

level of significance for this study was chosen at $p < 0.05$.

Results

Non-compliant group demonstrated a significantly higher education level ($p = 0.029$), negative perceptions scores ($p = 0.006$) and higher fatigue ($p = 0.029$) compared to the compliant group. Significant difference was not observed regarding ability to perform ADL (Activities of Daily Living). There was no correlation between duration since stroke and home exercise noncompliance.

Conclusion

Identified factors for noncompliance with home exercises in the tested population are the level of education, perception on following exercises and perceived fatigue in performing daily tasks. Addressing the factors would provide guidance for the rehabilitation therapists to plan and alter the rehabilitation interventions in an effective manner to promote adherence.

OP4 A comparative study of metalloestrogens in blood and ectopic endometrial tissue in women with endometriosis and matched controls

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Introduction

Environmental pollution has been cited as a potential cause for an increase in the prevalence of endometriosis. Heavy metals are known to have oestrogenic properties. Several studies have reported high serum concentrations of heavy metals in patients with endometriosis. A study has demonstrated increased amount of iron in ectopic endometrial tissue. The presence of other metals in ectopic endometrial tissue, either qualitatively or quantitatively is yet to be described in literature.

Objective

To compare levels of heavy metals in the blood of women with endometriosis, in endometrial deposits and in the blood of controls who had no evidence of endometriosis. This could help identify an approach for treatment and prevention of endometriosis.

Methodology

A Case-control study, involving 50 cases of endometriosis and 50 age matched controls was conducted at the Professorial Gynaecology Unit of the National Hospital, Colombo. Blood (from cases and controls) and samples of ectopic endometrial tissue (from cases) were obtained at laparoscopy or laparotomy and concentrations of metals were measured by graphite furnace atomic absorption spectroscopy (GFAAS) and Total Reflection X-ray Fluorescence (TXRF). T-tests, Spearman's correlation coefficient and ANOVA were used to assess associations.

Results

Cases had significantly higher ($p=0.011$) mean blood nickel levels ($1.69\pm 1.18 \mu\text{g/L}$) as compared to controls ($0.96\pm 0.94 \mu\text{g/L}$). Blood levels (cases vs. controls) of cadmium ($0.75\pm 0.46 \mu\text{g/L}$ vs. $0.77 \pm 0.37 \mu\text{g/L}$) lead ($5.88\pm 1.25 \mu\text{g/L}$ vs. $3.45\pm 1.25 \mu\text{g/L}$) and zinc ($123.02\pm 2.49 \mu\text{g/L}$ vs. $151.35 \pm 2.46 \mu\text{g/L}$) were similar in the two groups ($p=0.289$, $p=0.123$, and $p=0.339$, respectively).

In cases, tissue samples had significantly higher ($p=0.001$, $p<0.001$, $p=0.049$ respectively) mean (\pm SD) levels of cadmium ($2.86\pm 0.61 \mu\text{g/Kg}$ vs. $0.75\pm 0.46 \mu\text{g/L}$) nickel ($8.64\pm 0.4.12 \mu\text{g/Kg}$ vs. $1.69\pm 1.18 \mu\text{g/L}$) and lead ($11.22\pm 4.67 \mu\text{g/Kg}$ vs. $5.88\pm 1.25 \mu\text{g/L}$) as compared to blood levels. Mean (\pm SD) blood levels of zinc ($123.02\pm 2.49 \mu\text{g/L}$) in cases was higher ($p<0.001$) than that in tissues ($27.54\pm 6.65 \mu\text{g/Kg}$). There was a positive correlation between blood zinc levels and tissue zinc levels ($r=0.417$; $p=0.034$) but no correlation between blood and tissue levels of cadmium, nickel and lead ($r=0.237$, $p=0.085$; $r=0.372$, $p=0.113$; $r=0.70$, $p=0.067$, respectively).

Conclusion

Cadmium, nickel and lead but not zinc accumulates in ectopic endometrial tissue.