Journal of Medical & Surgical Pathology

Soumanou et al., J Med Surg Pathol 2016, 1:1
DOI: 10.4172/2472-4971.1000106

Commentary Open Access

Clinical Stage Evaluation at Diagnosis of Prostate Cancer at Urology-Andrology Clinic CNHU-HKM Cotonou

Fouad Kolawalé Yde Soumanou*, Josué Dejinnin Georges Avakoudjo and Prince Pascal Hounnasso

Department of Urology -Andrology, Teaching University Hospital (CNHU-HKM) of Cotonou, BENIN Republic

***Correspondence**: Fouad Kolawalé Yde Soumanou, Department of Urology -Andrology, Teaching University Hospital (CNHU-HKM) of Cotonou, BENIN Republic, Tel: 00229-96880788; E-mail: soumfou@yahoo.fr

Received date: Jan 06, 2016; **Accepted date**: Feb 08, 2016; **Published date**: Feb 13, 2016

Abstract

Prostate cancer remains elderly man cancer. It is the most common form of non-skin cancer diagnosed in men, with three quarters of cases occurring in men aged 65 years and older. Digital rectal examination (DRE) still remains an important diagnostic tool and it should not be substituted to an isolated total serum PSA rise. The biopsy procedure, which is the gold standard of CaP diagnosis, is invasive and painful, the side effects are significant, sometimes serious. Multiparametric magnetic resonance imaging (mp-MRI) and Tomography with Emission of Positons are often used for diagnosis and follow-up of prostate cancer.

Keywords: Prostate cancer; Digital rectal examination; Urology-Andrology clinic; Serum prostate-specific antigen levels; Prostate biopsies

Commentary

Prostate cancer is the second most common diagnosed cancer and the sixth leading cause of cancer deaths in men, accounting for 14% of total new cancer cases [1]. Prostate cancer remains elderly man cancer. It is the most common form of non-skin cancer diagnosed in men, with three quarters of cases occurring in men aged 65 years and older [2,3]. As expected, the prevalence is most strongly related to age, with the prevalence doubling about every 14 years. Age only explains part of the considerable variation between studies: we could identify only one other clear factor: use of a Gleason score. The estimated mean cancer prevalence increased in a nonlinear fashion from 5% (95% CI: 3-8%) at age <30 years to 59% (95% CI: 48-71%) by age >79 years [4]. Digital rectal examination (DRE) still remains an important diagnostic tool and it should not be substituted to an isolated total serum PSA rise. Contemporary recommendations for prostate cancer screening incorporate the measurement of serum prostate-specific antigen (PSA) levels associated with other methods of detection such as digital rectal examination (DRE) and/or ultrasonography [5,6]. With regards to screening accuracy, studies have demonstrated that a PSA cut-off of 4.0 µg/L can detect many cases of prostate cancer; however, some will be missed [7]. Using a lower cut-off level detects more cases, but at the cost of falsely labelling more men as potentially having cancer. Whether, for instance, the PSA cut-off is decreased to 2.5 µg/dL, more than double the number of men aged 40 to 69 years will be labelled as a false positive [8,9]. However, its limitations have been increasingly recognized [10]. Over one million men undergo prostate biopsies annually in the United States, a majority of them due to elevated serum PSA [11]. The biopsy procedure, which is the gold standard of CaP diagnosis, is invasive and painful the side effects are significant, sometimes serious. More than half of the biopsies are negative for CaP partially because serum PSA can be elevated for reasons other than CaP (true negative biopsy), or because biopsy needles often miss tumour foci in the prostate (false negative biopsy) [12]. Recent efforts to develop non-invasive alternatives are focusing on urine-based molecular assays (e.g., PCA3, TMPRSS2-ERG 13) and blood-based molecular assays (e.g., Prostate Health Index (PHI), four kallikreins score (4K) and CTC assays) [14,15].

Multiparametric magnetic resonance imaging (mp-MRI) and tomography with emission of positions are often used for diagnosis and follow-up of prostate cancer. The goals of initial diagnostic imaging evaluation can include identification and localization of occult metastatic disease (in lymph nodes and bone), assessment of resectability and/or curability, and prediction of local morbidity. Conventional imaging modalities, including CT and radionuclide bone scan, have demonstrated poor performance characteristics, often requiring correlation with MRI or bone biopsy in the event of solitary or equivocal abnormalities [16]. Numerous studies have now indicated that multiparametric (Mp) prostate MRI at 3 Tesla, including anatomical and functional sequences, enables accurate PCa detection and local staging with reasonable sensitivity and specificity [17].Approximately 15% of men with prostate cancer are diagnosed with high-risk disease and are at increased risk of treatment failure and mortality [18]. Of men with newly diagnosed prostate cancer, 80% will have localized disease, 12% will have regional disease, and 4% will have distant disease [19]. However, for newly diagnosed high-risk prostate cancer, 22% of men will have a positive bone scan, 31% will have a positive abdominal CT, and 33% will have a positive pelvic CT on initial diagnostic imaging, highlighting the importance of imaging in the initial diagnosis of high-risk prostate cancer [20].

