PREDICTING THE MALIGNANT AND HYPERPLASTIC POTENTIAL OF POLYPS

A LOGISTIC REGRESSION MODEL

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DECLARATION OF INTERESTS – NONE

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Previous research has noted that **symptoms, size** and **patient age** are risk factors for endometrial carcinoma in polyps.

*Shushan A et al, Gynecol. Obstet Invest.*


*How often are endometrial polyps malignant?*

**Outpatients hysteroscopy** is highly acceptable and safe.

*Penketh R et al, J Minim Invasive Gynecol.*

2014 Sep-Oct;21(5):830-6

*Feasibility of resectoscopic operative hysteroscopy in a UK outpatient clinic using local anaesthetic and traditional reusable equipment, with patient experiences and comparative cost analysis.*

**Volumetric assessment of polyps can be performed preoperatively with Ultrasound** and this is highly accurate.
Objective

The objective was to explore potential pre-operative predictors of malignancy and hyperplasia in:

- Symptomatic women
- Post menopausal woman and greater than 51 years of age
- Woman undergoing outpatient hysteroscopy
Design: 5 year prospective cohort study

320 post menopausal women

TVS in Outpatient clinic

Resection in SHINE clinic
A purpose built outpatient hysteroscopic suite
UHW Cardiff, UK
Intervention

TVS

8mm or 10mm Resectoscope

Glycine

Cervical block
Data analysis

SPSS version 20

Continuous non-parametric variables were analysed with a Mann-Whitney U test or Kruskal Wallis where appropriate.

Multinominal logistic regression analysis was carried out to assess the relationship between patient age, the volume and weight of the polyp and the dependent variable of hyperplasia or malignancy.

320 patients
33 cases of hyperplasia
21 cases of endometrial ca

Variables:
Weight, Largest diameter, Volume, Density, Age of patients
Results
Age v histology

Median patient age

Benign < Hyperplasia < Endometrial cancer

59 < 62 < 65 years old

IQR=10 IQR=16 IQR=15

Hypothesis Test Summary

<table>
<thead>
<tr>
<th>Null Hypothesis</th>
<th>Test</th>
<th>Sig.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The distribution of Age is the same across categories of Histology.</td>
<td>Independent-Samples Kruskal-Wallis Test</td>
<td>.003</td>
<td>Reject the null hypothesis.</td>
</tr>
</tbody>
</table>

The significance level is .05.
Stepwise multinomial logistic regression shows that the patient age at that time of presentation increases the probability of hyperplasia or malignancy with odds ratios of 1.05 and 1.1 respectively.
Results
Weight v histology

Median polyp weight

Benign < Hyperplasia < Endometrial ca

0.75g < 1.34g < 2.68g

IQR=1 IQR=2 IQR=4

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The significance level is .05.
Stepwise multinomial logistic regression shows that the weight of the polyp increases the probability of hyperplasia and malignancy with odds ratios of 1.14 and 1.3 respectively.
Conclusion

The age of the patient and the weight of the polyp is the most predictive of the presence of cancer or hyperplasia in the polyp.
Thank you