

RESEARCH COMMUNICATION

Knowledge, Attitude and Practices of Non-oncologist Physicians Regarding Cancer and Palliative Care: A Multi-center Study from Pakistan

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Abstract

Background: Cancer is a major cause of disease burden in Pakistan, so that knowledge of physicians about all aspects should be adequate, especially for palliative care for end stage management, given the generally late stage presentation. **Methodology:** A cross-sectional study was conducted in three tertiary care hospitals and areas of general practice in Pakistan. **Results:** A total of 236 non-oncologist physicians were assessed. Most of them claimed to have cared for cancer patients in some way and considered that cancer treatment is often long and protracted. However, one-third were unaware of the fact that cancer is a major disease burden in our society. About half of them thought that chemotherapy makes patients miserable. Oncology as a practice was considered financially of low reward by about a quarter. Most physicians, including consultants, were unaware of the term hospice. Many did not know where to refer cases of cancer and about the commonest cancers in Pakistani males. **Conclusions:** Awareness about cancer and palliative care among primary physicians needs to be improved for cancer prevention and control.

Key Words: Cancer knowledge - palliative care - physicians - Pakistan

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Introduction

Pakistan is a country with high tumor burden. Although a valid cancer registry has not been established in Pakistan, a need for establishing one can not be overemphasized (Akhtar, 2007). Karachi is the largest city of Pakistan with a population of about 14.5 million in 2007 and South Karachi cancer registry (KCR) is the only well established cancer registry of the country with a stable track record of more than ten years (Bhurgru, 2004). KCR covers a mixed population of all the ethnicities living in the country and is considered to be representative of Pakistan, until a national based cancer registry is available. KCR data indicates that the age standardized ratio of cancer for all sites was 132.4/100,000 for the males and 133.0/100,000 in the females (Bhurgru 2004). The commonest cancer in males in descending order of frequency is lungs, oral cavity, larynx, urinary bladder, prostate, lymphoma, pharynx and colorectal. The order in females is, breast, oral cavity, cervix, esophagus, ovary, lymphoma, gallbladder and skin (Bhurgru et al., 2002).

Review of literature reveals that patients in Pakistan are mostly not aware of cancer prevalence and availability of screening modalities because they are not well informed

about it (Imam et al., 2008). The possibility of putting any reins on a disaster in evolution, like cancer, lies in awareness of representative data on epidemiology, the knowledge of factors known to be associated with cancer and of ways to avoid exposure to them. Such core knowledge determines where the emphasis of cancer control efforts should be enforced (NCCP 2002). It is because of lack of cancer awareness that cancer presentation in Pakistan for most cancers is late, resulting in worse mortality rates even when the incidence is not as high as seen in the western population (Badar, Anwar et al. 2007). Late presentation of cancer also warrants an essential basic awareness about palliative care, palliative care centers (hospices) and about availability and judicious use of pain control medications. For a population of about 160 million, there are currently 132,843 doctors registered for practice in Pakistan, including 213,29 who are registered as specialists in various specialties (PMDC 30th October, 2008). With this background we carried out the present cross sectional questionnaire based survey about basic knowledge of cancer and palliative care by practicing physicians (non-oncologists) in three tertiary care hospitals, to gain the initial insight of where the deficiencies can be improved.

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Materials and Methods

Subject population:

The survey was conducted on consultants of internal medicine, general, and postgraduate trainees of internal Medicine. The survey was conducted in three of the busiest tertiary care hospitals in the province of Sindh, and out patient clinics of general practitioners in various localities in the cities of Karachi and Hyderabad/Jamshoro. The study was conducted between April and September 2008.

The Questionnaire

The questionnaire was structured to ask physicians about their contact with cancer patients, their knowledge of cancer prevalence, knowledge of risk factors for the common cancer in Pakistan, availability of various cancer treatment modalities, their behavior towards cancer patients, their referral preferences for cancer patient, cancer pain management, availability of opiod analgesics, and of existence and knowledge about hospice and terminal care for cancer patients.

