Materials and methods (1) 12 littermate hyperlipidemia pig models were established. (2) The experimental group (n=6) was administrated with EECP since the 2.5 months old. One group of hyperlipidemia pig (n=6) without EECP serve as control group. EECP was dealt with 2 h every other day, and the total time was 36 h. (3) All pigs were sacrificed by 100 ml/L KCl, heart chamber injection. The testis and corpus cavernosums were separated quickly, swashed by PBS and then fixed by 10% formaldehyde. (4) Slices of each corpus cavernosum were selected randomly from the continuous slices, and observed under high power microscope after HE stain. Samples were sorted and graded on the basis of the number of mature sperms and the hyperplasia degree of the spermatogenic cells.

Results Total cholesterol (TC) and low density lipoprotein (LDL) before EECP are (6.49 ± 2.10) mmol/l and (6.43 ± 1.16) mmol/l, (2.57 ± 1.04) mmol/l and (2.50 ± 0.67) mmol/l, respectively; TC and LDL after EECP are (7.93 ± 1.04) mmol/l and (10.84 ± 0.66) mmol/l, (3.42 ± 1.16) mmol/l and (5.66 ± 0.77) mmol/l, the differences between the two groups are statistically significant ($p < 0.05$). The corpus cavernosum weight of the two groups before EECP are (41.6 ± 4.5) kg and (41.7 ± 4.7) kg, no statistical significance was indicated ($p > 0.05$); after EECP the weights are (79.7 ± 7.5) kg and (85.7 ± 2.5) kg, also not statistically significant ($p > 0.05$). Corpus cavernosum pathological grading of experimental group is (1, 2, 3, 5, 7 and 8), and the control group is (4, 6, 9, 11 and 12), the difference is statistically significant, $p < 0.05$. Testis pathological grading of experimental group is (1, 4, 5, 7, 10, and 11), and the control group is (2, 3, 6, 8, 9 and 12), the difference is not statistically significant, $p > 0.05$.

Conclusion (1) EECP improves the lipid levels of high fat diet pigs; (2) EECP postpones the pathological lesion of high fat diet pigs.

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THE INFLUENCE OF ENHANCED EXTERNAL COUNTERPULSATION THERAPY ON TESTICLE AND CORPUS CAVERNOSUM OF HYPERLIPIDEMIA PIG

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Objective To study the pathological changes of enhanced external counterpulsation (EECP) on testicle and corpus cavernosum of hyperlipidemia pig.