

# Uterine Fibromyomata in Urban Blacks

## A PRELIMINARY SURVEY OF THE RELATIONSHIP BETWEEN SYMPTOMATOLOGY, BLOOD PRESSURE AND HAEMOGLOBIN LEVELS

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### SUMMARY

An attempt was made in a study of 100 consecutive cases of fibroids of the uterus to substantiate the commonly-accepted signs and symptoms associated with fibromyomata.

Menorrhagia commonly attributed to submucous fibroids occurred in less than 50% of cases. Dysmenorrhoea was also surprisingly less common than expected (30%). Pelvic sepsis was seen in 75% of the patients, and most local symptoms related to fibroids may be due to the associated pelvic sepsis. There was no statistical difference between the control patients and the fibroid group as regards parity. There were 29 nulliparous women; 19 had had one child and the remainder (52%) had more than two children. This suggests that fibroids may not be a dominant factor (as is usually claimed) in the production of infertility. The very common associated finding of pelvic infection may be the culprit.

Hypertension attributed to ureteric obstruction does not appear to be substantiated, and does not appear to be related to the fibroids *per se*. Menorrhagia is common (75%), yet a group of patients with hypertension and fibroids did not have anaemia. It is well documented that fibroids may be associated with secondary polycythaemia, but the association of hypertension and polycythaemia has been interesting.

There was no obvious relationship between the size of the fibroid uterus, the hypertension recordings and the haemoglobin levels. However, the greater the blood pressure reading, the higher the haemoglobin level appeared to be.

*S. Afr. Med. J.*, 48, 2060 (1974).

One hundred and one consecutive cases of uterine fibroids were studied in urban Blacks at the Johannesburg Hospital during 1972. The significant feature of the study presented in this article was that the higher the blood pressure, the higher the haemoglobin levels, in spite of the fact that menorrhagia occurred in 75% of all cases with fibroids. The uterine size was not related to the levels of haemoglobin or blood pressure recordings. In this study blood pressures greater than 150/100 mmHg were considered hypertensive.

A control group of 116 inpatients was similarly investigated with regard to symptoms and haemoglobin

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levels, blood pressure recordings and associated pelvic sepsis. The controls were patients admitted to the ward during the same period, whose diagnoses were unrelated to fibroids, but excluded all patients with pregnancy states.

Wrigley *et al.*<sup>1</sup> and Glietenberg and Cominos<sup>2</sup> presented cases of secondary polycythaemia with uterine fibromyomata. Wrigley *et al.*<sup>1</sup> also showed that fibroids may produce erythropoietin. Hypertension was not mentioned as a feature in these cases.

The size of the uterine fibroids in this study was not related to the degree of hypertension. However, since hypertension is a common finding in Blacks, a further control based on hypertension is now under scrutiny.

### PATIENTS AND METHODS

On admission, all patients with a diagnosis of fibromyomata were submitted to a full blood count, blood urea and electrolyte examination. The blood pressure was recorded and checked on two occasions in the 24 hours after admission. Those patients who had fibroids which were larger than a 20-week pregnancy size, or fibroids which were fixed in the pelvis, had pre-operative intravenous pyelogram examinations. A full history was taken. A general and pelvic examination was then performed. Each patient was then listed under various headings.

### RESULTS

Summaries of these findings are given in Tables I and II.

TABLE I. SYMPTOMATOLOGY

	Fibroids 101 cases	Controls 116 cases
<b>Age</b>		
Average	41,8 years	31,4 years
Range	23 - 58	15 - 54
<b>Symptoms</b>		
Menorrhagia	52,8%	14,6%
Dysmenorrhoea	26,8%	2,5%
Abdominal pain	63,0%	49,1%
Infertility	12,8%	17,2%
<b>Duration of symptoms</b>	These were found to be generally unreliable and were thus discarded for comparison	
Average		
Range		
<b>Parity</b>		
Average	1,83	2,1
Range	0 - 6	0 - 7

TABLE II. CLINICAL FINDINGS AND MANAGEMENT

Size of fibroids		
>20 weeks	16,8%	
<20 weeks	83,2%	
Situation of fibroids	: submucous only	3
	: subserous	83 (4 not known)
	: submucous and others	10
Blood pressure (mmHg)		
(average)	: 141/88	
(range)	: 100/60 - 220/150	
Haemoglobin (average)	: 12,7 g/100 ml	
(range)	: 4,8 g/100 ml - 17,1 g/100 ml	
Blood transfusion total	: 63 patients had 196 units blood	
Average in 63	: 3,1 units	
Associated sepsis (at laparotomy)	: 75%	
Ovarian cysts present	: 10%	
Histology (other)	: malignancy 0	
	: adenomyosis 1	
Operations	: total abdominal hysterectomy with or without salpingo-oophorectomy	— 84
	: myomectomy	— 15
	: others	— 1 D & C
		— 1 cone biopsy cervix

### Patients with Hypertension

There were 19 patients with hypertension ranging from 150/110 to 220/150 mmHg. The range of haemoglobin levels in these patients was 10,5 - 17,1 g/100 ml. The average haemoglobin was thus 13,97 g/100 ml. The size of the uterus was then observed in this group. Only 4

patients in this group had uteri greater than 20 weeks' size (21%).

Table III shows the complete list of patients with hypertension listed under age, parity, blood pressure, uterine size, haemoglobin level and the main presenting symptoms.

### Patients without Hypertension

There were 80 patients in this group and the average haemoglobin was 12,23 g/100 ml. In this group 14 patients had uteri greater than 20 weeks' pregnancy (17,5%).

### Haemoglobin Levels

These were grouped into 5 categories and an attempt was made to correlate the various Hb levels with hypertension.

