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The Link of Expressions of B7-H1 and PD-1 to the Cancer Development in Human Gastric Carcinoma

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B7-H1 expressed on the APCs, acting as one kind of co-stimulatory molecules associated with PD-1 expressed on the T lymphocyts, acting as a receptor can elicit an immune suppress response through inhibiting activation of T lymphocytes. It has been found recently that B7-H1/PD-1 played a crucial role in the cancer immune evasion from the host immune surveillance system. In the present study the expression of B7-H1 in the SGC7901/VCR, SGC7901, BGC-823 gastric cancer cell lines and GES gastric epithelial cell line, and the expressions of B7-H1 and PD-1, and the TILs (tumor infiltration lymphocytes) status examined with ANAE-staining in the gastric carcinoma with different pTNM were studied. The results showed that in the 3 kinds of gastric cancer cell lines the B7-H1 expression, including mRNA and protein, was promoted markedly in comparison with the GES cell line. In human gastric carcinoma both expressions of B7-H1 and PD-1, including mRNA and protein were enhanced, while there was no expression of B7-H1 in human gastric normal tissue; and there was negative correlation between the expression of B7-H1 and the TILs amount (mainly $CD8^+$). There was a link between expression of B7-H1 to the pTNM, including cancer invasion depth, lymph node metastasis, but the latter was not correlated with the expression of PD-1. The results showed that B7-H1 was correlated with the cancer processing and suggest that B7-H1 may be used as a potential marker for accessing prognosis and therapeutic target, and B7-H1/PD-H1 may facilitate the cancer growth through inhibiting the host immune response.

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Hemodynamics Plays More Important Role than Hyperlipidemia During the Development of Atherosclerosis, Artery Interposed to Vein don't develope atherosclerosis in Cholesterol-fed Rabbits

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To study autologous arterial grtafts interposed to veins, and to assess whether they would be susceptible to the development of accelerated atherosclerosis in hyperlipidemic rabbit model. Left common carotid artery (5 cm long) were interposed in the right external jugular vein position of 30 adult male New Zealand White rabbits. After surgery, rabbits were fed with high cholesterol diet for 1, 2, 4, 8 and 12 weeks. Serum lipid (TC,TG,HDL-C.LDL-C) levels of all animal were measured and the related blood vessel segments were harvested at different time points and observed under the light, transmission and scanning electron microscope. Vessel wall thickness, the content of collagen and elastin of tunica media was measured and analyzed by image processing system. The apoptosis of vascular wall cells was also analyzed by TUNEL. Hyperlipidemia occurred in operated rabbits. Fatty streak and atherosclerotic plaques were observed and lipid drops enriched in medial smooth muscle cells in control carotid arteries 1 month after surgery. In the grafted arteries, no fatty streak and atherosclerotic plaque were seen and the vessel wall thickness decreased continuously after surgery 3 months after surgery, grafted arteries possess similar structures as that of veins. Smooth muscle cell apoptosis of grafted artery occured from inner layer to the outer one as time went by. The content of both collagen and elastin in the grafted artery decreased with the thim goes on, but collagen degrade apparently than elastin. Grafted artery interposed to vein did not develop atherosclerosis in cholesterol-fed rabbits and only atrophic changes appear. Hemodynamics is more critical than hyperlipidemia in the development of atherosclerosis.