References

1. Torre LA, Bray F, Siegel RL, Ferlay J, Lortet-Tieulent J, et al. (2015) Global cancer statistics, 2012. CA Cancer J Clin 65: 87-108.
2. Seigel R, Ward E, Brawley O, Jemal A (2011) Cancer Statistics, 2011. CA Cancer J Clin 61: 212–236.
3. Baade PD, Youlden DR, Cramb SM, Dunn J, Gardiner RA (2013) Epidemiology of prostate cancer in the Asia-Pacific region. Prostate Int 1: 47-58.

4. Bell KJ, Del Mar C, Wright G, Dickinson J, et al. (2015) Prevalence of incidental prostate cancer: A systematic review of autopsy studies. Int J Cancer 137: 1749-1757.
5. Andriole GL, Crawford ED, Grubb RL, Buys SS, Chia D, et al. (2009) Mortality results from a randomized prostate-cancer screening trial. N Engl J Med 360:1310-1319.
6. Schröder FH, Hugosson J, Roobol MJ, Tammela TL, Ciatto S, et al. (2009) Screening and prostate-cancer mortality in a randomized European study. N Engl J Med 360: 1320-1328.
7. João Paulo Zambon, Fernando G. Almeida, Raquel Dilguerian O. Conceição, Viviane Arevalo Tabone, Nea Miwa Kashiwagi, et al. (2014) Prostate-Specific Antigen testing in men between 40 and 70 years in Brazil: database from a check-up program 40: 745-752.
8. Welch HG, Schwartz LM, Woloshin S (2005) Prostate-specific antigen levels in the United States: implications of various definitions for abnormal. J Natl Cancer Inst 97: 1132-1137.
9. Lin K, Lipsitz R, Miller T, Janakiraman S; US. Preventive Services Task Force. (2008) Benefits and harms of prostate-specific antigen screening for prostate cancer: an evidence update for the U.S. Preventive Services Task Force. Ann Intern Med 149: 192-199.
10. Hoag NA, Goldenberg SL (2013) Prostate cancer in 2012: Paradigm shifts in prostate cancer diagnosis and treatment. Nat Rev Urol 10: 69-70.
11. Loeb S, Carter HB, Berndt SI, Ricker W, Schaeffer EM (2011) Complications after prostate biopsy: Data from SEER-medicare. J Urol 186:1830–1834.
12. Nickens KP, Ali A, Scoggin T, Tan SH, Ravindranath L, et al. (2015) Prostate cancer marker panel with single cell sensitivity in urine. Prostate 75: 969-975.
13. Hessels D, Schalken JA (2013) Urinary biomarkers for prostate cancer: a review. Asian J Androl 15: 333-339.
14. Sartori DA, Chan DW (2014) Biomarkers in prostate cancer: what's new? Curr Opin Oncol 26: 259-264.
15. Scher HI, Morris MJ, Larson S, Heller G (2013) Validation and clinical utility of prostate cancer biomarkers. Nat Rev Clin Oncol 10: 225-234.
16. Bjurlin MA, Rosenkrantz AB, Beltran LS, Raad RA, Taneja SS (2015) Imaging and evaluation of patients with high-risk prostate cancer. Nat Rev Urol 12: 617-628.
17. Cooperberg MR, Broering JM, Carroll PR (2010) Time trends and local variation in primary treatment of localized prostate cancer. J Clin Oncol 28: 1117-1123.
18. Brawley OW (2012) Trends in prostate cancer in the United States. J. Natl Cancer Inst. Monogr 2012: 152–156.
19. Turkbey B, Pinto PA, Mani H (2010) Prostate cancer: value of multiparametric MR imaging at 3T for detection-histopathologic correlation. Radiology 255: 89–99.
20. Miller DC, Hafez KS, Stewart A, Montie JE, Wei JT (2003) Prostate carcinoma presentation, diagnosis, and staging: an update form the National Cancer Data Base. Cancer 98: 1169-1178.