remodeling. This research aims to evaluate the expression of the proteasome β5 subunit in atherosclerotic plaques from patients subjected to aortic replacement surgery.

Methods We assigned the atherosclerotic plaque tissue, from carotid endarterectomy for carotid stenosis patients, as the case group (16 cases). According to different degrees of arterial stenosis, we divided the samples into the edge portion (stenosis>50%, A group) and the core portion (stenosis≤50%, B group). Carotid endarteriums were obtained from four patients undergoing Aortic replacement surgery, selected relatively normal arterial intima (Subclavian artery and Innominate artery) as the control group; Collected clinical data of patients, such as age, sex, smoking history, hypertension, diabetes, hyperlipidemia, and the biochemical indicators. A portion of the sample was fixed in 10% formalin, dehydrationed in gradient alcohol, Transparented in xylene, embedded in paraffin, sections were prepared for HE staining and immunohistochemical analysis. Another part of the tissue was frozen in liquid nitrogen, for extracting Total protein, and Western Blot analysis. Data are expressed as percentage or mean±SE for continuous variables and by percentage for qualitative variables. The proteasome β5 subunit activity variables were compared by use of the $\chi 2$ test. Statistical significance was assumed for $p<0.05$.

Results (1) The decrease in the level of β5 had something to do with the risks of diabetes, Hyperlipidemia and possibility of smoking in the patients we observed; (2) β5 was expressed in all samples, most of which accumulated in cytoplasm with few exceptions in nucleus; (3) There was significant divergence in the expression of β5 in different sub-groups of samples: A group (arterial stenosis>50%)<B group (arterial stenosis≤50%)<C group (control group).

Conclusion The expression of β5 was decreased in the atherosclerotic plaques of patients, implying it might play an important role in the progress of atherosclerosis.

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THE EXPRESSION OF THE PROTEASOME β5 SUBUNIT IN HUMAN ATHEROSCLEROTIC PLAQUE

Ning Shi[1], Ming-xiao Wang[1], Chun-ling Wang[1], Ning Zhang[2], Xiao-jia Ping[3], Yan-lin Liu[3], Jian-mei Zhang[1] *[1]Heart Center, Mei-tan General Hospital, Beijing, China; [2]Institute of Basic Medical Sciences, Chinese Academy of Medical Sciences, School of Basic Medicine, Peking Union Medical College, Beijing, China; [3]Pathology, Mei-tan General Hospital, Beijing, China*

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Objective Proteasome is a mutiple-unit protease working on non-lysosomal protein degradation in cells. Recent studies have illustrated its potential roles in the whole process of atherosclerosis including endothelial dysfunction, formation of foam cells, smooth muscle cell proliferation, and vascular