on prostate at a dose of 100 Gy in 5 cases and 110 Gy in 94 cases. Some type of hormone therapy was administered in 23 cases (23.2%).

Results. The review was performed between 2011 and 2012. One patient did not have follow-up (treated in 2007). Overall, specific and disease free survival at 5 years were 89% (CI 95% 84–92) 98% (CI 95% 96–100) and 93% (CI 95% 89–97) respectively. Biochemical relapse at 5 years was 9% (CI 95% 5–15). No local relapses were found and only one patient with nodal relapse and one patient with distant metastasis were observed. Acute toxicities were urinary in 17 pts (17%) 4 of them GIII (4%); rectal in 4 pts (4%). Chronic toxicities were urinary in 15 pts (15%), 7 of them GIII (7%), 6 of them required catheter, 2 of them required suprapubic cystostomy and 5 of them underwent transurethral resection.

Conclusions. Although efficacy results are satisfactory, patients are adding up toxicities on both radiotherapy techniques.

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Gas rectal pockets removal diminishes rectal doses during vaginal cuff brachytherapy
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Purpose. Vaginal cuff brachytherapy (VBT) is one of the most widely and settle brachytherapy procedures worldwile. Some groups advocate a previous rectum cleansing, despite this fact no studies exist analysing the consequences of rectal distention during VBT. The aim of our study was to define how the type of rectal content affects its dosimetric values.

Material and methods. CT sets (337) derived from 92 patients treated with HDR-VBT were re-segmented and re-planed for study purpose under the same parameters. Rectum content on each CT was recorded. Rectum DVH values were extracted and the dose percentage related to the empty status was calculated. Parametric and non-parametric analysis was carried out according to the rectal content.

Results. Dose percentages according to the rectal content and related to the empty status were: D0.1cc: feces 101.86, air 113.36, air + feces 108, contrast 109.49, contrast + air 111.99; D1cc: feces 100.58, air 113.61, air + feces 107.62, contrast 111.75, contrast + air 112.96; D2cc: feces 100.4 air 114.53, air + feces 108.15, contrast 112.99, contrast + air 114.5; D5cc: feces 101.57, air 119.82, air + feces 111.95, contrast 117.6; contrast + air 120.27. Kruskal–Wallis (D5cc, D10cc) and ANOVA (Dmax, D0.1cc, D2cc) tests showed significant differences among empty rectums, rectums with feces, and rectums with gas pockets (all p < .00001).

Conclusions. The presence of gas pockets increases rectal doses during vaginal cuff brachytherapy. Maneuvers addressed to reduce it, like rectal tubes or rectum cleansing, could diminish rectal doses and toxicity.

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HDR brachytherapy in early and advance lung cancer: HUPM (CADIZ)
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Introduction. Endobronchial brachytherapy is an option in the treatment of airway tract tumors in centres where had experienced staff. The indications are: localized endobronchial carcinomas, combined with external irradiation in first line treatment of lung cancers and palliative intention.

Objectives. To report our 5 years experience in brachytherapy for patients with respiratory tract cancer.

Methods. We carried out a retrospective review of our patients who underwent endobronchial brachytherapy from December 2007 to December 2012. Indications were radical, adjuvant and palliative intention. Under sedation, with local anesthesia and by nasal access, the procedure involves the insertion of an afterloading 5F catheter into bronchus affected in close proximity to an endoluminal lesion and to perform limited irradiation sparing as much as possible healthy tissues. CT dosimetry was performed to verify catheter position and dose planning. In patients with early stages (31.2%), we observed a patient with complete remission in a 3-years follow-up period.

Results. A total of 16 patients (14 men and 2 women) were reviewed: 11 with lung cancer, 4 esophagus and one tongue base. Types of histology identified were: 12 squamous, 3 adenocarcinoma and only one with different histology. The mean patient’s age was 63.9 (46–79). The stages were: 6.2% 0, 25% I, 25% II, 31.25% III, 12.5% IV. Dose per fraction 500 Gy. One patient did not complete treatment due to progression with occlusion of the bronchial lumen. One suffered from significant toxicity: pneumothorax. Other patients had minor toxicities: mucositis, dysphagia and cough. All patients who completed treatment showed good clinical response (100%) and successful local control.

Conclusion. Endoluminal HDR brachytherapy in patients with respiratory tract cancer is a safe and effective treatment for improving local control and symptoms relief and also with radical intention in early stages.

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