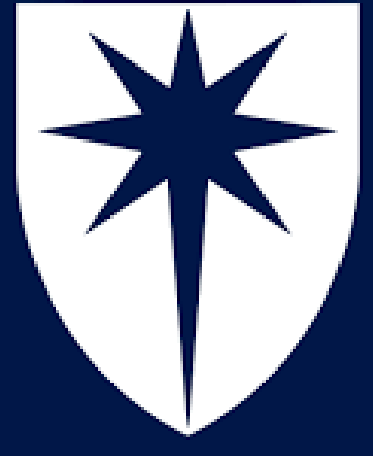




Cabergoline: A Promising Therapy for Reducing Inflammatory Markers and Pain in Endometriosis

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Introduction

- Endometriosis is an estrogen dependent gynaecological condition marked by chronic pelvic pain and infertility
- It arises from the ectopic presence of endometrial tissue
- It affects 49% of adolescents with chronic pelvic pain and 10% of all women of reproductive age (1)
- Inflammation and angiogenesis are important for endometriosis pathogenesis, supporting ectopic tissue survival through elevated inflammatory markers and promoting vascular growth essential for lesion maintenance (2)

Aims and Objectives

PRIMARY OBJECTIVES

- To evaluate the effect of Cabergoline versus Dienogest on VEGF, TNF alpha, hsCRP

