

# Knowledge of and access to screening in women with carcinoma of the cervix in Brazil

UILHO ANTONIO GOMES<sup>1</sup>, EDMUNDO MAUAD CARVALHO<sup>2</sup>

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## Summary

*In order to assess the level of knowledge of screening for carcinoma of the cervix among women presenting with this condition, a survey of a consecutive series of patients was undertaken. All 266 patients presenting at this hospital during 1988 for the treatment of carcinoma of the cervix completed a structured questionnaire about cervical cancer screening. A percentage of 68.8% patients had never been screened. Those patients who had not previously had a cervical smear test were more likely to be in the older age groups (over 45 years) and to come from low income groups with poor education and poor access to medical facilities. Even among patients who had previously had contacts with the medical profession, only a minority (approximately 40%) had undergone cervical screening at any time.*

*Since carcinoma of the cervix is currently the commonest malignant neoplasm in women in Brazil, it is evident that an urgent campaign is necessary to educate both the public and the medical profession in cervical screening, hopefully to reduce the very high rate of invasive carcinoma of the cervix in this country.*

**Key words:** *cervical cancer, screening*

## Introduction

Since 1943, when the Papanicolaou test was introduced to detect the earliest stages of cervical cancer [1], cervical smear screening has been used in many countries to reduce mortality from invasive carcinoma of the cervix [2-10]. Despite this, it appeared to us in this hospital that many women were presenting with carcinoma of the cervix who had not had any form of previous screening. Thus, in this institution between 1968 and 1986, 1,173 women were treated for carcinoma of the cervix. Of these cases 96% were invasive cancers. This was equivalent to 32% of all malignant disease seen in women in this hospital (excluding skin cancer). In Brazil, as a whole, carcinoma of the cervix is a very common neoplasm and, in ten States, it accounts for approximately half of all cancers in women, including cancer of the skin [4-14].

This study was undertaken in order to assess the

reason why so many patients in Brazil are presenting late with invasive carcinoma of the cervix and with little knowledge of or exposure to cervical smear screening.

## Methods

All 266 patients treated in the São Judas Tadeu Hospital Barretos, São Paulo, Brazil in the 12 months ending November 1986 who had histologically proven carcinoma of the cervix were included in the study. This hospital is a regional cancer therapy centre, and belongs to the Integrad System for the fight against cancer.

All patients were interviewed by one of us (E.C.M.), using a structured questionnaire. They were asked about their knowledge of cervical screening, the source of their information, whether they had previously undergone cervical smear testing, and how frequently. They were also asked about any contacts

<sup>1</sup>Professor Associado do Departamento de Medicina Social da Faculdade de Medicina de Ribeirão Preto - USP; <sup>2</sup>Médico Consultante do Hospital São Judas Tadeu da Fundação Pio XII - Barretos. Endereço do autor para correspondência: Rua 20 nº 221 - Barretos - SP - CEP 14781-104.

with medical or paramedical services in the three years before their presentation with invasive cancer.

Information about previous treatment was confined to that available in hospital notes, as the area in which Barretos is situated has relatively poor records both for diagnostic services and medical treatment [12]. The significance of differences was measured by the  $X^2$  technique.

## Results

A total of 266 women with carcinoma of the cervix attended this hospital between November 1985 and October 1986 inclusive. Exactly half of all the patients was completely ignorant of cervical screening techniques (Table 1). Women aged 45 and over were significantly more likely than younger women to have no knowledge of cervical screening ( $P < 0.001$ ). Only a relatively small proportion of patients who had knowledge of cervical screening had actually acquired this from a doctor or health worker. Most had heard about it from friends or relatives, some from television or radio programmes, and some from information in books or magazines.

Knowledge about cervical screening was closely related to the level of education of the patient. This is detailed in Table 2. Thus, ignorance of cervical screening was commoner among illiterate patients than those who had completed primary schooling ( $P < 0.001$ ), and ignorance of screening was similarly commoner in those who had only undergone primary schooling than in those who had undergone secondary education ( $P < 0.001$ ).

A similar relationship was seen between knowledge of cervical screening and family income, but this was much less close than the relationship seen with the level of education (see Table 3). Thus those women with family income in the lowest bracket were significantly more likely than others to be ignorant of cervical screening methods.

