UNIVERSITI PUTRA MALAYSIA

RISK FACTORS OF UTERINE FIBROID AMONG PATIENTS IN HOSPITAL SELAYANG AND HOSPITAL PUTRA JAYA, MALAYSIA

FATANEH BANDARCHIAN

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BY

FATANEH BANDARCHIAN

Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia, in Fulfilment of the Requirements for the Degree of Master of Science

July 2010

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DEDICATIONS

This thesis is dedicated especially to my beloved parents, sister, brothers, friends and all those individuals behind the scenes who made it possible to complete my study successfully.

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Master of Science

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Chairman: Associate Professor Latiffah A Latiff, PhD

Faculty: Medicine and Health Sciences

Uterine Fibroid (UF) starts in the muscle tissues of the womb which can grow into the uterine cavity. This disease is common gynaecological disorders with numerous adverse health effects that will affect the woman's quality of life.

Since there are limited studies about risk factors of uterine fibroids in Malaysia, this case-control study aims to evaluate the proportion, presentation and management of uterine fibroid and also investigates its socio-demographic, life style, obstetrical& gynecological characteristics among Malaysian women attending Gyneacology clinics in Selayang and Putra Jaya Hospitals.

In this study, based on secondary data after screening for inclusion and exclusion criteria, 752 women treated in O&G wards in the two hospitals from 2001 to 2005 were enrolled upon obtaining ethical clearance from Ethics Committee in University Putra Malaysia and the Ministry of Health Malaysia. Three hundred seventy six

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patients with uterine fibroid confirmed by HPE and ultrasound were recruited as cases, while a similar number of women diagnosed negative for uterine fibroid in the same clinics were recruited as controls. A structured and pre-tested proforma were used for data collection from the clinical records.

Results for independent t-test revealed significant mean difference in term of age in patients with UF as compared to Non-fibroids (44.22±8.21years vs 28.54±5.60 years, p=0.001). Patients with UF were found to have less parity than women without UF ($p_{=}$0.001). UF cases were more significantly found to have last child birth (LCB) of 5 years and above as compared to controls (p=0.000, OR=12.65 95% CI: 8.51-18.79). Odds ratio of occurrence of Uterine Fibroid among diabetic patients was 3.03 times more than non-diabetic patients (χ^2=7.61, p=0.006, 95% CI: 1.33- 6.90). Those individuals with hypertension were 6.32 times, more likely to get uterine fibroid than individuals without hypertension (χ^2=69.02, p=0.001, 95% CI: 3.94-10.14).

Patients in higher socio-economic status with social class-2 were 2.19 times more likely to develop UF than women from lower socio-economic status (χ^2=10.38, p=0.01, 95% CI: 1.35-3.57). Results showed a significant association between smoking and UF (χ^2=6.92, p=0.01, 95% CI: 0.17-0.80). There was a significant protective association between alcoholic drinking and uterine fibroid (χ^2=38.07, p=0.001, 95% CI: 0.04-0.23).

Multivariate analysis concluded that higher age (adjusted OR= 1.55, 95% CI=1.42-1.68), duration of last child birth of more than 5 years **(**adjusted OR=4.82**,** 95%

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CI=2.26-10.29), parity **(**adjusted OR= 0.05, 95% CI=0.02-0.11) and alcohol consumption (adjusted OR=0.08, 95% CI=0.01-0.51) were found to contribute significantly to the risk for uterine fibroid.

The findings of the present study provide an insight into risk factors that contribute to uterine fibroids among Malaysian women attending the gynecology clinics in Hospital Selayang and Hospital Putra Jaya.

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Abstrak tesis dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Master Sains.

FAKTOR-FAKTOR RISIKO KETUMBUHAN FIBROID RAHIM DI ANTARA PESAKIT DI HOSPITAL SELAYANG DAN PUTRA JAYA MALAYSIA

Oleh

FATANEH BANDARCHIAN

Julai 2010

Pengerusi: Profesor Madya Latiffah A Latiff, PhD

Fakulti: Perubatan dan Sains Kesihatan

Ketumbuhan fibroid rahim bermula di dalam tisu otot rahim dan boleh tumbuh ke dalam rongga rahim. Penyakit ini adalah gangguan ginekologi biasa yang dengan kesan sampingan kesihatan serius yang boleh menjejaskan kualiti hidup wanita. Kajian mengenai kejadian dan faktor risiko berkaitan dengan ketumbuhan fibroid rahim di Malaysia didapati masih terhad. Oleh itu, kajian kes kewalan ini bertujuan untuk mengkaji proporsi, presentasi atau penampilan klinikal dan pengurusan ketumbuhan fibroid serta mengkaji ciri-ciri sosio-demografik, gaya hidup, dan faktor obstetrik & ginekologi (O&G) di kalangan kaum wanita di Malaysia yang mengunjungi Klinik Ginekologi di Hospital Selayang dan Putrajaya.

