6. Conclusion

These results indicate that treatment with coenzyme Q10 or metformin or sitagliptin or rosvastatin showed significant renoprotective and neuroprotective effect against STZ-nicotinamide induced diabetic nephropathy and neuropathy. However, concomitant administration of coenzyme Q10 and sitagliptin and metformin showed a better renoprotective and neuroprotective effect than when administered singly or coenzyme Q10 with metformin or sitagliptine or rosvastatin treatment. These effects might be due to amelioration of lipid peroxidation as well as improvement of renal function and suppression of TNF-α, MPO activity, TGF-β and nitrite content in renal tissue as well as improvement in muscular grip strength and pain threshold response. Finally, it was concluded that adjuvant therapy of coenzyme Q10 with antidiabetic or antihyperlipidemic drug might prevent or delay the diabetic nephropathy and neuropathy.