High dose rate endobronchial brachytherapy effectively palliates symptoms due to inoperable lung cancer in elderly patients (over 65 y.o.)

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Purpose: This is a retrospective study to review the HDR endobronchial brachytherapy in the treatment of patients with bronchial obstruction, haemoptysis, dyspnoe and cough caused by inoperable lung cancer.

Material and methods: From IV/2004 to III/2009, 78 patients withinoperable lung cancer underwent this procedure. The average age of this group was 72.2 years at the day of the first brachytherapy. The majority of patients had many coexistent diseases, especially of the heart and circulatory system, obesity and diabetes. The primary objective of the treatment was the reduction of: bronchial obstruction, haemoptysis, dyspnoe and cough. A total 136 HDR brachytherapy treatments were delivered. An average of 7.5 Gy at a radius of 1 cm from center of the source was delivered by iridium 192 sources. The majority of the patients received 2 fractions at 4 to 8 week intervals. Response was considered by complete based on clinical signs in 78%, response was complete based on endoscopy in 91%.

Results: The symptomatic response rates are as follows: dyspnoe had 68% response rate (33% partial response, 35% complete response). Cough had a 64% response rate (29% partial response, 35% complete response), haemoptysis had a 83% response (0% partial response, 83% complete response). 58 patients had follow up endoscopic examination (1-2 months after brachytherapy). Their total response rate was 91% (9% partial response and 82% complete response). There were no late complications.

Conclusion: These results confirm the efficacy of endobronchial brachytherapy in palliative treatment of the inoperable lung cancer in elderly patients.