stable. Two patients developed renovascular hypertension, but these patients had vascular repair instead of kidney removal.

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PATHOLOGY

Current practice of diagnosis and reporting of PIN and glandular atypia among genitourinary (GU) pathologists

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Background: Although there is a sizable body of literature relating to PIN and atypical glands suspicious for cancer, many areas remain unresolved and practice patterns are varied.

Design: A questionnaire was sent to 93 GU pathologists in countries around the world with the purpose to survey current practices of diagnosing and reporting prostate needle biopsies with PIN and atypia.

Results: The response rate was 69%. The term PIN was universally acknowledged for preneoplastic lesions. However, if cytological or architectural atypia were pronounced, 44% would use intraductal carcinoma.

PIN was graded by 83%, usually as low/high grade PIN (LGPIN/HGPIN) or, more commonly, as HGPIN only. Lesions that may qualify for LGPIN were never mentioned (58%) or only rarely mentioned in the descriptive part of the report (25%). Architectural patterns of PIN were usually not specified (81%) and those who specified never commented on their significance. The majority (75%) did not comment that HGPIN is premalignant and 63% would not recommend a repeat biopsy. With invasive cancer also present, 69% would still mention HGPIN. Basal cell stains were used in <5% of HGPIN cases (67%). HGPIN would be diagnosed by 56% in the absence of prominent nucleoli, most commonly based on prominent pleomorphism (53%), marked hyperchromasia (47%) or mitotic figures (28%). Among diagnostic criteria for HGPIN were different degrees of nucleolar prominence (52%), or nucleoli seen in at least 10% of cells (33%). Number of cores involved with HGPIN was specified by half of the respondents.

Lesions suspicious for but not diagnostic of carcinoma were reported as ASAP (47%) or atypia/atypical glands/suspicious (48%). Degree of suspicion of cancer in atypical acinar lesions was defined by 41%. Only 34% always recommended repeat biopsy, while 30% would do it depending on referring doctor and 13% depending on patient age.

Conclusions: For controversial areas relating to PIN and atypical glands, our survey provides information to general pathologists about how GU pathologists deal with these issues.

Editorial Comment

This is a timely topic for the urologists on how pathologists report PIN and ASAP. Atypical prostate epithelium was described as early as 1926 (1). Since then the lesion was referred as atypical hyperplasia, atypical lesions, dysplastic lesions, intraductal dysplasia, carcinoma in situ and premalignant lesion among many other denominations. In 1989 (2) , during an international workshop sponsored by the American Cancer

Society in Bethesda, Maryland, in order to unifying such diverse names, it was suggested that the best denomination for such lesions would be prostatic intraepithelial neoplasia (PIN). In 1987, Bostwick & Brawer (3) had described 3 histologic grades for PIN. In the workshop of 1989 it was suggested to refer to grade 1 as low-grade PIN and to grades 2 and 3 as high-grade PIN. Most pathologists do not report grade 1 (low-grade) PIN. The main reasons are: 1) there is a lack of reproducibility in its diagnosis (4); and, 2) the finding of low-grade PIN on needle biopsy does not confer an increased likelihood of finding prostate cancer in a given individual on subsequent biopsy (5).

The term atypical small acinar proliferation (ASAP) has been proposed for lesions that contain insufficient cytological or architectural atypia to establish a definitive diagnosis of cancer (6). According to Iczkowski et al. (6) the major causes for the report of ASAP are: 1) small size of the focus (70% of cases); disappearance on step levels (61%); and, 3) lack of significant cytologic abnormalities. It is very important for the urologist to understand that ASAP is not an entity. The term atypical small acinar proliferation may be misunderstood as adenosis, PIN or other conditions. In order to avoid this problem and considering that ASAP is an indication for rebiopsy, I have advised the pathologists to use the term suspicious but not diagnostic for adenocarcinoma instead of ASAP.

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Differences in clinical outcome between primary Gleason grades 3 and 4: an analysis of 228 patients with a pathological Gleason score 7

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Background: In radical prostatectomy specimens, Gleason score 7 is among the most commonly assigned scores to prostate carcinoma accounting for 30-50% of the cases. Gleason score 7 is different from other more differentiated prostate carcinomas (tumors of Gleason scores 5 and 6), with a significantly worse outcome and higher rate of recurrence.

Design: Five hundred and four patients underwent radical prostatectomy for prostate cancer. Two hundred and twenty-eight of the patients (45%) had a Gleason score of 7. Cases were analyzed for a variety of clinical and pathologic parameters.

Results: Among 228 prostatic adenocarcinomas with Gleason score 7, 91(40%) had a primary Gleason grade of 4 and 137 (60%) had a primary grade of 3. Patients of the former group were more likely to have a higher pathological stage (P = 0.004), a higher rate of PSA recurrence (P = 0.008), and a higher incidence of vascular invasion (P = 0.039). In multiple logistic regression controlling for tumor stage (P = 0.046), surgical margin status (P = 0.0003), vascular invasion (P = 0.033), and preoperative PSA (P = 0.015), the primary Gleason grade was not an independent predictor of PSA recurrence (P = 0.141).

Conclusions: Among patients with Gleason score 7, primary Gleason grade 4 carries the likelihood of higher tumor stage, higher rate of PSA recurrence and higher incidence of vascular invasion. It does not however independently predict a worse outcome after controlling for other known prognostic parameters that are associated with disease progression.

Editorial Comment

There are evidences showing that Gleason grade 4/5 may be superior to the Gleason score as a predictor of PSA progression following surgery (1,2). There are several ways to evaluate grade 4/5: primary Gleason grade 4 or 5, secondary Gleason grade 4 or 5, % of Gleason grade 4, % of Gleason 5 and combined % of Gleason grade 4 and 5 (3).

Reporting of percentage Gleason grade 4/5 is cumbersome: there is the question of the reliability of the estimate (interobserver agreement) and how to quantitate percentage 4/5 cancer (4). It is our opinion that the easiest and straightforward way to evaluate the importance of grade 4/5 is to consider it either as the primary or secondary grade. In the present study of Hattab et al., grade 4 was considered either as the primary or the secondary grade in cases of Gleason score 7.

In a recent quite similar study done in our Institution, we found that Gleason score ≥ 7 or Gleason predominant grade 4/5 were more likely to have higher preoperative PSA, more extensive tumors, extraprostatic extension (pT3a) and seminal vesicle invasion (pT3b). However, only patients with Gleason predominant grade 4/5 had a statistical tendency for a shorter time to biochemical progression following radical prostatectomy (5).

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