-stromal tumor" of the ovary and testis. Their observations concerning fundamental differences in the nature of this "entity" in the two gonads are in line with our experience. They described morphological, histochemical, and immunohistochemical differences in the germ cell components of the testicular and ovarian cases, noting that, in the testicular cases, the germ cells lacked the "squared-off" cytomorphology of germinoma cells and failed to stain with periodic acid-Schiff and with antibodies directed against the usual markers of neoplastic germ cells (placental alkaline phosphatase, c-kit, and OCT4). These findings contrasted with the germ cell component of the ovarian lesions, which also demonstrated 12p amplification in one case.

The testicular lesions the authors described are similar, if not, in some cases, identical to those we previously reported [2]. We are puzzled, however, by the conclusion of the authors that the testicular lesions are mixed tumors having both neoplastic germ cells and neoplastic sex cord-stromal components. The negative results mentioned above are a powerful argument against the germ cell component being neoplastic; the authors, realizing this contradiction, then hypothesized that the germ cell component is analogous to the germ cells of spermatocytic seminomas. However, convincing evidence to support their hypothesis is not presented. Furthermore, the ages of their patients, averaging 34 years, were similar to the mean of 26 years in our cases, and not what would be expected in a series of tumors related to spermatocytic seminoma. In our cases, we did not identify the "spireme" chromatin characteristic of spermatocytic seminoma, nor did the authors mention this finding in their series.

The authors stated that their cases had "no areas in which the germ cells resembled entrapped cells within testicular tubules or within a sex cord-stromal tumor." They do not, however, provide any actual evidence to support this contention, and in our opinion, no aspect of the appearance of the tumors excludes the possibility of entrapped germ cells in a sex cord-stromal tumor. We do not regard the lack of recognizable tubular configurations of the germ cells as good evidence against entrapment because several of our cases also lacked this finding but had widely scattered germ cells. Still others in our series had foci with tubular-like groupings as well as individually dispersed germ cells throughout the neoplasm. The authors imply that the appearance of the germ cells as "integral" to the tumor means they were not entrapped, but our experience with cases having both widely dispersed individual germ cells as well as tubular groupings of them contradicts this notion. The occurrence of AE1/AE3 cytokeratin expression in the germ cell component of one of their three testicular cases is of interest but could represent a tumor-induced change in

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nonneoplastic germ cells and, furthermore, was seen in a minority.

In summary, we congratulate the authors on their careful study, but we feel that their conclusions regarding the neoplastic nature of the germ cell component in their testicular cases are not supported by their data. In our opinion, their study not only does not provide objective evidence to rebut our conclusion that these cases represent sex cord-stromal tumors with entrapped, nonneoplastic germ cells but indeed also supports this idea.

References

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