Administration of Questionnaire

The participating physicians were directly approached by visit and appointment, a written informed consent was taken from them. A simple 48 itemed questionnaire organized in 20 Headings was administered.

Statistical Considerations

To the best of our knowledge, this was the first survey of its kind done in the entire region of South Asia. We divided the respondents only on the basis of their working designation in three categories namely, consultants, postgraduate trainees (PGs) in internal medicine and general practitioners (GPs). Data were entered into an Excel spreadsheet. Statistical Package for Social Sciences (SPSS) 16 was used to perform data analysis. χ^2 tests were used to examine the relationships between variables.

Ethics

The questionnaire was anonymous and upon completion was put in a sealed box for retrieval only at the time of assessment. Appropriate institutional Approval from the ethical review committee (The ERC) was obtained beforehand.

Table 1. Comparison of the Knowledge of Physicians Regarding Risk Factors for Cancer in Pakistan

Causes	Post Graduates	Consultants	GPs	p-value
Smoking?	98.9	100	100	0.462
Paan?	88.2	92.2	91.1	0.670
Hepatitis B?	79.6	82.8	79.7	0.862
AIDS?	76.3	84.4	58.2	0.001
Alcohol?	86.0	92.2	82.3	0.225
Chalia?	84.9	81.0	93.7	0.067
Gutka?	95.7	96.9	97.5	0.808
Hepatitis C?	81.7	81.2	78.5	0.854
Bad genes?	66.7	56.2	68.4	0.272

Data are % giving positive answers. Paan: chewing Betel leaf (Piper betle) combined with the areca nut; Gutka is a preparation of crushed betel nut, tobacco, catechu, lime and sweet or savory flavorings

Results

Total number of physicians included in the study was 236. Of these 64 (27.1%) were consultants, 79 (33.5%) were general practitioners (GPs) and 93 (39.4%) were post graduate trainees (PGs) in the specialty of medicine (PGs) (Fig 1). Of the total surveyed physicians 189 (81.1%) thought that they have cared for cancer patient in some way. Eighty three (90.2%) PGs, 54 (85.7%) consultants and 52 (66.7%) GPs responded this ($p=0.000$). Of the total responders 23 (9.7%) thought that cancer can be contagious. This was observed amongst 14 (15%) of PGs, 5 (7.8%) consultants and 5 (4%) GPs ($p=0.180$). Two hundred and eighteen (94%) responded that some cancers are preventable. This was seen in 81 (90%) PGs, 60 (95.2%) consultants and 77 (97.5%) GPs ($p=0.102$). Eleven (4.7%) physicians considered cancer as incurable. This view was expressed by 4 (4.3%) of PGs, 4 (6.4%), consultants and 3 (3.7%) GPs ($p=0.687$). Thirteen (5.6%) responded that surgery is not helpful in curing any cancers. Four (4.3%) PGs, 5 (73.9%) consultants and 4 (5%) GPs were of this view ($p=0.751$). Twenty responders (8.6%) thought that chemotherapy is a radioactive substance. This was observed in 10 (11%) PGs, 3 (4.8%) consultants and 7 (8.9%) GPs ($p=0.350$). Twelve (5.1%) held the view that chemotherapy cannot increase the survival of cancer patients. Among PGs 5 (5.4%), 5 (7.8%) consultants and 2 (2.5%) GPs responded this ($p=0.516$). One hundred and two (44.3%) (102) thought that chemotherapy makes