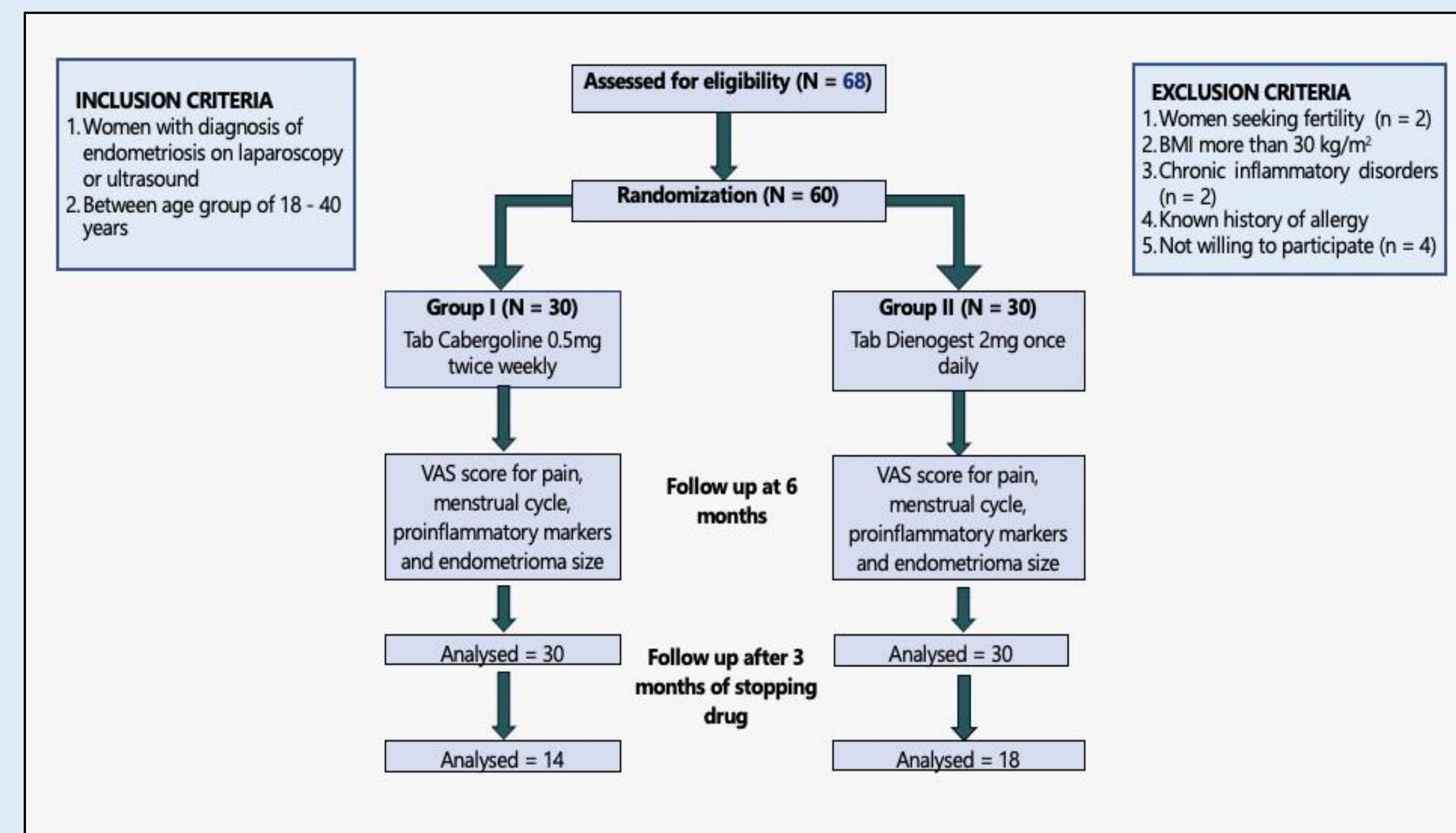
SECONDARY OBJECTIVES

- To compare the efficacy of Cabergoline & Dienogest on reduction in pain and after 3 months of stopping the drug
- To evaluate the effect of both treatments on volume of endometrioma

Materials & Method

- Prospective, open-label, randomized controlled study conducted at a tertiary care centre
- Sixty women with endometriosis meeting inclusion criteria were randomized into two equal groups
- Group I received Cabergoline 0.5 mg twice weekly, and Group II received Dienogest 2 mg daily for six months