Amongst other factors analysed, the ethnic

**Table 2.** Level of education related to previous knowledge of cervical screening.

Level of education	Previous knowledge		Total
	Adequate previous knowledge of cervical screening	No knowledge	
Illiterate	37 (31.9%)	79 (68.1%)	116
Primary schooling completed	79 (59.8%)	53 (40.2%)	132
Secondary schooling and college completed	17 (94.4%)	1 (5.6%)	18
Total	133 (50%)	133 (50%)	266

**Table 3.** Knowledge of screening techniques related to family income.

Family	Knowledge of screening techniques		Total
	Adequate previous knowledge of cervical screening	No knowledge	
0-2 MS*	77 (43.5%)	100 (56.5%)	177
2-5 MS	30 (58.8%)	21 (41.2%)	51
5+ MS	9 (64.3%)	5 (35.7%)	14

(24 patients were excluded as they could not accurately define their earning level)

MS = Minimum Salaries, equivalent to approximately 50 a month.

**Table 1.** Age and main source of knowledge of cervical screening methods.

Age	Source of knowledge					Total
	No knowledge	Friends or relatives	TV or radio	Doctor	Books Magazines	
< 45	39 (37.5%)	25	17	11	12	104
45+	94 (58%)	41	10	15	2	162
Total	133 (50%)	66	27	26	14	266

\* $P < 0.01$

background and occupation bore no relationship to previous screening, but patients who had multiple (more than three) pregnancies tended to be more ignorant about cervical screening.

Although 133 patients were aware of the possibility of screening for cervical cancer, only 83 had actually undergone screening. Of those who knew about screening but chose not to undergo it, 28 (56%) felt that it was unimportant, 11 (22%) were embarrassed about having the test done, and the remainder (22%) gave a variety of other reasons for not having the test. The majority of patients who had had screening had only undergone screening on a single occasion rather than repeatedly.

## Discussion

Carcinoma of the cervix extremely common in Central and South America, and in Africa, India China and Asia [13]. In Europe and North America is the fourth commonest cancer in women. In Brazil, in 1980, malignant neoplasms were responsible for 8.5% of deaths in women, carcinoma of cervix being responsible for 8% of them. For 1981 these figures were 8.9% and 12.86% and for 1983 they were 9.5% and 7.6% respectively [15].

We were surprised by the discovery in this study that half of all our patients with carcinoma of the cervix were completely ignorant of the fact that a screening test was available for this condition. A significant number of those who knew about the existence of cervical screening had never actually undergone screening, mainly because of ignorance about the test itself or what was involved.

It is disappointing, in view of the fact that the larger the proportion of women undergoing cervical screening the greater the reduction in clinically invasive carcinoma of the cervix [16], that more than two thirds of our patients with invasive carcinoma of the cervix had never undergone any sort of screening for carcinoma of the cervix.

Similarly poor results have been reported by authors in other countries [17-19]. However, it is possible to achieve much better results, as demonstrated in Sweden [20]. The medical and paramedical services are not always particularly good at ensuring that women who come into contact with them are reminded about the possibility of screening for carcinoma of the cervix. Thus Fruchter et al. showed that approximately half of those 97 patients with invasive carcinoma that they studied had not had screening, despite the fact that they had been in frequent contact with medical services [21]. We found similar results, in that 152 of our 266 patients had undergone some form of contact with the medical profession in the three years before the diagnosis of

carcinoma of the cervix, yet were not offered cervical screening. The benefits of doctors and paramedical staff encouraging cervical screening on hospitalised patients is well known [22-24]. In New York state it is a legal requirement to offer cervical smear screening tests to all inpatients [21].

This study clearly demonstrates that in Brazil, where carcinoma of the cervix is a very serious health problem, there is an urgent need to publicise the importance of cervical smear screening tests. There is a need for widespread public education, but also an increase in the education of medical and paramedical workers.

## Resumo

*Para avaliar o conhecimento do screening do carcinoma da cérvix uterina entre mulheres com esta afecção, foi feito um levantamento numa série de pacientes que consecutivamente procuraram o serviço. Todas as 266 mulheres que se apresentaram ao serviço no ano de 1988 para tratamento de câncer cervical uterino preencheram um questionário, onde se demonstrou que 68,8% delas jamais tinham sido submetidas a um screening. As pacientes que não tinham feito até então um Papanicolaou eram as de mais idade (mais de 45 anos) e vinham de camadas sociais menos favorecidas. Mesmo entre as que haviam tido contato prévio com pessoal da área de saúde, só uma minoria (45%) tinha feito screening em qualquer tempo.*

*Sendo o câncer cervical uterino atualmente a mais comum das neoplasias malignas nas mulheres brasileiras, torna-se urgente a realização de uma campanha para educação do público e da classe médica para reduzir os altos índices da doença no país.*