Table 2. Knowledge Regarding Commonly Used Terms in Oncology and their Meanings

Working As		Post Graduates	Consultants	GPs	p value
Are you aware of the term chemotherapy and its meaning?	Yes	92 (98.9)	63 (100)	79 (100)	0.465
	No	1 (1.1)	0 (0)	0 (0)	
Are you aware of the term hospice and its meaning?	Yes	20 (23.5)	22 (35.5)	25 (33.8)	0.217
	No	65 (76.5)	40 (64.5)	49 (66.2)	
Are you aware of the term palliative care and its meaning?	Yes	85 (92.4)	60 (96.8)	74 (94.9)	0.498
	No	7 (7.6)	2 (3.2)	4 (5.1)	
Are you aware of the term surgical oncology and its meaning?	Yes	80 (87)	58 (93.5)	70 (89.7)	0.420
	No	12 (13.0)	4 (6.5)	8 (10.3)	
Aware of the term gynecological oncology and its meaning?	Yes	76 (84.4)	57 (90.5)	72 (91.1)	0.331
	No	14 (15.6)	6 (9.5)	7 (8.9)	
Are you aware of the term Targeted Therapy and its meaning?	Yes	61 (68.5)	41 (65.1)	61 (77.2)	0.250
	No	28 (31.5)	22 (34.9)	18 (22.8)	

Table 3. Referral Patterns of Physicians by Category

Working As	Post Graduates	Consultants	GPs	p value
Surgeon	14 (15.2)	16 (25.4)	6 (7.9)	0.190
Medical physician	4 (4.3)	1 (1.6)	5 (6.6)	
Medical Oncologist	69 (75.0)	42 (66.7)	62 (81.6)	
Radiation Oncologist	4 (4.3)	2 (3.2)	2 (2.6)	
Advise against seeing anyone further	1 (1.1)	2 (3.2)	1 (1.3)	

patients more miserable. Forty six (50.5%) of PGs, 23 (37.7%) consultants and 33 (42.3%) GPs had this view (p=0.330). Eighty three (35.3%) do not consider cancer as the major cause of disease burden in our society. This was responded by 40 (43%) PGs, 14 (22.2%) consultants and 29 (36.7%) GPs (p=0.027). Twenty five (10.8%) thought that medical and radiation oncology are the same thing. This was seen in 12 (13%) PGs, 9 (14.5%) consultants and 4 (5.1%) GPs. One hundred and ninety six (84.1%) said that treatment of cancer is long and protracted. This view was given by 75 (81.5%) PGs, 47 (75.8%) consultants and 74 (93.7%) GPs (p=0.043). Two hundred and two responders (86.3%) responded that morphine is valuable for pain control in cancer. Eighty one (87.1%) PGs, 56 (90.3%) consultants and 65 (82.3%) GPs were aware of this (p=0.237). Thirty three (14.1%) didn't know that morphine is available in Pakistan. Nine (9.7%) PGs, 16 (25.4%) consultants and 8 (10.3%) of GPs were unaware of this fact (p=0.007). Fifty nine (25.3%) considered oncology as less financially rewarding than other specialties. Twenty (21.7%) of PGs, 21 (33.9%) consultants and 18 (22.8%) GPs had this view about the specialty of oncology in comparison with other medical specialties (p=0.010). One hundred and sixty three (72.1%) knew that palliative care is a sub specialty itself. Fifty nine (64.8%) of PGs, 48 (78.7%) consultants and 56 (75.7%) GPs knew this (p=0.323). The population of physicians studied revealed a reasonably good knowledge about risk factors for common cancers. Table 1 shows the comparison between knowledge of different groups of physicians about possible risk factors of cancer in our society.

Regarding the knowledge and awareness of different terms used in oncology, 234 (99.6%) were aware of the

Table 4. Knowledge about Commonest Cancers in Pakistan

Working As	Post-Graduates	Consultants	GPs	p value
In Females				
Breast	87 (93.5)	55 (85.9)	76 (97.4)	0.492
Lung	2 (2.2)	1 (1.6)	2 (2.6)	
Bone	2 (2.2)	3 (4.7)	0 (0.0)	
Bowel	2 (2.2)	5 (7.8)	0 (0.0)	
ENT/Oral	2 (2.2)	0 (0.0)	3 (3.8)	
Total	93 (100)	64 (100)	78 (100)	
In Males				
Testicular	3 (3.2)	3 (4.7)	1 (1.3)	0.492
Prostate	32 (34.4)	15 (23.4)	24 (30.8)	
Lung	52 (55.9)	40 (62.5)	46 (59.0)	
Bowel	4 (4.3)	6 (9.4)	4 (5.1)	
ENT/Oral	2 (2.2)	0 (0.0)	3 (3.8)	
Total	93 (100)	64 (100)	78 (100)	

