Gender Effect on Vascular Inflammation Following Bariatric Surgery

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In most surgical series the majority of patients were women, and men had higher post operative mortality and morbidity regardless of weight. Our primary end point was to study gender effects on vascular inflammation following bariatric surgery for weight loss.
Methods: A prospective study evaluated vascular inflammation in obese patients before and 3 months after bariatric surgery.
Results: 73 women and 29 men (40.5±12.3 years old) underwent bariatric surgery for weight loss. ICAM-1 levels and hs-CRP levels were decreased (0.0001). Gender differences: in women both ICAM-1 levels (p=0.002) and hs-CRP levels (P=0.0001) were decreased. In men following bariatric surgery both ICAM-1 levels and hs-CRP levels were non-significantly changed (both P=0.09).
Discussion: Our study examined gender effects of bariatric surgery on vascular inflammation. Bariatric surgery had no significant effect on biochemical inflammatory markers in male patients while females undergoing the same kind of bariatric surgery for weight loss had a significant decrease in these markers of inflammation. These results may explain the epidemiologic data that described higher morbidity and mortality among obese men undergoing bariatric operation for weight loss. This is the first study that has demonstrated a gender difference in the inflammatory responses that may affect clinical outcome and the cardiovascular morbidity and mortality.