Intraductal carcinoma of prostate (Recommended)

Reason/Evidentiary Support

Intraductal carcinoma of the prostate (IDC-P) is an uncommon finding in needle biopsies cores, hence its absence does not need to be explicitly stated. However, if IDC-P is present it should be recorded and the following comments apply.

IDC-P is usually associated with invasive prostate cancer, however, occasionally isolated IDC-P is found without invasive carcinoma; this latter situation is rare and beyond the scope of this dataset.

IDC-P has been well characterised at the histological and molecular levels over the past decade and its clinical significance is now also better understood.[1] The diagnosis of IDC-P is based on morphology and the key criteria include: 1) large calibre glands that are more than twice the diameter of normal non-neoplastic peripheral glands; 2) preserved (at least focally) basal cells identified on H&E staining (or with basal cell markers, such as p63, keratin 34βE12 and keratin 5/6, however, the use of immunohistochemistry to identify basal cells is optional, rather than mandatory, for the diagnosis of IDC-P); 3) significant nuclear atypia including enlargement and anisonucleosis; and 4) comedonecrosis, which is often but not always present.[2,3] It is important to distinguish IDC-P from high grade prostatic intraepithelial neoplasia (HGPIN): compared to IDC-P, HGPIN has less architectural and cytological atypia, and cribriform HGPIN is rare.

IDC-P is strongly associated with high volume, high grade invasive prostate carcinoma and metastatic disease, hence the presence of IDC-P in a biopsy, even if invasive carcinoma cannot be identified, mandates immediate repeat biopsy or definitive therapy (depending on the clinical situation).[4-7] In a cohort treated with radiation +/- androgen deprivation therapy, the presence of IDC-P in the needle biopsy was an independent predictor of early biochemical recurrence and metastasis.[8]

There was a strong consensus (82%) at the recent International Society of Urological Pathology (ISUP) consensus meeting (Chicago 2014) that IDC-P should not be assigned an ISUP or Gleason grade.[9]

References

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