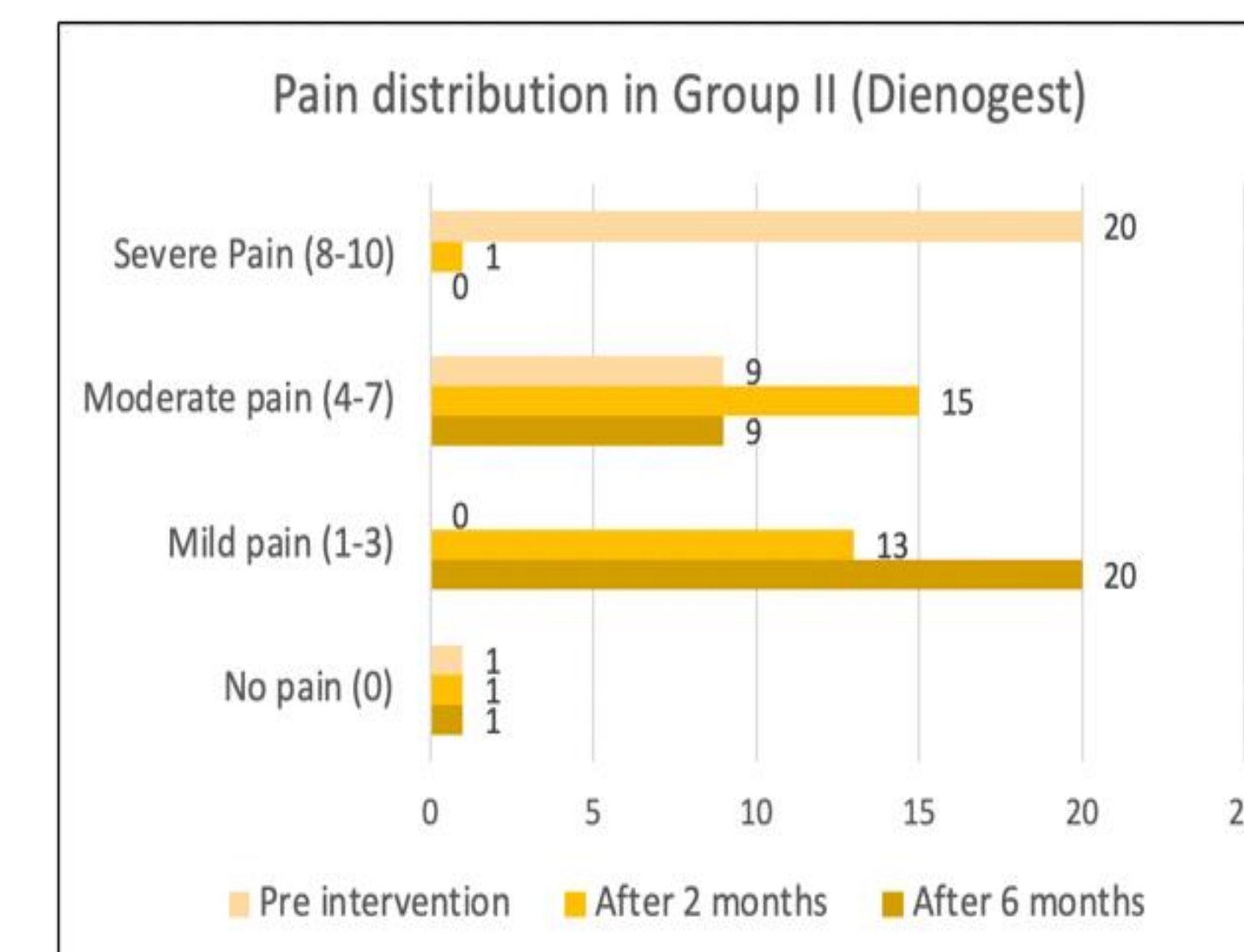
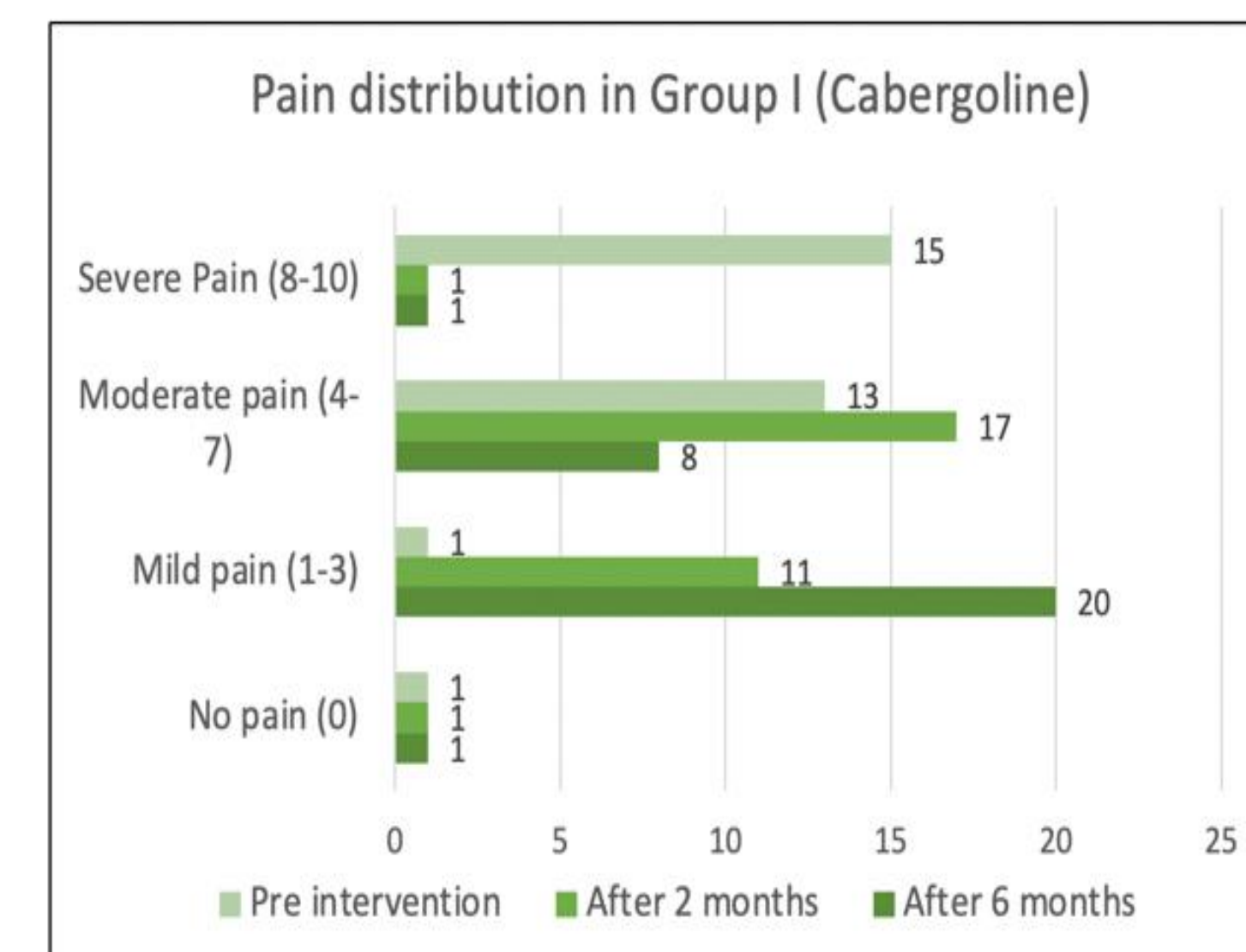
