Five-year Treatment Outcome of High-Risk Prostate Cancer Following Radical Prostatectomy, Low-dose-rate, or High-dose-rate Brachytherapy

Introduction and Objective: To report five-year treatment outcome of radical prostatectomy(RP), low-dose-rate (LDR) or high-dose-rate brachytherapy(HDR) for the patients with localized high-risk prostate cancer in Jikei University experience.
Materials and Methods: Between November 2003 and November 2007, a total of 171 pathologically proven prostate adenocarcinoma as high risk underwent RP (73), LDR (22), and HDR (76). High risk prostate cancer was defined as D'Amico risk classification (PSA>20 mg/mL and/or Gleason≤8 and/or clinical stage ≥T3). RP cases were performed with an extended lymph node dissection. LDR and HDR cases were performed with or without the combination of external body radiation therapy (EBRT) and with or without the androgen deprivation therapy (ADT). The duration of ADT with LDR and HDR was 11 and 30 months as median, respectively. The definition of the biochemical recurrence of each treatment differs as to that PSA ≥0.2ng/mL for RP, PSA nadir +2 for LDR and HDR. We retrospectively investigated a biochemical recurrence free survival (bRFS) of individual cases. Five-year bRFS rates were calculated using Kaplan-Meier analysis.
Results: Median follow-up duration of RP, LDR and HDR were 42, 57 and 47months, respectively. Five-year bRFS rate for RP, LDR and HDR were 70.0, 65.6 and 74.1%, respectively. Most of RP cases experienced Grade2 urinary incontinence. Grade1-2 urinary urgency and a mild urinary tract ache were found in some of LDR and HDR cases. In the recurrence cases of any treatment, EBRT and/or ADT were provided as a salvage therapy.
Conclusions: Our high risk prostate cancer treatment results were similar with the past reports. In LDR and HDR cases revealed better treatment outcome combined with EBRT and ADT.