This is a retrospective study which highlights the surgical outcome of 20 patients who were referred to the cardiac surgical department at Iben Al-Bitar Hospital from 2007 to 2015 as cases of ascending aortic aneurysm. The aims of this research is to focus on Diagnostic tools used in the referred patient and Treatment regimes. Its outcome and comparing it with results from other centers. The age of the patients ranged from 16-58, the commonest age was 41-50, blood group was A+ve, male/female ratio was 4:1. 5% of patients were smokers, and another 5% were alcoholics, no history of trauma was detected, 90% of patients were diagnosed as annuloaortic ectasia, while the other 10% were diagnosed as Marfan syndrome. 10% were having renal cysts, and 10% were having gall stones as non-cardiac diseases. As cardiac associated diseases, 90% of patients were having sever aortic valve regurgitation, 5% bicuspid aortic valve, 5% mild-moderate aortic valve regurgitation, 15% of patient died on table because of bleeding from anastomosing sites, and as non lethal complications, 10% were re-explored in the first post-operative day. The life expectancy of patients with ascending aortic aneurysm undergoing surgical repair has improved and is consistent with increased survival.