METHOD

For this study, skin fragments were collected from 66 female patients during surgical operations and were grouped according to age: group 1 ( < 15 years), group 2 (15-50 years) and group 3 ( > 50 years). Two sites were investigated: the abdomen (unexposed areas) and face (exposed sites). Iron and Ascorbic acid were collected from human dermis by microdialysis and assessed by atomic absorption spectrometry and gas chromatography mass spectrometry respectively. The aim of the study was to determine the ex vivo iron and Ascorbic Acid concentrations in human dermis from different age groups to better understand their role.

RESULTS

This study showed a correlation of iron with age, the iron levels were 68% higher in group 3 than in group 1. An inverse correlation of Ascorbic acid with age, the asc concentration in elderly subject were 26% lower than Asc levels in the dermis of young subjects. The iron dermis concentrations were significally lower in facial than in abdominal sites for the three groups. The concentrations of L-Ascorbic acid in the skin of the face were remarkably higher than in the abdomen for the three groups. With age L-Ascorbic concentrations decreased more rapidly in the facial sites than in the abdominal area.