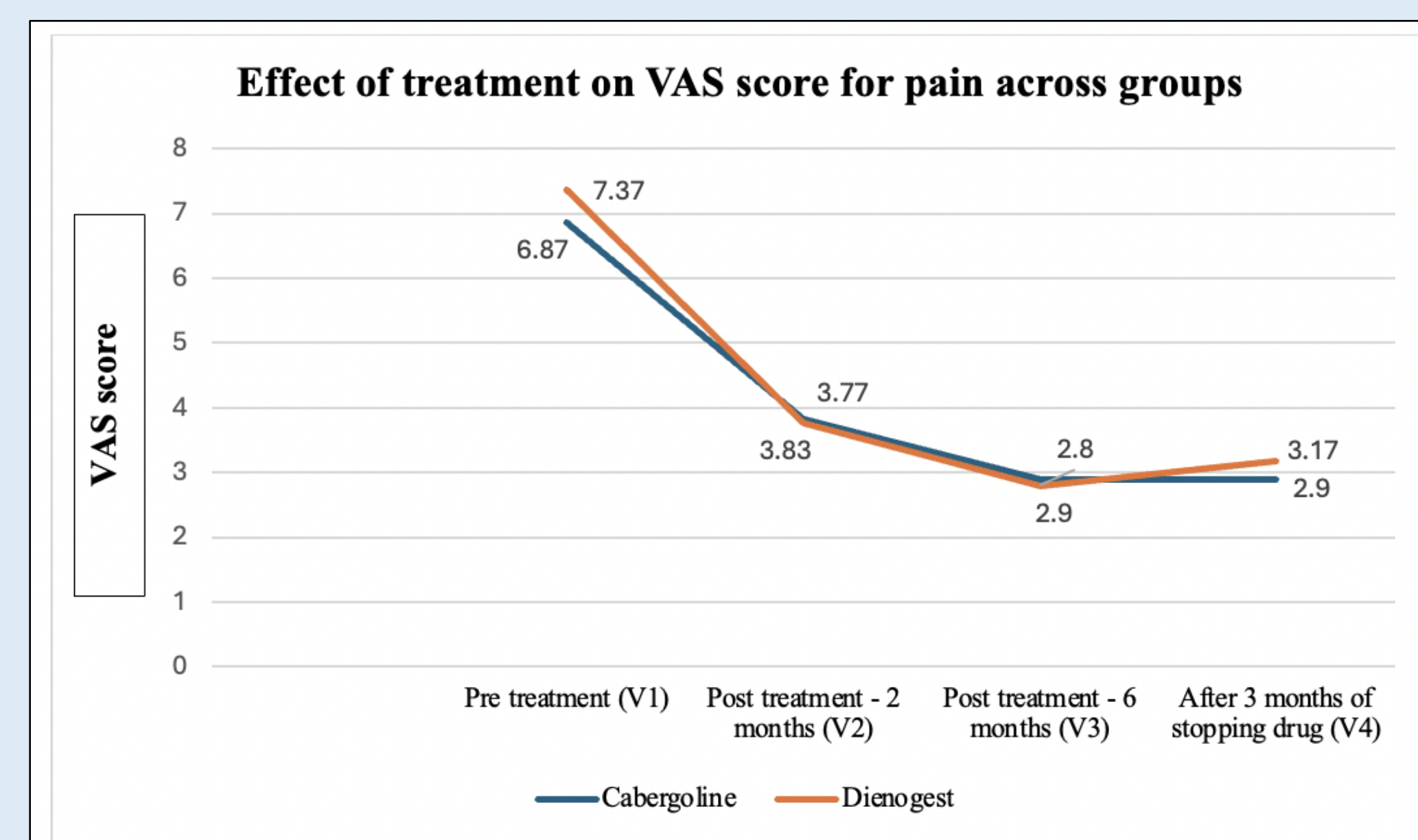
Results