Dalam kajian ini yang berasaskan data sekunder yang di tapis menggunakan ciri-ciri kemasukan dan pengecualian, 752 orang wanita yang dirawat di wad-wad O&G di

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dua buah hospital ini dari tahun 2001 sehingga 2005 telah didaftarkan ke dalam kajian ini setelah kajian ini diberi kelulusan etika. Seramai 376 orang pesakit dengan ketumbuhan fibroid rahim yang disahkan melalui HPE dan ultrabunyi diambil sebagai bahan kajian kes manakala jumlah yang sama bagi wanita yang disahkan tidak mengalami ketumbuhan fibroid rahim diambil sebagai kumpulan kawalan.

Pengumpulan data dijalankan keatas rekod klinikal pesakit menggunakan Proforma berstruktur yang telah di pra-uji. Hasil kajian menggunakan ujian-t tak bersandar menunjukkan perbezaan min yang ketara bagi umur wanita dengan fibroid rahim (44.22±8.21 th vs 28.54±5.60 th, p =0.001) dan kumpulan kawalan wanita mengalami fibroid rahim mempunyai status pariti lebih rendah dari wanita tidak mengalami fibroid rahim (p=0.001). Wanita dengan fibroid rahim mencatatkan tempoh kelahiran terakhir selama 5 tahun atau lebih yang lebih tinggi dari wanita kawalen (χ^2=192.29, p=0.001, OR= 12.65, 95% CI: 8.51-18.79).

Nisbah kebarangkalian kasar mendapat fibroid rahim di antara kumpulan kes dan kumpulan kawalan adalah ketara. Keputusan ini menunjukkan bahawa nisbah kebarangkalian mendapat fibroid rahim di kalangan wanita mengalami kencing manis adalah 3.03 kali lebih tinggi daripada wanita yang tidak mengalami kencing manis (χ^2=7.61, p=0.006, OR=3.03, 95% CI: 1.33- 6.90). Selain itu, individu yang mengalami tekanan darah tinggi adalah 6.32 kali lebih berkemungkinan mengalami fibroid rahim daripada individu tanpa tekanan darah tinggi (χ^2=69.02, p=0.001, OR=6.32, 95% CI: 3.94-10.14).

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Pesakit dalam kelas sosio-ekonomi yang tinggi iaitu kelao kedua adalah 2.19 kali lebih berkemungkinan mengalami ketumbuhan fibroid rahim berbanding kaum wanita dari status sosio-ekonomi yang lebih rendah (χ^2=10.38, p=0.01, OR=2.19, 95% CI: 1.35-3.57). Keputusan kajian juga menunjukkan hubungan yang ketara di antara tabiat merokok dengan ketumbuhan fibroid (χ^2=6.92, p=0.01, OR=0.37, 95% CI: 0.17-0.80). Terdapat kaitan yang ketara di antara pengambilan alkohol dan fibroid rahim (χ^2=38.07, p=0.001, OR=0.09, 95% CI: 0.04-0.23).

Analisis multivariate menunjukkan bahawa peningkatan umur (penyesuaian OR= 1.55, 95% CI=1.42-1.68), jarak tempoh kelahiran terakhir 5 tahun atau lebih (penyesuaian OR=4.82**,** 95% CI=2.26-10.29) dan pengambilan alkohol (penyesuaian OR=0.08, 95% CI=0.01-0.51) didapati memberikan sumbangan yang tinggi terhadap risiko ketumbuhan fibroid rahim.

Hasil kajian ini menunjukkan terdapat hubungkait antara faktor-faktor risiko diatas dengan fibroid rahim kalangan wanita yang dirawat di klinik gineklogi Hospital Selayang dan Hospital Putra Jaya.

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APPROVAL SHEETS

I certify that an Examination Committee met on (08/03/2011) to conduct the final examination of **Fataneh Bandarchian** on her Master of Science thesis entitled **"Risk Factors of Uterine Fibroid among patients in Hospital Selayang and Hospital Putra jaya, Malaysia"** in accordance with Universiti Pertanian Malaysia (Higher Degree) Act 1980 and Universiti Putra Malaysia (Higher Degree) Regulation 1981. The committee recommends that the candidate be awarded the relevant degree. Members of the Examination Committee are as follows:

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of **Master of Science**. The members of the Supervisory Committee were as follows:

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DECLARATION

I declare that this thesis is my original work except or quotations and citation which have been duly acknowledged. I also declare that it has not been previously, and is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.

FATANEH BANDARCHIAN

Date: 27 July 2010

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TABLE OF CONTENT

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