A CASE-CONTROL STUDY OF ADIPOKINES IN ENDOMETRIAL CANCER AND CORRELATION WITH PROGNOSTIC FACTORS

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Conclusions

Adipokines like leptin and adiponectin play an important role in inflammation, angiogenesis, apoptosis and tumourigenesis. Such adipokines are postulated to play a role in development of obesity related cancers like endometrial cancers. We aimed to study the serum levels of leptin and adiponectin in cases of endometrial cancers and normal controls.

Methods

A prospective case control study was conducted to study the serum levels of leptin and adiponectin in endometrial cancer patients and normal controls over a period of 24 months.

Results

Fifty-five cases of endometrial cancers and 25 controls were included in this study. Median serum levels of leptin among cases and controls were 95.7 (16.0–483.5) ng/ml and 38.0 (4.7–107.2) ng/ml, respectively (p=0.015). Median serum adiponectin levels among cases and controls were 8481.4 (1700.7–24956.28) and 9547.5 (3015.0–24257.0) ng/ml, respectively (p=0.906). Leptin:adiponectin (L:A) ratio was significantly higher in cases than in controls (0.0086 v 0.0042, p=0.014). Due to high standard deviation of values from mean, leptin, adiponectin and L:A ratio were analysed in tertiles among cases and controls. Only age and BMI were significantly higher in cases than in controls (0.0086 v 0.0042, p=0.014). Women who had ITCs identified were more likely to receive postoperative therapy (81.8% versus 29.8%, p<0.001) and chemotherapy (16.3% versus 6.4%, p=0.037). Moreover, women undergoing sentinel lymph node biopsy (SLNB) had a higher likelihood of identifying ITCs compared to those undergoing lymphadenectomy (LND): 2.7% for SLNB alone, 3.7% for SLNB/LND, and 1.2% for LND alone (aOR ranged 2.60–2.99, P<0.001). Women who had ITCs identified were more likely to receive postoperative therapy (81.8% versus 31.7%, P<0.001), including external beam radiotherapy (EBT) alone (25.1% versus 3.2%) and chemotherapy/EBT (16.3% versus 1.9%). Similiar associations were observed in the low-risk group (stage IA, grade 1–2 endometrioid, 78.4% versus 9.2%, P<0.001), including EBT alone (35.3% versus 0.6%).