VAS Score	Pretreatment (V1)	Post 2 months of treatment (V2)	Post 3 months of treatment (V3)	After 3 months of stopping the drug (V4)	P value
Cabergoline Group	6.9 ± 2.2	3.8 ± 1.8	2.9 ± 1.6	2.9 ± 1.8	V1-V2 - <0.001 V2-V3 - <0.001 V3-V4 - <0.001 V1-V4 - 0.265
Dienogest Group	7.4 ± 1.9	3.7 ± 1.5	2.8 ± 1.3	3.2 ± 2.3	V1-V2 - 0.003 V2-V3 - <0.001 V3-V4 - 0.001 V1-V4 - 0.041
P value	0.357	0.883	0.801	0.759	

Inflammatory Marker	Cabergoline Group (N = 30)			Dienogest Group (N = 30)		
	Pre treatment	Post Treatment	P value	Pre treatment	Post Treatment	P value
VEGF (pg/mL)	477(111-1696)	389(102-1203)	0.003	410(102-1161)	360(102-1509)	0.629
TNF-α (pg/mL)	1.2(0.08-4.06)	0.2(0.1-2.2)	<0.001	1.4(0.1-9.5)	0.2(0.1-3.3)	0.006
hsCRP (mg/L)	2(0 - 10)	1(0 - 12)	0.027	2(0 - 17)	2(0-8)	0.031

Endometrioma (vol – cc ³)	Pretreatment (V1) N = 30	Post treatment (V3) N = 30	After 3 months of stopping the drug (V4) N = 14,18	P value
Cabergoline Group	25(5-194)	18(1-130)	15(4-73)	V1-V3 - 0.005 V3-V4 - 0.413 V1-V4 - 0.109
Dienogest Group	57(14-385)	23(1-305)	17(0-170)	V1-V3 - 0.001 V3-V4 - 0.505 V1-V4 - 0.023
P value	0.003	0.284	0.541	



Discussion

- Standard treatment options for endometriosis include surgical excision or hormonal therapies aimed at inducing a hypoestrogenic state
- Their use is limited in women desiring fertility
- Cabergoline and Dienogest both showed significant reduction in serum TNF-alpha & hsCRP as well as pain measured by VAS
- However, Cabergoline in addition significantly decreases serum VEGF, an angiogenic marker and also preserves menstrual cycle regularity

Conclusion

- Cabergoline may be a potential new treatment for endometriosis associated pain in young women, recurrent endometriosis and those who prefer non-surgical management
- Cabergoline can be a adjunct to fertility treatment in endometriosis associated infertility as it preserves ovarian & menstrual function

References

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- Gargett C, Weston G, Rogers P. Mechanisms and regulations of endometrial angiogenesis. Reprod Med Rev. 2002 Mar;10(1):45–61