Diagnostic Patterns of Very Long Chain Fatty Acids in Plasma of Korean Patients with X-linked Adrenoleukodystrophy

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Normal levels of very long chain fatty acids (VLCFAs) in plasma of Koreans were not established yet. Plasma VLCFA composition of Korean normal subjects (n=58) and X-ALD patients (n=16) was examined by gas chromatography as their methyl esters. The average percentages of C22:0, C24:0 and C26:0 in the total fatty acids were 0.89 ±0.20, 0.79 ±0.24 and 0.008 ±0.004, respectively for normal group, but they ranged from 0.31 to 0.79, from 0.47 to 1.59 and from 0.027 to 0.130, respectively for X-ALD group. C24:0/C22:0 and C26:0/C22:0 ratios, and the concentration (mg/mL) of C26:0 were 0.87 ±0.11, 0.009 ±0.004 and 0.13 ±0.03, respectively for normal group, but for X-ALD group they varied from 1.21 to 2.41, from 0.057 to 0.203 and from 0.35 to 1.47, respectively. Each X-ALD patient was significantly different from normal group (P value < 0.001) and each star pattern in non-equilateral quadrangular shape was visually discriminative from the rectangular star pattern of the normal group average. And 74 individual plasma specimens were correctly classified into two separate clusters according to normal or X-ALD patients in the canonical plot. The newly established Korean reference values of plasma VLCFA values served well for the accurate biochemical diagnosis of Korean X-ALD.Star graphical and canonical plotting as the pattern recognition tools complements each of the other for the visual diagnosis of X-ALD.

Impact of Economic Crisis on Drug Consumption at Local Pharmacies

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Health care utilization is affected by many factors, including the socioeconomic determinants as well as the need factors such as illness or health status. Among the socio-economic determinants, income is known to play a key role in changing the demand for drugs and health services. Reduced real income from the economic crisis in December 1997 may have enforced the Korean people to use less health services. It is expected that drug consumption may have fallen as a result of the worsened economic conditions. Data shows that people bought less drugs, and significantly so in the case of non-essential pharmaceuticals.

It is interesting to know what factors are involved in the decrease of drug use during the 1997-98 period. Two multiple regression models were estimated to figure out the socioeconomic determinants of drug consumption at local pharmacies. The results reveal that the number of active pharmacists, size of pharmacy, location of pharmacy, and income status of consumers are factors that influence people's drug consumption.
The drug consumption per local pharmacy in a day is significantly higher at local pharmacies that are located in low-income regions. However, drug consumption per visit turns out to be lower in those pharmacies. It implies that local pharmacies served the low income families as a means to solve their health problem. It also implies that the economic crisis may have restricted the low income class in their access to necessary health care utilizations.