**UNITERMOS:** *câncer do colo do útero, rastreamento*

## Referências bibliográficas

1. PAPANICOLAOU GN, TROUT HE. Diagnosis of Uterine Cancer by Vaginal Smears. The Commonwealth Fund, New York, 1943.
2. GUZICK DS. Efficacy of screening for cervical cancer. *Am J Public Health*, 1978; 68: 125-134.
3. MURPHI WM, COLEMAN SA. The long term course of carcinoma in situ of the uterine cervix. *Cancer*, 1976; 38: 957-963.
4. PARKIN DM, NGUYEN-DINH X, DAY NE. The impact of screening on the incidence of cervix cancer in England and Wales. *Br J Obstet Gynaecol* 1985; 92: 150-157.
5. DAY NE. Effect of cervical cancer screening in Scandinavia. *Obstet Gynaecol* 1984; 714-718.
6. SOOST HJ, BOCKMUHL HZ. Results of cytologic screening in the Federal Republic of Germany. *Acta Cytologica*, 1981; 26: 445-452.
7. BOYES AD. The British Columbia screening program. *Obstet Gynaecol Surv* 1969: 1005-1011.
8. CHRISOHERSON WM, PARKER JE, MENDES WM, LUNDIN FE

- Jr. Cervix cancer death rates and mass cytologic screening. *Cancer*, 1970; 26: 808-811.
9. DICKINSON L, MUSSEY ME, KURLAND LT. Evaluation of the effectiveness of cytologic screening for cervical cancer: 11 survival parameters before and after inception of screening. *Mayo Clin Proc* 1972; 47: 545-549.
  10. MacGREGOR JE, FRASER MER, MANN EMF. Improved prognosis for cervical cancer due to comprehensive screening. *Acta Cytol* 1972; 16: 14-15.
  11. BRUNINI R, TORLONI H, HENSON DE, GOTLIEB SLD, SOUZA JMP. Distribuição percentual das dez primeiras localizações de câncer primário segundo grandes regiões (Brasil 1976-80). In *Cancer no Brasil dados histopatológicos - Ministério da Saúde*, 1982: 4-8.
  12. CUNHA MMP. Avaliação da rede laboratorial das secretarias estaduais da saúde. *Rev Bras Cancerol* 1985; 31: 213-220.
  13. PARKIN DM, STYERNSWARD J, MUIR CS. Estimates of the worldwide frequency of twelve major cancers. *Bulletin of the World Health Organization* 1984; 62: 163-182.
  14. A WHO Meeting: Control of cancer the cervix uteri. *Bulletin of the World Health Organization*, 1986; 64: 607-618.
  15. CAMPOS GP, BARBOSA RB, BANUELLOS A. Seminário de integração do setor para controle do câncer cérvico uterino. *Divisão Nacional de Doenças Crônico-Degenerativas. Campanha Nacional de Combate ao Câncer*, 1986: 2.
  16. MILLER AB, LINDSAY J, HILL GB. Mortality from cancer of the uterus in Canada and its relationship to screening for cancer of the cervix. *Int J Cancer*, 1976; 17: 602-612.
  17. MacGREGOR JE. On taking uterine cervical smears. Aberdeen. *British Society for Clinical Cytology*, 1981.
  18. DRAPER GJ. Screening for cervical cancer: revised policy. The recommendations of the DHSS committee on gynaecological cytology. *Health Trends*, 1982; 14: 37-40.
  19. ROBERTS A. Cervical cytology in England and Wales 1965-80. *Health Trends*, 1982; 41-43.
  20. RYLANDER E. Cervical cancer in women belonging to a cytologically screened population. *Acta Obstet Gynecol Scand*, 1976; 55: 361-366.
  21. FRUCHTER RG, BOYCE J, HUNT M. Missed opportunities for early diagnosis of cancer of the cervix. *Am J Public Health*, 1980; 70: 418-420.
  22. GREENWALD P, NASCA PC, GORDON ED. Prevention of cervix deaths through hospital screening. *Ny State J Med* 1972; 72: 742-745.
  23. SARGEANT EJ, GIZILBASH AH, JOHNSON FL. Cervical cytology screening experience in a general hospital. *Can Med Assoc J*, 1977; 117: 1026-1027.
  24. HUDSON E, HEWERTSON S, JANSZ C, GORDON H. Screening hospital patients for uterine and cervical cancer. *J Clin Pathol* 1983; 36: 611-615.