term chemotherapy and its meaning, 154 (69.7%) were unaware of the term hospice and its meaning, 219 (94.4%) were aware of the term palliative care and its meaning, 24 (10.3%) were unaware of the term surgical oncology and its meaning, 27 (11.6%) were unaware of the term gynecological oncology and its meaning and 98 (29.4%) were unaware of the term targeted therapy and its meaning. Table 2 shows the comparison of knowledge of different groups of physicians about commonly used terms in oncology.

Of the total physicians included 173 (74.9%) said that if they suspect diagnosis of cancer they would refer the patient to medical oncologist, 36 (15.6%) responded to refer the patient to surgeon, 10 (4.3%) to medical physician, 8 (3.5%) to radiation oncologist and 4 (1.7%) said that they would advise the patient not to see any physician in future. Table 2 shows the comparison of knowledge of different groups of physicians about referring the patients of cancer diagnosis to relevant specialist

Discussion

This is the first survey of its kind conducted in Pakistan. Literature review does not reveal any comprehensive study for cancer knowledge targeting primary physicians in practices any where in the entire region. The three groups of physicians namely consultants, general practitioners and postgraduate trainees are the most important first or second encounters of patients with healthcare givers. Pakistan has 0.74 physicians per 1,000 people (WHO 2002a). Most physicians are there fore expected to see many patients. Most general practitioners in Pakistan are not specifically trained to do the general practice, as a license to practice medicine is granted upon completion of medical graduate study, a fellowship exam in Family medicine exists, it is not however, a requirement to start the general family practice. There are in all twenty four practitioners registered as fellows in Family Medicine by the College of Physicians and Surgeons Pakistan (Nov 10 2008) which has a key role in the professional development of medical doctors across Pakistan (Siddiqui <http://www.aare.edu.au/07pap/sid07623.pdf>). Specialists in the internal medicine are by far the most common physicians who refer the patients to oncology specialty. There are eight hundred and fifty six fellows in medicine registered with the CPSP. Although a study from Australia, where GP registrar is a trained specialty, suggests that the Knowledge of general practitioners about cancers is satisfactory (Barton, Gabriel et al. 2007). For Pakistan there is a need for physicians professional development (Siddiqui <http://www.aare.edu.au/07pap/sid07623.pdf>). Our survey demonstrates that despite the fact that most of our physicians come in contact with cancer patients, fears and misconceptions about cancer exist even amongst the physician community, as about cancer being contagious, chemotherapy making patients miserable, and ignorance of the fact that cancer is a major cause of disease burden in Pakistan. The population of physicians studied revealed a reasonably good knowledge about risk factors for common cancers, still there is a lack

of awareness of possible association with regards to knowledge about hepatitis B, Hepatitis C, alcohol use and genetic factors (Table 1). Almost all fear that cancer therapy is very long and protracted. Knowledge and availability about pain control medication is limited as is awareness of term and existence of hospice in Pakistan (Table 2). Fewer consultants were found to be willing to refer the patients to medical oncologists compared to GPs and PGs, but a reasonable pattern of referral was found (Table 3). Primary care physicians play the most important role in, dissemination of cancer prevention information, screening, timely detection and accurate referral of cancer patients. Physician information and education therefore has a critical role in patient care.

Constraint of resources limit the use of information technology in Pakistan (Bhurgri 2004). Use of computer technology has been found helpful in increasing cancer knowledge of physicians (Masahito Jimbo; McPhee, Bird et al. 1991). Effective legislation, media campaigns, information, continuing medical education (CME) seminars for physicians, coordination with established cancer registries, clinical meetings, physician out reach programs are some of the suggested measures to be used as effective measures to increase the physicians knowledge base about cancer.

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