Title: Low BMI in emphysema patients: A contraindication for lung transplantation?

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Body: Lung transplantation (LTx) is an accepted therapeutic option for patient with end-stage emphysema. These emphysema patients can be subdivided in blue bloaters and pink puffers, although most patients have characteristics of both groups. BMI is an important tool in distinguishing these subgroups. A low BMI is associated with a poor nutritional status which may predict a poor outcome after LTx. We aimed to investigate the outcome of emphysema patients with a low pre-transplant BMI (<20) in terms of acute rejection (AR), lymphocytic bronchiolitis (LB), infections, BOS and survival. All 193 patients transplanted for emphysema between 1991-2011 and surviving more than 60 days post transplant, were included (53 SLTx(single) and 140 SSLTx(double)). AR, LB and BOS are diagnosed according to the ISHLT criteria. Multivariate analyzes were done using SAS software. Patients with a lower BMI (<20) had a significant better 10-years survival compared with those with a BMI>20 for the total population (p=0.01) (figure). Prevalence of BOS was significantly lower within the lower BMI group, independent from other covariates (table). There is a statistical association between the prevalence of BOS, infection and LB (table). We conclude from this single centre observation that emphysema patients with a BMI below 20 have a better outcome in terms of BOS and mortality and this should therefore no longer be regarded as contra-indication for LTx.