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Title: To treat or not to treat with corticosteroids radiation induced pneumonitis

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Body: Aim – to assess the functional parameters evolution with and without corticotherapy in patients with radiation induced pneumonitis (RIP). Material and methods – we evaluated 83 patients, 76 females (mean age 57.3 yrs), diagnosed with RIP after postoperative radiotherapy for thoracic cancers. History, physical exam, chest X-ray, and pulmonary function tests were obtained at diagnosis, after 3 months, and after one year. Results – 47 patients (group A) had mild symptoms (fever, dyspnea, and cough) or asymptomatic and they didn't receive any treatment, and 36 patients (group B) had moderate symptoms and received corticotherapy (prednisolone or prednisone 0.5 mg/kg/day with tapered doses) for 3 months. Both groups showed significant decrease of symptoms and decrease of the alveolar infiltrates/consolidation on chest-X ray after 3 months. There were no differences between groups in pulmonary volumes and flows (VC, FEV1, FEV1/VC ratio, TLC, RV) at baseline, after 3 months and one year. Group A showed an increase of the transfer factor (DLco), from 68.9% at 76.8% at 3 months and at 90.5% predicted at one year, and group B showed a raise in DLco from 61.1% at 68.5% at 3 months and at 69% predicted at one year. The difference between the two groups was non significant at baseline and after 3 months, but statistically significant after one year ($p<0.05$). Conclusions – Both groups (with or without corticotherapy) had an improvement in clinical symptoms after 3 months, but the non treated group showed a consistent improvement in transfer factor compared to the treated group after one year. A placebo controlled trial is needed to establish the usefulness of corticotherapy in mild to moderate radiation pneumonitis.