Prevention of type ii endoleaks by coils and fibrin glue embolization of the aneurysmatic sac.

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Abstract:

Objective: Type II endoleaks are the most common 'complication' after EVAR. Their incidence is various in many series reported and their significance and treatment have been long debated. It seems to be generally agreed that the treatment of type II endoleaks is recommended in case of growth of aneurysm diameter. The purpose of this study is to evaluate if the routinely intra-sac embolization with coils and fibrin glue during EVAR is a safe and effective procedure to reduce the incidence of type II endoleaks and the incidence of re-intervention after EVAR. Methods: From January 2009 to August 2010 63 patients underwent EVAR, emergency procedure are not considered here. Forty-two patients have been treated in 2009 without sac embolization (group A) while, from January 2010, 21 patients underwent EVAR + routine intra sac embolization at the end of the endovascular procedure (Group B): 20 of these patients have been treated by intra sac positioning of coils (19 cases Tornado and one case Balt), 17 patients were treated also with injections of fibrin glue (TissueColl), one patient had only coils and one only fibrin glue. All patients underwent a 30 days postoperative CT-scan. Results: In 30 days the incidence of type II endoleaks in Group A was 14.3% (Six cases) and in group B was 4.8% (one case). In Group B no adjunctive surgical procedure were needing and no type I endoleaks were observed. Conclusions: The sac embolization with coils and fibrin glue at the time of endograft placement seems to be a safe procedure for prevention of type II endoleaks. Considering that literature reports a global incidence of reoperation for type II endoleaks of 55%, seen the reductions of incidence of type II endoleak after this procedure, we can estimate a reduction of re-interventions of about 5.3% with a relevant

cost saving for the national health system. Moreover, the absence of type I (A or B) endoleaks in all the cases treated seems to confirm the effectiveness of the technique also in the stabilization of the sac giving high fixation to the endograft.