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Abstract Topic: 9. Endometriosis

Poster presentation only? No

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Data is submitted for a separate scientific abstract and video presentation: No

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Title: DIAGNOSTIC VALUE OF HEMOSIDERIN LADEN MACROPHAGES IN HISTOLOGICALLY PROVEN ENDOMETRIOSIS

Objective: To determine the diagnostic value of peritoneal fluid hemosiderin laden macrophages

in endometriosis patients compared to controls.

Design: Prospective cohort

Materials and Methods: Patients presenting for gynecologic laparoscopy were included. 46 patients had presented with infertility, and or chronic pelvic pain and were diagnosed with endometriosis on laparoscopy. The controls included were 15 women undergoing tubal ligation. The peritoneal fluid obtained at laparoscopy was then stained by Papanicolau cytologic stain and fixed in paraffin for immunohistochemical assessment. A histochemical stain for Iron (hemosiderin) was performed. The staining was done by an automated immunostainer system (Ventana Tuscon, AZ). Histological confirmation for endometriotic lesions was obtained with biopsy. The clinical features of the patients who were positive and negative for hemosiderin laden macrophages with endometriosis and the controls were compared using the Fisher's Exact, Chi-square, and Wilcoxon Rank Sum tests, reporting data as median, quartiles and percentage as appropriate. $P < 0.5$ was considered to be statistically significant. The objective of our case control study was to assess the potential of hemosiderin laden macrophages in diagnosis of endometriosis. The sensitivity and specificity were calculated with 95% binomial confidence limits.

Results: Endometriosis patients were significantly more likely to have positive hemosiderin laden macrophages test results ($P = 0.0013$). The presence of hemosiderin laden macrophages has a low sensitivity 52% but an acceptable specificity 87% diagnosing endometriosis

Table 1: Sensitivity and Specificity of Hemosiderin Laden Macrophages in Diagnosis of Endometriosis

Hemosiderin Laden Test Result	Endometriosis	Control
Positive	16 (51.6 %)	2 (13.3 %)
Negative	15 (48.4%)	13 (86.7%)
Total	31	15
Measure	Estimate	95 % exact binomial confidence interval
Sensitivity ^a	16/31=52%	33 %, 70 %
Specificity ^b	13/15=87%	60 %, 98 %

^a the probability that an endometriosis patient is Hemosiderin laden macrophage positive; ^bthe probability that a control patient is Hemosiderin laden macrophage negative

. The presence of the hemosiderin laden macrophages was not related with any other of the clinical factors studied.

Conclusions: The presence of specific findings of hemosiderin laden macrophages related with endometriosis, strongly suggests abnormalities in the peritoneal iron metabolism.

Support: None

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