TABLE IV. COMPARISON OF HAEMOGLOBIN LEVELS

Hb levels g/100 ml	Total	Normotensive	Hypertensive
<7	5	5	0
7 - 10	7	7	0
10 - 14	43	34	9
14 - 16	38	30	8
>16	6	4	2

## DISCUSSION

### Possible Correlation between Hypertension and Haemoglobin

No patient with hypertension had a haemoglobin level below 10 g/100 ml. On average the haemoglobin levels were 1,7 g/100 ml higher in patients with hypertension.

TABLE III. REVIEW OF HYPERTENSIVE PATIENTS

Age (years)	Parity	Blood pressure (mmHg)	Uterine size (weeks)	Hb level (g/100 ml)	Symptom
45	6	190/110	6	15,7	Menorrhagia
42	2	205/115	16	14,3	Menorrhagia
53	2	200/135	12 - 14	12,1	Abdominal pain
48	1	160/130	8	10,5	Menorrhagia, dysmenorrhoea
38	1	170/120	22	13,8	Abdominal pain
51	5	180/110	8	15,5	Irreg. menses, dysmenorrhoea
54	2	160/120	Normal, cervical fibroid only	15,9	Irreg. menses, abdominal pain
50	2	150/110	16	13,4	Postmen. bleed
46	1	180/110	6	17,1	Postmen. bleed., abdominal pain
30	1	220/150	37	16,8	Abdominal pain
40	2	180/110	20	11,0	Abdominal pain, menorrhagia
50	1	200/120	18	14,2	Menorrhagia
34	2	160/120	8	14,7	Abdominal pain
23	0	150/110	12	14,9	Menorrhagia, dysmenorrhoea
45	0	190/120	10	12,5	Abdominal pain, infertility
44	6	190/110	20	15,5	Abdominal pain, dysmenorrhoea
34	1	160/110	12	12,2	Menorrhagia, infertility
45	0	160/110	38	13,7	Abdominal pain
45	0	190/110	30	11,6	Abdominal pain, menorrhagia

TABLE V. SUBMUCOUS FIBROIDS

Patient	Age	Parity	Blood pressure (mmHg)	Uterine size (weeks)	Hb level (g/100 ml)	Symptoms
1	40	3	120/90	20	13,6	Menorrhagia, abd. pain and tumour
2	26	0	120/70	10	6,0	Irreg. period, infertility
3	42	1	170/70	10	6,8	Menorrhagia
4	38	3	150/80	10 - 12	9,8	Menorrhagia, dysmenorrhoea
5	53	2	205/135	12	12,1	Abdominal pain, tumour
6	40	1	150/75	16	8,6	Dysmenorrhoea
7	45	2	100/60	20	15,4	Abdominal pain, menorrhagia
8	54	2	140/90	12	13,9	Abdominal pain
9	44	0	130/90	26	12,8	Abdominal pain, menorrhagia
10	46	1	180/110	16	17,1	Abdominal pain, tumour
11	26	0	140/70	14	16,7	Infertility, dysmenorrhoea
12	47	3	150/90	6	11,3	Menorrhagia, dysmenorrhoea
13	54	2	160/100	Normal	15,9	Abdominal pain, irreg. periods

Although menorrhagia is a difficult symptom to assess clinically, 8 out of 19 (42%) of the patients with hypertension, did have menorrhagia. On the other hand, some of the patients with haemoglobin levels below 10 g/100 ml did not in fact complain of menorrhagia. It is thus only presumptive evidence that patients with hypertension, who actually had menorrhagia, did in fact have higher haemoglobin levels to begin with.

#### Size of the Fibroids and Haemoglobin

There is no evidence to suggest that patients with large fibroids have higher haemoglobin levels than those with small fibroids. The highest haemoglobin level was recorded in a patient with a 16-week-sized uterus.

#### Correlation Between the Size of the Fibroids and Hypertension

Although the patient with the largest fibroid uterus did have the highest blood pressure on admission, there were patients with blood pressures of 160/120 and 200/135 mmHg with only 8 weeks' and 14 weeks' sized uteri respectively. All the patients in this study had normal urinary outputs and normal blood ureas.

In the very large fibroid uteri, there was ureteric displacement and some degree of hydronephrosis on intravenous pyelography, which may have aggravated the hypertension. The hypertensive levels over-all were no greater in this group compared with those of patients whose uteri produced no ureteric obstruction.

We emphasise that hypertension, a common disease in Blacks, is unlikely to be related to the fibroid uterus.

#### Presenting Symptoms

Menorrhagia appeared to be the most common presenting symptom in patients with fibroids. Pelvic sepsis was present in 75% of our cases. The symptoms of abdominal pain in 63% of cases are thus probably unrelated to the fibromyomata, but could be accounted for by the sepsis.

It is difficult to assess the fact that only 12,8% of these patients complained of infertility. Those patients whose main complaint was infertility would probably not have been subjected to hysterectomy.

#### Submucous Fibroids

The 13 cases of submucous fibroids are summarised in Table V.

There appears to be little correlation between the symptoms of menorrhagia and dysmenorrhoea associated with submucous fibroids compared with fibroids situated elsewhere in the uterus. Menorrhagia does, however, appear to be more severe when submucous fibroids are present. Neither of the two hypertensive patients who had submucous fibroids complained of menorrhagia. Patient No. 10 in Table V, in fact, had the highest haemoglobin level of all the hypertensive patients.

#### REFERENCES

1. Wrigley, P. F. M., Malpas, J. S., Turnbull, A. L., Jenkins, G. C. and McArd, A. (1971): *Brit. J. Haemat.*, **21**, 551.
2. Glietenberg, H. and Cominos, D. C. (1969): *S. Afr. Med. J.*, **7**, 27.