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## The development in diagnosis of sub clinic cobalamin deficiency

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The growing data indicates that subclinical cobalamin deficiency (SCCD) is being diagnosed more than ever. Because of its common occurrence than classical cobalamin deficiency, SCCD is an important condition for public health. One question with SCCD is whether it is only a state of mild metabolic abnormality without any clinical signs or symptoms or is associated with clinical signs and symptoms, albeit vague. The exact prevalence of SCCD which is more frequent in young and middle aged adults is largely unknown. Furthermore, the absence of ideal test marker for cobalamin deficiency is aggravating the situation. It is clear that these problems can be solved with the evaluation of reference values of cobalamin and related tests in each population. In our current reference range study, serum cobalamin, folate and holotranscobalamin (Holo-TC) values, plasma homocystein and methyl malonic acid (MMA) levels were assayed in over the 400 healthy volunteers. The results indicated that, all of the tests except for the plasma homocysteine and MMA were found lower than detected by the manufacturer. They were divided to subgroups with respect to ages. Cobalamin and Holo-TC values of youngest group differ from the oldest group. So, we suggest the use of own reference values for each population and Holo-TC should be used together with the serum cobalamin in diagnosing SCCD. In another study, we observed that the cognitive test scores elevated with the increase of Vitamin B12 in young and middle-aged. In conclusion, SCCD is a hidden health problem that could be manifested by itself with a cognitive failure in the young and middle aged population. The serum cobalamin around 190-250 pg/ml should be considered for the diagnose.

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## Modified University of Wisconsin solution with melatonin and its efficacy on kidney preservation time

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In order to provide long lasting time period for organ preservation, donor organs are kept in special preservation solutions, as University of Wisconsin (UW) is the most preferred solution. The aim of this study is to extend the preservation time and also provide more effective protection. In order to provide better preservation, the ingredients of the UW solution were changed (Modified UW), as well as melatonin was included (Modified UW+M) in the preservation medium. Time related morphological changes of rat kidneys in each group were comparatively investigated within this study. Totally perfused kidneys were placed in UW, Modified UW and Modified UW+M solutions and kept during 2, 10, 24 and 72 h at 4 oC. Kidney tissue samples were taken at all given time intervals and these samples were prepared for light and transmission electron microscopy. Histopathological scoring based on renal injury, tubular and glomerular degeneration, inflammatory cell infiltration and vasocongestion was performed. Liquid samples, taken at 2, 10, 24 and 72 h at 4 oC from the storage media were investigated for lactate dehydrogenase (LDH) activity. Comparative findings at light and transmission electron microscopical levels and also LDH results revealed that preservation in Mod UW+M solution was statistically much more prominent in all time intervals, significantly at 72nd hour of preservation. In all groups, LDH levels were consistent with morphological results. We could conclude that Mod UW+M were the most effective solution among the experimental groups especially suitable for preservation up to 72 hours.

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